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Three essays on Social Capital

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A Alba

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CHAPTER 1:

Motivación del trabajo¹

Introducción

La investigación empírica llevada a cabo en los últimos años sobre los determinantes del crecimiento económico ha tendido a incorporar como variables explicativas factores políticos y sociales, ante la evidencia surgida de los análisis tradicionales de que las diferencias en el desempeño económico de los países no pueden ser explicadas exclusivamente por factores económicos.

Una de las vertientes de esta corriente de investigación considera el papel de

¹Varias de las ideas desarrolladas en esta introducción fueron escritas en conjunto con Dayna Zalcicever en el trabajo: Notas panorámicas de la literatura sobre capital social y desarrollo: el papel de la religión. *Documento de Trabajo* No. 07/06, dECON.

la cultura, de la cual la religión es un componente importante.²

La idea detrás de este enfoque es que los factores culturales afectan ciertos valores o creencias los que, a su vez, influyen en las actitudes y prácticas económicas y, por consiguiente, en el desempeño económico, tanto a nivel de los individuos como de grupos y países. La religión, en particular, ha sido vista durante siglos como una fuente principal de valores y códigos morales y éticos.

Históricamente se ha prestado poca atención en los análisis económicos a la influencia de la religión y de otros factores culturales. Iannaccone plantea que la principal dificultad que han tenido los economistas para “hablar de valores” tiene que ver con los propios fundamentos económicos, especialmente el supuesto de preferencias estables³

Según este autor, los estudios sobre religión contribuyen a enriquecer

²Siguiendo a Iannaccone (1998), el término religión se utiliza para denotar cualquier conjunto compartido de creencias, actividades e instituciones que tienen como premisa la fe en poderes sobrenaturales. Cabe aclarar que en este trabajo se soslayan cuestiones referidas a la validez de las creencias o la legitimidad de las instituciones religiosas.

³Según Gary Becker, en la disciplina económica se plantean tres justificaciones para este supuesto: 1) al tener poco que aportar a la comprensión de cómo se forman las preferencias, se supone que éstas no cambian sustancialmente (ni en el tiempo, ni entre las personas), trasladándose el problema a otras disciplinas sociales; 2) las preferencias realmente son estables, no cambian caprichosamente ni difieren de manera importante entre los individuos; 3) las preferencias sí varían, pero los modelos de maximización de consumo, formación de capital y adicción racional son suficientes para incorporar estos cambios dentro del marco neoclásico estándar.

la disciplina económica “*generando información sobre un área del comportamiento de no-mercado hasta ahora desatendida, mostrando cómo los modelos económicos pueden ser modificados para dar cuenta de cuestiones relacionadas con creencias, normas y valores, e indagando acerca de cómo la religión (y, por extensión, la moral y la cultura) afecta las actitudes y actividades económicas de individuos, grupos y sociedades.*” (Iannaccone, [2]).

El tema de la religión hace relativamente fácil el desarrollo y la verificación de teorías de formación de preferencias, restricciones normativas y cambios culturales, en la medida que ninguna otra actividad de no-mercado pone tanto énfasis en creencias y normas, y pocas están tan bien documentadas (la información disponible -proveniente de encuestas, censos oficiales y registros de instituciones religiosas- sobre comportamiento religioso permite analizar el impacto moral de la religión más que el de otras instituciones).

En opinión de Iannaccone, en lo que respecta a la economía de los valores, la religión cumple la doble condición de ser el tema más relevante -en tanto es un aspecto fundamental de la vida humana y de la cultura- y menos estudiado. Por otra parte, la economía de la religión podría servir de base para el estudio de valores en otros contextos sociales.

Capital social y Religión

Definición, formas y alcance del capital social

El reconocimiento de que las diferencias en el desempeño económico, tanto a nivel de los individuos o las familias como de los países, no pueden ser explicadas exclusivamente en base a los factores tradicionales (capital físico, recursos naturales y capital humano) ha llevado en las últimas décadas a considerar el papel del denominado “capital social”.⁴

Este concepto hace referencia a las instituciones, relaciones, actitudes y valores que rigen las interacciones entre las personas y contribuyen al desarrollo económico y social (World Bank, [3]). A partir de esta definición general, Grootaert y Van Bastelaer [1] distinguen dos formas de capital social: el capital social estructural que hace referencia a las estructuras sociales relativamente objetivas y observables externamente (redes, asociaciones, instituciones), y a las reglas y procedimientos contenidos en éstas; y el capital social cognitivo que comprende elementos más subjetivos e intangibles tales como actitudes y normas de comportamiento de aceptación generalizada,

⁴El origen del término capital social, en su forma actual, se ubica a comienzos del siglo XX (1916) y es atribuido a Lyda J. Hanifan. Posteriormente, el concepto fue retomado en los años 1950s y 1960s, logrando nueva atención a comienzos de los años 1990s a raíz de los trabajos de Coleman y Putnam.

valores compartidos, reciprocidad y confianza.

No obstante, no existe una única definición de capital social y el alcance del concepto varía considerablemente en la literatura. El concepto más limitado considera al capital social como un conjunto de asociaciones horizontales entre personas, consistente en redes sociales (“redes de compromiso cívico”) y normas asociadas que tienen un efecto sobre la productividad y el bienestar de la comunidad. En esta definición el aspecto clave del capital social es que facilita la coordinación y cooperación para el beneficio mutuo de los miembros de la asociación.

Un segundo concepto, más amplio que el anterior, define al capital social como “una variedad de diferentes entidades” de la estructura social, incluyendo tanto asociaciones verticales (caracterizadas por relaciones jerárquicas y una distribución desigual del poder entre sus miembros) como horizontales, así como el comportamiento al interior de y entre organizaciones, tales como las empresas. Según este enfoque, para que los vínculos horizontales-necesarios para proporcionar a las comunidades un sentido de identidad y de fin común- no se conviertan en la base para la búsqueda de intereses limitados e imposibiliten el acceso a información y recursos materiales necesarios para la comunidad (por ejemplo, información sobre vacantes de empleo, ac-

ceso al crédito), se requieren vínculos que trasciendan las diferencias sociales (religiosas, étnicas, socioeconómicas).

Un tercer enfoque, más comprensivo, incluye el entorno social y político que modela la estructura social y hace posible el desarrollo de normas. Además de las relaciones horizontales y jerárquicas en su mayor parte informales, y a menudo locales, de los dos primeros conceptos, este enfoque incluye relaciones y estructuras institucionales más formalizadas (tales como gobierno, régimen político, sistema judicial y libertades civiles y políticas). Se considera que el desarrollo económico y social depende del apoyo mutuo que se brinden la sociedad civil, el Estado y el sector empresarial en la búsqueda de fines comunes.

Según se plantea en World Bank [3], estos tres conceptos no deberían ser considerados como alternativos sino más bien como diferentes manifestaciones del capital social presente en la sociedad. Las asociaciones horizontales y jerárquicas y las macro-instituciones pueden y deberían coexistir de modo de maximizar el impacto del capital social sobre los resultados económicos y sociales.

De manera similar, Grootaert y Van Bastelaer [1] proponen una distinción entre los elementos que componen el capital social en base a la amplitud

de su unidad de observación. En este sentido, señalan que a nivel micro el capital social comprende las redes horizontales de individuos y familias y las normas y valores asociados subyacentes en estas redes, a nivel meso captura las relaciones horizontales y verticales entre grupos, y a nivel macro abarca el entorno institucional y político que está detrás de toda actividad económica y social. Un concepto de capital social que comprenda las tres dimensiones podrá capturar los efectos complementarios y compensatorios de las estructuras sociales y las actitudes a todos los niveles de la sociedad.

Las diferencias planteadas respecto a la definición y el alcance del concepto de capital social se trasladan al problema de cómo medirlo. Debido a que las definiciones más comprensivas son multidimensionales e incorporan distintos niveles y unidades de análisis, y muchos de los conceptos involucrados son inherentemente ambiguos y difíciles de cuantificar, la medición del capital social puede resultar compleja.

Si bien no se ha establecido aún un método general de medición (las distintas aproximaciones, teóricas y empíricas, plantean sus propias metodologías), la mayoría de los autores concuerda que las normas sociales y las redes son elementos claves del capital social, mientras que la confianza es considerada un elemento adicional o una proxy cercana del nivel de capital social presente

en una comunidad⁵ (Productivity Commission [2]).

Las normas sociales comprenden las reglas informales y convenciones compartidas que rigen determinados comportamientos (incluyen: honestidad, ética del trabajo, tolerancia y aceptación de la diversidad).

Una red es un grupo interconectado de personas que tienen generalmente un atributo en común (por ejemplo, comparten la misma ocupación o religión). Las redes pueden favorecer otros aspectos del capital social: es más probable que las normas sociales sean difundidas y respetadas en una sociedad más conectada, y a los miembros de una comunidad altamente conectada les puede resultar más fácil confiar unos en otros.

La confianza se refiere al nivel de fiabilidad que las personas tienen en que los otros (individuos, grupos o instituciones) tendrán el comportamiento anunciado o esperado, o en que lo que dicen es confiable. También es posible concebir una confianza social, referida a la predisposición a confiar en un extraño o en una organización con la que no se ha tratado previamente y respecto a los cuales no se tiene conocimiento específico sobre sus acciones pasadas.

⁵Algunos autores consideran a la confianza más como un producto del capital social (resultante de la interacción repetida, de instituciones creíbles, de reputaciones) que un componente de éste.

De esta manera, la religión y, más en general, el sistema de valores puede tener una influencia decisiva en las formas de capital social de una sociedad. En este sentido, Fukuyama plantea que el capital social es resultado de factores tales como la religión, las tradiciones y la experiencia histórica compartida.⁶

A nivel individual, el capital social genera externalidades positivas para los miembros de organizaciones sociales a través de la confianza mutua, normas y valores compartidos, y sus efectos sobre las expectativas y el comportamiento. La influencia del capital social sobre el desarrollo económico se da principalmente a través de la reducción de los costos de transacción, la promoción del comportamiento cooperativo, la difusión del conocimiento y las innovaciones, entre otros.

La investigación empírica sugiere que la adhesión a normas sociales, redes bien desarrolladas y niveles asociados de confianza influyen positivamente en el desarrollo económico y social. En este sentido, Grootaert y Van Bastelaer [1] plantean que el efecto del capital social -manifestado principalmente en la agilización de las transacciones entre individuos, familias y grupos- puede adoptar tres formas:

⁶Fukuyama, F. (1999), "Social capital and civil society", citado en Productivity Commission (2003).

1. la participación de los individuos en redes sociales incrementa la disponibilidad de información (referida, por ejemplo, a localización de nuevos mercados o fuentes de crédito) y reduce sus costos
2. la participación en redes locales y las actitudes de confianza mutua facilitan a los grupos alcanzar decisiones e implementar acciones colectivas
3. las redes y ciertas actitudes reducen el comportamiento oportunista por parte de miembros de la comunidad: las presiones sociales y el miedo a la exclusión pueden inducir a los individuos a adoptar determinado comportamiento esperado para beneficio del grupo

La falta de capital social, por su parte, puede limitar las oportunidades sociales y económicas de individuos, grupos y comunidades, afectar la eficiencia en el funcionamiento de los mercados y acentuar las inequidades existentes.

No obstante, el capital social también puede tener impactos negativos. Fuertes vínculos grupales pueden reducir la tolerancia hacia “extraños” y llevar a un énfasis indebido en las necesidades del grupo en detrimento de la sociedad en su conjunto. Por otro lado, algunas normas sociales pueden reprimir la expresión e iniciativa individuales.

Indicadores de capital social

Entre los diversos indicadores de capital social utilizados en los estudios empíricos se destacan los siguientes:

Confianza generalizada: medida de capital social a nivel micro, horizontal, con

característica de bien público, que operaría principalmente reduciendo los costos de transacción.

Confianza en las instituciones (gobierno, policía, administración pública y sistema legal): medida de un elemento vertical de capital social que refleja el efecto de éste como un bien público que reduce los costos de transacción de las interacciones sociales y económicas que se dan en la sociedad (la confianza reflejaría la calidad de las instituciones).

Participación cívica (“instrumento de Putnam”): cantidad de organizaciones voluntarias en las que participa un ciudadano promedio (incluyendo partidos políticos, sindicatos, instituciones religiosas, clubes deportivos, asociaciones benéficas, organizaciones vecinales, asociaciones de comerciantes, cooperativas, grupos de mujeres, organizaciones de jóvenes, asociaciones de padres, comisiones escolares, grupos ecologistas, entre otras). Constituye una medida a nivel meso, intermedia (ni totalmente horizontal ni comple-

tamente vertical) que podría representar un elemento de capital social con características de bien cuasi-club (dado que los tipos de organizaciones considerados requieren afiliación), o implicar hasta cierto grado características de bien público. El beneficio potencial derivado de ser miembro de una organización voluntaria podría operar permitiéndole al individuo tener acceso a una mayor cantidad y diversidad de recursos e información a través de la interacción social con otros miembros.

Compromiso cívico: cantidad de actividades cívicas en las que el individuo ha participado en los últimos años (votar, contactar a alguna persona influyente, contactar a la prensa, participar en una campaña de información, intervenir en una campaña electoral, participar en una manifestación, contactar a un representante electo, notificar a la policía o a la justicia algún hecho, realizar una donación). Al ser todas actividades que implican alguna forma de cooperación en pro de un beneficio común, se considera una medida horizontal e inclusiva de capital social con características de bien público.

En cada caso, la elección de los indicadores utilizados dependerá de la disponibilidad de información, de los objetivos del estudio y de la conceptualización particular de capital social que se adopte.

References

- [1] Grootaert, C. y Van Bastelaer, T. (2002): Understanding and measurement social capital: a multidisciplinary tool for practitioners. *The World Bank*, Washington, junio
- [2] Iannaccone L.R. Introduction to the Economics of Religion. *Journal of Economic Literature* 1998; **36**: 1465-1496.
- [3] Productivity Commission. Social Capital: Reviewing the Concept and its Policy Implications. *Research Paper 2003*, AusInfo, Canberra.
- [4] World Bank. The Initiative on Defining, Monitoring and Measuring Social Capital, Social Capital Initiative. *The World Bank, Washington.1998*, WP 2.

CHAPTER 2:

The perception of corruption⁷

Introduction

We employ the concept of corruption in several areas and its connotations vary widely depending on societies and people. As it is well-known, there are very different definitions of corruption. Moreover, if corruption definition depends on social and cultural factors, the same is true for corruption perception.

The data source is the module on Citizenship of the 2004 International

⁷Joint paper with Natalia Melgar and Tom Smith, accepted for publication in *The International Journal of Public Opinion Research*.

Social Survey Program (ISSP). The survey includes a question that allows us to identify corruption perception focusing on a wide concept: with the misuse of public office with the purpose of making private gains.

We estimate ordered probit models and we conclude that there are socio-demographic variables which are significant, such as: gender, religiosity, the level of education, the sector of employment, among others. Additionally, country of residence has a significant impact and we find some clear pattern of behavior taking into account economics as well as political characteristics. Finally, we show the effects of economic performance (measured by Gross Domestic Product per capita (GDPpc), inflation and GINI index) and its interaction with education and people's opinion on democracy. While GDPpc reduces corruption perception, inflation and GINI index show the opposite effect.

The structure of the paper is as follows. The first section is theoretical in nature; we analyze corruption perception as multidimensional phenomena. Section two sketches the main features of the econometric methods apply in this analysis, the data source and the description of variables. The third section deals with results. Finally, the conclusions are presented in section four.

Corruption and the perception of corruption

We employ the concept of corruption in several areas and its connotations vary widely depending on societies and 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. Therefore, corruption perception is not the reflection of a current situation; it is a social phenomenon.

The first problem of any comparative research on corruption is arriving at a definition which lends itself to cross-cultural and cross-national research. The question used to capture people perception of corruption 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.

In economic terms, there are several ways to define corruption. For example, Werlin [12] characterizes corruption as the use of public office for private needs and Blackburn et al. [1] 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 et al. [10],

define it as the sale of state assets by civil servants in order to make gains.

Pope [7] asserts that corruption can take place where there is a combination of opportunity and inclination. Corruption can be initiated from either side of the transaction. 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.

According to Rose-Ackerman [9] 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 private sector by governments is high.

Corruption could be seen as a tax because rules are asymmetric and costly. Those costs could be seen as the time and information needed to fulfill rules. Therefore, if individuals need a lot of time or information to fulfill a rule, the probability of behaving in accordance with the law decreases. The rules modify the decision making process (Gherzi, [3]). Corruption could also

be interpreted as insurance. People buy this insurance when they bribe a government employee to protect themselves against costly rules. Therefore, 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 (Svetozar [11]).

Moreover, You et al. [13] 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 and to buy favorable interpretations of the law. Additionally, the authors argue that income inequality also influences corruption perception 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". We expect that a greater level of inequality determines a higher level of corruption perception. Thus we should find a direct empirical relationship between inequality and corruption perception, other factors being equal.

Regarding democracy, Montinola et al. [5] find that political competition

matters; it is posited to reduce corruption in two ways. First, the freedom of information helps monitoring of public officials, thereby limiting their opportunities for corrupt behavior. Secondly, the possible turnover of power implies that politicians cannot always credibly promise that particular laws and regulations will continue. This minimizes the size of bribes that rent-seekers are willing to pay. In line with this, Rose-Ackerman [9] asserts that a competitive electoral process can give politicians an incentive to reveal the untrustworthy behavior of their opponents and to be trustworthy themselves. She focuses on honesty and trust as they affect the functioning of the democracies and markets. As those are proofs of this relationship, we will focus on the satisfaction with the democratic system rather than the democracy itself.

Cábelková [2] studies the incentives to take corrupt actions and she holds that this problem 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. Since the perception of corruption is not necessarily related with actual experience. Consequently, the sources of corruption perceptions might facilitate or diminish the actual corruption level.

In general terms, 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 effect than corruption itself; it generates a “culture of distrust” towards some institutions.

Given the mentioned objective aspects that favor corruption, individuals’ corruption perception will vary depending on their values and moral views. 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. Moreover, the formation of individuals’ perception 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 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.

Data and methodology

The data source is the module on Citizenship of the 2004 International Social Survey Program (ISSP). The survey asks respondents their opinions on a great variety of issues, including trade, migration, politics, taxes and corruption, as well as demographic and socio-economic information, such as age, gender, education, religiosity and others. Data were weighted by country size.

An ordered probit model aims at determining how individual characteristics affect the formation of opinions towards corruption. The dependent variable seeks to grasp citizen's perception of corruption and it is defined taking into account the following question: taking into account your experience, how widespread do you think corruption is in the public service in your country?

TABLE 1: ANSWERS

Taking into account your experience, how widespread do you think corruption is in the public service in your country?	
Categories	Frequency (%)
Hardly anyone	4.45
A small number	27.21
A moderate number	31.04
A lot of people	25.92
Almost everyone	11.39
Total	100

Table 1 shows the weighted frequency distribution of the answers to this question in the whole sample (45,765 respondents). The description of the variables is included in table 2.

TABLE 2: DESCRIPTION OF INDEPENDENT VARIABLES

Area	Variable	Values	Mean
Religion and religiosity	NO_RELIGION	1 if respondent does not identify with some religious group	0.209
	ATTENDANCE	1 if the person attends religious services once a week or more	0.198
	R_CATHOLIC	1 if respondents religion is Roman Catholic	0.420
	PROTESTANT	1 if respondents religion is Protestant	0.233
Labor market	UNEMPLOYED	1 if unemployed	0.063
	RETIRED	1 if retired	0.195
	EMP_FT	1 if respondent is employed full time	0.442
	PRIVATE_S	1 if working in a private enterprise	0.538
	SELF_EMP	1 if being self-employed and	0.165
	UNION	1 if belonging to an union	0.218
Human Capital	EDU_LEVEL2	1 if respondent is above lowest qualification	0.213
	EDU_LEVEL3	1 if respondent has completed higher secondary or above this level	0.374
	EDU_LEVEL4	1 if respondent has a university degree	0.154
Other socio-demographic variables	GENDER	1 being a woman	0.531
	AGE18-39	1 if respondent's age is between 18 and 39 years old	0.389
	AGE40-60	1 if respondent's age is between 40 and 60 years old	0.382
	MARRIED	1 if married or living as married	0.580
	DIVORCED	1 if divorced	0.085
Others variables	URBAN	1 if respondent lives in a big city, suburb or outskirts of a big city	-----
	DEM_TODAY	1 if respondent places the state of democracy in his country among 5 to 10	0.769

Results

As could be seen in table 3, the probability of perceiving the highest level of corruption, for the whole sample, is 4.25%.

We calculate the marginal effects and their standard errors after estimation. Rather than reporting coefficients, tables 3.1 and 3.2 report the discrete change in the probability for each significant dummy variable. The table reports the change in this probability when the variables turn from 0 to 1. We find a significant gender bias. In particular, women are more likely to perceive a higher level of corruption than men (the probability increases 0.40 percentage points, pp). This result shows that although traditional gender roles and perspectives have been changing in recent decades, some influences remains and differences between genders are significant.

Secondly, the variables reflecting individual's age are not significant; there are no significant differences among youngest people, middle-aged people and the oldest group. Hence, regarding corruption perception there are not life course adjustments. It is often argued that more recent generations socialized in more troubled situations and more impersonal environments. However, this fact may not affect corruption perception.

TABLE 3.1: MARGINAL EFFECTS BY SIGNIFICANT INDIVIDUAL CHARACTERISTICS

Probability (corruption = 4) = 4.25%		
	Variable	Marginal change (dy/dx)
Positive effect	SELF_EMP	0.013*** [0.003]
	PRIVAT_S	0.009*** [0.002]
	DIVORCED	0.009*** [0.003]
	UNEMPLOYED	0.006** [0.003]
	GENDER	0.004** [0.002]
	EMP_FT	-0.002* [0.002]
	MARRIED	-0.003** [0.001]
Negative effect	ATTENDANCE	-0.005*** [0.002]
	EDU_LEVEL3	-0.010*** [0.002]
	EDU_LEVEL4	-0.026*** [0.003]
	DEM_TODAY	-0.069*** [0.008]
	Observations	27,047
Pseudo R-squared	0,1429	
Robust standard errors in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.		

Thirdly, marital status matters; those people who are married (or live as married) tend to perceive a lower level of corruption than other people, the opposite is true for those who are divorced (the changes in probability are -0.30 pp and 0.90 pp respectively). While it is possible to see divorce as just another miscellaneous negative life event, Smith (1997) holds that divorce will have a distinct and especially strong negative impact on shaping judgments about life since it concerns broken commitments involving very close, interpersonal relationships.

Moreover, as expected, the level of education has a relevant role in determining the perception of corruption. People who have completed, at least, secondary education are more likely to perceive a lower level of corruption. The change in the probability is -1.0 and -2.6 pp, respectively. 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. Corruption perception decreases with socioeconomic status, the better-off people are materially and the higher their social standing, the more likely they will view the world and other people in a favorable light.

Regarding religion and religiosity we find that there are no significant differences among religious groups and the same happens if we compare people who identifies with some religious group and atheists. On the other hand, the degree of religiosity does influence the perception of corruption (the probability is down by 0.50 pp). However, as there is no information available, we could not identify if there are a significant difference among those with fundamentalist beliefs, which may emphasize the sinful nature of humans and a stern and authoritarian God, and others.

Concerning labor market, we find that self-employed people tend to perceive a higher level of corruption (the probability hikes 1.3 pp). It might be possible that self-employed people are exposed to more incidents of corruption. The opposite is true for full-time workers who tend to perceive lower corruption (the probability reduces 0.15 pp). On the other hand, there is a significant difference among people who are unemployed and those who are employed; unemployment increases the probability by 0.6 pp. There are no significant differences among: a) those who are retired and other people and b) those people who belong to a union and other people.

Additionally, 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. The probability increases 0.90 pp.

Connected with democracy, we find that those who have a favorable opinion on democracy are more likely to perceive a lower level of corruption. Taking into account the place of residence, we find that there is no significant difference among people living in urban areas and others. This variable has the most significant impact on corruption perception; 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, the probability reduces 7.8 pp.

It is worth noting that all country dummies are significant. This result might mean that there are significant cultural and political differences that influence the perception of corruption. While most of them show a positive sign, there is a small group of countries that register a negative sign. We will explain this result differences later. Table 3.2 summarizes the information about the change in the probability of perceiving the highest level of corruption for each country variable.

The average change in the probability is 7.78 pp, Chile registers a similar value (7.74 pp). The median change is 5.08 pp, Hungary and United States show impacts close to this value (5.82 pp and 4.34 pp, respectively).

The biggest impacts are found in Latin American (LA) countries: Brazil, Mexico and Venezuela. In those cases the probability is up by 37.96 pp, 25.74 pp and 25.05 pp, respectively. This result implies that Brazilians, Mexicans and Venezuelans tend to perceive a higher level of corruption than the rest of the sample.

TABLE 3.2: MARGINAL EFFECTS BY COUNTRY OF RESIDENCE

Variable	Marginal change (dy/dx),percentage points	Standard errors
BRAZIL	37.96	0.010
MEXICO	25.74	0.010
VENEZUELA	25.05	0.011
POLAND	22.20	0.009
BULGARIA	21.46	0.013
ISRAEL	18.21	0.012
SLOVAKIA	17.08	0.009
PHILIPPINES	16.61	0.010
SOUTH KOREA	9.69	0.007
SLOVENIA	9.42	0.007
CZECH REPUBLIC	9.07	0.007
PORTUGAL	7.89	0.007
CHILE	7.74	0.007
URUGUAY	7.71	0.006
LATVIA	7.63	0.005
JAPAN	6.92	0.006
HUNGARY	5.82	0.005
UNITED STATES	4.34	0.004
CANADA	1.68	0.002
FRANCE	1.63	0.002
IRELAND	1.54	0.002
GERMANY	1.53	0.002
SPAIN	1.29	0.002
SWEDEN	0.43	0.001
AUSTRIA	0.32	0.001
SWITZERLAND	-0.23	0.001
NORWAY	-0.36	0.001
CYPRUS	-0.42	0.001
NETHERLANDS	-0.45	0.001
GREAT BRITAIN	-0.61	0.001
NEW ZEALAND	-0.65	0.001
FINLAND	-0.88	0.001
DENMARK	-0.93	0.001

Note: AUSTRALIA is the omitted variable. All variables are significant at 1 %.

Moreover, the table shows that all LA countries are situated in the first half of the table; the change is higher than the average. In this group of

countries, Chile and Uruguay register almost identical impacts (7.74 pp and 7.71 pp, respectively). Something similar happens in the case of Asia.

On the contrary, in the case of European Union (EU) the majority of countries are situated in the second half of the table. Portugal is the exemption; it belongs to the EU and is found in the top half of the table. Similarly, Canada and United States, which belongs to America but with very different economic performance and cultural characteristics than LA countries, reach lower values (1.68 pp and 4.34 pp, respectively). Additionally, Anglo-settlement colonies (Canada, New Zealand and United States) fall in the bottom half as do the majority of rich countries.

Only in eight cases (out of 34) the probability reduces: Switzerland (-0.23 pp), Norway (-0.36 pp), Cyprus (-0.42 pp), Netherlands (-0.45 pp), Great Britain (-0.61 pp), New Zealand (-0.65 pp), Finland (-0.88 pp) and Denmark (-0.93 pp). It is worth noting that all of those countries are rich and almost all of them belong to the EU.

Analyzing political characteristics, we find another clear pattern of behavior. The former Socialist states of Eastern Europe are located in the first half of the table in the following order: Poland (22.20 pp), Bulgaria (21.46 pp), Slovakia (17.08 pp), Slovenia (9.42 pp), Czech Republic (9.07 pp), Latvia

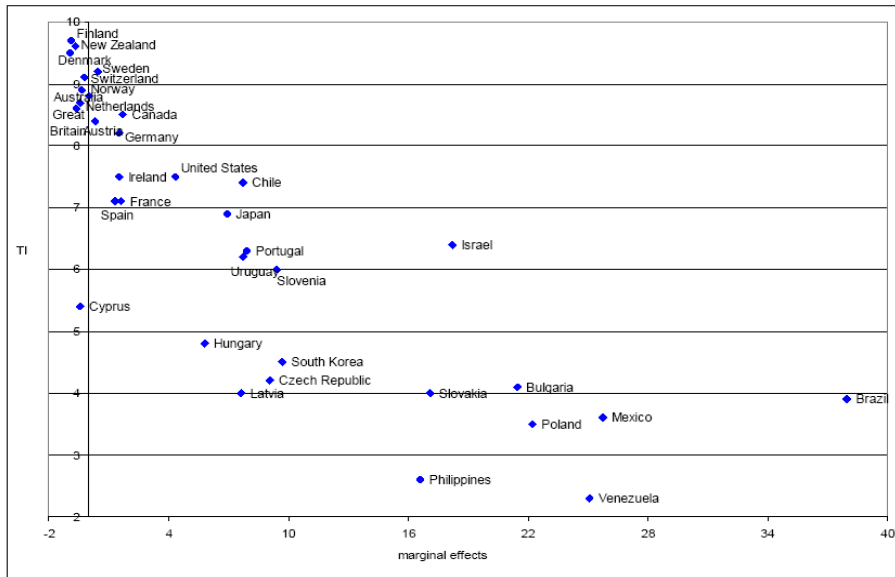
(7.63 pp) and Hungary (5.82 pp). This result could be related to the past experiences of corruption at the governmental level than to present events.

Taking into account country size (measured by the population) we find that, in general, smaller countries are at the bottom of the table (Cyprus, Finland, Denmark, New Zealand and Norway). Regarding others characteristics such as whether the country was a colony or official language, we do not find a clear pattern of behavior.

Given our previous results, we analyze whether there is a relationship among this ranking of countries and Transparency International's Corruption Perception Index '2004. In order to prove this, we employ the Spearman's rank correlation test, which displays the correlation coefficients for selected variables. The null hypothesis established that the variables are independent.

As expected we find that those rankings are correlated and the correlation coefficient is -88.46. The null hypothesis is rejected at 1%. Even when those coefficients are high, the correlation is not perfect because those variables are not determined by the same set of independent variables. Figure 1 shows the dispersion between the misanthropy ranking and our previous corruption perception ranking.

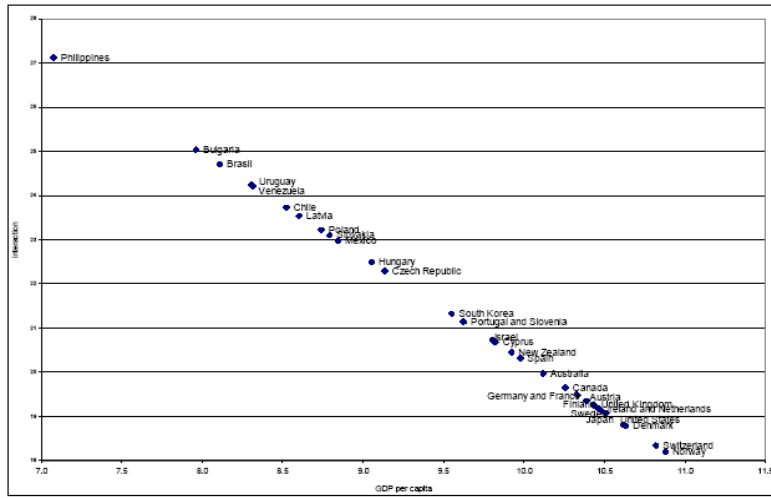
FIGURE 1: RELATIONSHIP BETWEEN THE CORRUPTION PERCEPTION RANKINGS



Finally, we estimate two additional models in order to analyze the impact of macroeconomic environment and as expected, it is relevant. In particular, the probability of perceiving corruption decreases if GDPpc is up and the interaction between it and education is also significant (and negative) but only for the highest level of education. Figure 2 shows that even when the effect is always positive, the interaction effect decreases as GDPpc increases. Moreover, macroeconomics stability also reduces corruption perception (higher inflation rate increases corruption perceived). However, the interaction between this variable and the opinion on democratic system is not significant. On the other hand, inequality hikes corruption perception; the higher the

GINI index, the higher corruption perception. The biggest impact is found in the case of GINI index (0.36 percent), followed by inflation and GDPpc (0.16 percent and -0.06 percent, respectively).

FIGURE 2: INTERACTION EFFECT BETWEEN GDP PER CAPITA AND EDUCATION (LEVEL 4)



I

Conclusions

We find that some individual characteristics have a significant effect on the probability of perceiving the highest level of corruption: gender, marital status and the level of education. For example, the probability increases when we consider a woman instead of a man and when we change to divorced people. On the other hand, married people, those who attend frequently to religious services and those with an university degree tend to perceive lower

corruption. Regarding employment, those who are working at the private sector and those who are self-employed are more likely to perceive a higher level of corruption and the opposite is found for those who work full-time. Finally, with respect to democracy, it is found that those who have a favorable opinion on the way that democracy works in his/her country, are more likely to perceive a lower level of corruption.

We find that macroeconomic environment is relevant. While a better economic performance (measured by GDPpc) reduces corruption perception, macroeconomic instability and inequality (measured by inflation rate and GINI index) hike it.

Taking into account fixed effects, as expected, all country dummies were significant. Regarding countries ranking, we find that all LA 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. The highest changes are found in LA countries: Brazil, Mexico and Venezuela (more than 25 pp) and others LA countries also rank in the top half. Similarly, ex-Socialist states are in the top half of the table. The model also shows that in the case of the former Socialist states of Eastern Europe the change in the probability is bigger than the average. This result might be connected with past

experiences of corruption at the governmental level than to present events.

Moreover, almost all East Asian countries are found in the first half of the table. 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 find that all Anglo-settlement colonies fall in the bottom half as do the majority of rich countries.

Only in eight countries we find a negative change, in general, they are small, rich and belong to the EU, Denmark shows the biggest reduction in the probability, -0.93 pp.

Finally, we demonstrated that our ranking of countries is highly correlated with a well-know corruption index, the CPI computed by Transparency International.

References

- [1] Blackburn K., Bose N., Haque M. Endogenous corruption in economic development. *University of Nottingham WP 2004*; **16**.
- [2] Cábelková I. Perceptions of corruption in Ukraine: Are they correct? *CERGE-EI* 2001.
- [3] Ghersi E. Economía de la corrupción. *Centro de la Divulgación del Conocimiento Económico, Venezuela* 2006.
- [4] Maingot A. Confronting corruption in the hemisphere: a sociological perspective. *Journal of Interamerican Studies and World Affairs* 1994; **36(3)**: 49-74.
- [5] Montinola G., Jackman R. Sources of corruption: a cross-country study. *British Journal of Political Science* 2002; **32**: 147-170.
- [6] Nelken D., Levi M. The corruption of politics and the politics of corruption: an overview. *Journal of Law and Society* 1996; **23(1)**: 95-112.
- [7] Pope J. **Confronting corruption: the elements of a national integrity system**. Transparency International Source Book 2000.

- [8] Posner R. **Análisis económico del derecho**. Fondo de Cultura Económica, México 1999.
- [9] Rose-Ackerman S. Trust, honesty and corruption: reflection on the state-building process. *European Journal of Sociology* 2001; **42**: 27-71.
- [10] Shleifer A., Vishny R. Corruption. *Quarterly Journal of Economics* 1993; **108**: 599-617.
- [11] Svetozar P. **Fundamentos de economía**. Fondo de Cultura Económica, Mexico 1985.
- [12] Werlin H. The Consequences of corruption: the ghanaiian experience. *Political Science Quarterly* 1973; **88(1)**: 71-85.
- [13] You J.S., Khagram, S. A comparative study of inequality and corruption. *American Sociological Review* 2005; **70**: 136-157.

CHAPTER 3:

Individual's religiosity enhances trust: Latin American evidence for the puzzle⁸

Introduction

In recent years, and after a long period of neglect, the economic profession has begun to devote increasing attention to religion. This “emerging” discipline, known as the *Economics of Religion*, has two prominent approaches: the economic analysis of religious behavior within an economic model, and the study of the consequences of religion and religiosity on economic behavior (see

⁸Joint paper with Pablo Brañas-Garza and Dayna Zacylcever, published in *Journal of Money, Credit and Banking* 41(2-3): 555-666.

Iannaccone [7]). This paper falls in the second sphere.⁹ This study shows that *individual religiosity* (both denominations and practise) is positively correlated with *trust attitudes* (forwards other subjects, institutions and the market system).

The effect of any *religious framework* on economic behavior is not a trivial issue. Imagine for instance a religion which imposes constraints upon individuals¹⁰ and that these restrictions might affect economic behavior. In this case, the whole economic system would then be driven by such an institution. Guiso et al. [11] [GSZ hereafter] note that there is something intrinsic to certain religions that constrains subjects and inhibits economic growth.

The most prominent research subject has been the relationship between religion, education and human capital investment. In a seminal work, Azzi–Ehrenberg [1] used a classical intertemporal choice model to explore the *secularization hypothesis*¹¹ that predicts a negative effect of education on church-going¹² (and religious activities). However, recent empirical studies show

⁹The list is not exhaustive. A third line of research might include the study of religious markets, while a fourth could be related to *Religious Economics* in the normative sense. The most obvious example of the latter is *Islamic Economics*, although the Association of Christian Economists (ACE) has a similar motivation.

¹⁰An obvious example could be the Koranic precept (al–Qur’an 30:39) which prohibits Muslims from charging interest rates (*ghara*) .

¹¹See also Stark and Finke (2000), among others, for ideas on secularization.

¹²Specifically the model shows that the higher the wage the smaller the attendance.

both positive and negative effects of schooling and education (and earnings) on religious activity (and vice versa). A clear example of these controversial results is the work by Shoshana Neuman. Using a sample of Israelis, Neuman [8] shows a *negative* influence of religiosity on education. Yet with Brañas-Garza [5] she illustrates just the opposite effect (a positive correlation between education and church-attendance) for Spanish Catholics.

According to Sacerdote and Glaeser [12], there are positive spillover effects of religion on education given that religious participation enlarges networking. Education increases the returns from network participation and other forms of *social capital*.¹³ Therefore, highly educated people participate more in social church-related activities. Barro and McCleary [2] offer a different explanation based on the idea that both religious belief and scientific analysis both require a considerable degree of abstraction. Thus, highly educated people would also be more able or willing to use such reasoning to support religious beliefs and would therefore be more religious –in sharp contrast to Weberian theses.

¹³Although the scope of social capital varies considerably in the literature, a broad definition of the concept refers to “*the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development*” (World Bank 1998[15]) “*by reducing transaction costs, promoting cooperative behaviour, diffusing knowledge and innovations, and through enhancements to personal well-being and associated spill-overs*” (Productivity Commission 2003[10]).

The other main research field is the nexus between religion and economic growth. Barro and McCleary [3] explore the role of individual religious beliefs and church attendance on economic growth between 1965 and 1995, using international survey data. They find that individual variables correlate to economic performance: church attendance is negatively correlated with growth rates, while the correlation between religious beliefs (particularly, belief in hell) and economic growth is positive. The use of instrumental variables allowed the authors to isolate the direction of causation from religiosity to economic performance. They argue that “*stronger religious beliefs stimulate growth because they help to sustain specific individual behaviors that enhance productivity*” (such as honesty¹⁴, the work ethic, thrift and openness to strangers).¹⁵ For given beliefs (output), higher levels of church attendance (input) tend to depress economic growth because more resources are used up by the religious sector. The net effect of an increase in church attendance on economic growth would depend on the influence of this increase in beliefs, which in turn affects growth.¹⁶

¹⁴See the paper by B. Torgler (2006[14]) which connects religiosity and tax morale.

¹⁵“*Beliefs in heaven and hell might affect these traits by creating perceived rewards and punishments that relate to “good” and “bad” lifetime behavior*” (Barro and McCleary 2003[3], p. 771).

¹⁶Although the correlation between church attendance and growth is negative, the relationship found between economic growth and religiosity is due to the simultaneous in-

Putnam [11] proposes a new source: he explains economic experiences in Italy by the lack of TRUST toward others that presumably characterizes the Catholic tradition. Following these ideas, other authors like Zak and Knack [16] [ZK hereafter] and GSZ [11] connect *individual religious attitudes, trust, and economic growth*.

ZK develop a model in which agents deal with investment brokers but they have a moral hazard problem: the brokers may cheat their clients.¹⁷ Individuals can spend time on investigating their broker's loyalty at a cost. "*Because trust reduces the cost of transactions (i.e. less time is spent investigating one's broker), high trust societies produce more output than low trust societies*" (ZK [16], p. 296). Another salient idea of their model is that the greater the social (ethnic, religious, etc.) distance between subjects, the greater the incentives to cheat.¹⁸ Their model has two outstanding results: high-trust societies have higher growth rates, and social polarization diminishes growth (via a reduction in trust).

The empirical part of ZK finds support for both ideas using a sample of 41

clusion of measures of church attendance and religious belief. In this sense, for given religious beliefs, increases in church attendance tend to reduce economic growth; and, for given levels of church attendance, increases in religious beliefs tend to increase economic growth.

¹⁷Individuals can only access the capital market through an investment broker, who possesses more information about the actual return on investment than his clients do.

¹⁸Basically they follow the Hamilton Rule.

countries (WVS dataset). First, they observe that growth rates are positively correlated with trust, and second, they find a negative correlation between the Gini Index and other measures of social distance and trust. The positive association between trust and growth holds even when investment/GDP rate is included in the model, which implies that trust may also affect growth through a secondary channel which is not explained by investment motives.

GSZ [11] analyze (using WVS) the relationship between religion and several societal attitudes (regarding trust and cooperation, women, the government, the law, the market economy and thrift) that might impact economic growth. They find that in general: *i*) there is a positive relationship between religion and trust (toward others, in the government, in the legal system), *ii*) religious people are more intolerant and more conservative toward women, although there is great variability among denominations, and *iii*) Christian religions are positively associated with attitudes that might foster economic growth.

As regards the effect of religious denominations on growth rates, Barro and McCleary [3] and ZK [16] both provide some evidence but it is not conclusive. For the former (as in GSZ [11]) there is a positive Catholic effect on economic growth; in contrast, ZK [16]) find negative effect of Catholic

denomination on trust. The other salient question is whether the Protestant denomination (vs. Catholic) is more beneficial for economic growth, that is, the Weberian thesis. GZS [11] do not find a definitive answer. “*On average, Christian religions are more positively associated with attitudes that are conducive to economic growth, while Islam is negatively associated*” (GSZ [11], p. 280).

Our goal is to obtain (robust) empirical evidence which supports the notion that *individual religiosity reinforces individual trust attitudes and so reinforces “the economic link”* idea. Our study will explore the role of Catholicism on social capital.

We examine the link between subjects’ religiosity and *trust* in five key *institutions* (the government, the police, the armed forces, the judiciary and banks), and *trust towards others* (interpersonal trust). We also introduce other variables that reflect the individual’s view about the economic system, private firms and markets.

This paper offers evidence for one of the largest markets of religion. The *Latinobarómetro* –a survey that explores social values in Latin America¹⁹– shows that in 2004 the religious market was basically dominated by the

¹⁹The Latinobarómetro survey has been conducted annually since 1995 by the Latinobarómetro Corporation, a private non-profit organization located in Santiago, Chile.

Catholic *denomination*. In a sample of 19,372 individuals, 72% declare themselves to be Catholics, 15% are Evangelical/Protestants, 3% belong to other religions,²⁰ while 10% have no religious affiliation.²¹ Among those who declare a religious affiliation, these percentages go as high as 80% for Catholics and 16.6% for Evangelical/Protestants. These figures are shown in Table 1 below.

Although Catholicism is the dominant religion throughout Latin America, Venezuela, Ecuador, Paraguay, Colombia and Argentina are, in this order, the most predominantly Catholic nations in our sample: more than 80% of all respondents profess this religion (about 90% if we only consider people who declare some religious affiliation). Mexico, Peru and Bolivia also exhibit high levels of Catholic observance in their religion markets. On the other hand, Uruguay, El Salvador and Honduras present the lowest fraction of Catholic people among their populations (just under 50%).

The *evangelical denomination accounts for an important and increasingly large fraction of the religion market* in Honduras, Guatemala and El Salvador (about 30%). In general, the evangelical churches in the region have enjoyed

²⁰Including: Jehovah's Witnesses 0.9%, Adventists 0.6%, Mormons 0.5%, Afro-American Cults, Umbanda, etc. 0.3%, Jewish 0.1%.

²¹Among these: believers 1.6%, agnostics/atheists 1.2% and none 7.6%

a leap in growth in recent decades which has been accompanied by a decline in the number of adherents to the Catholic faith (see Iannaccone 1998[7]).

TABLE 1: RELIGIOUS MARKETS IN LATIN AMERICA, 2004

Country	Catholic	Evangelic/ Protestant	Other	No religion
Argentina	82.4%	7.8%	1.9%	7.9%
Bolivia	76.6%	17.7%	2.9%	2.9%
Brazil	69.8%	19.0%	4.7%	6.5%
Chile	66.3%	13.9%	1.8%	18.1%
Colombia	82.8%	2.3%	2.1%	12.8%
Costa Rica	65.4%	20.7%	2.7%	11.2%
Dominican Rep.	70.3%	13.4%	4.0%	12.3%
Ecuador	85.5%	8.2%	1.8%	4.5%
El Salvador	53.5%	29.0%	2.7%	14.8%
Guatemala	58.6%	31.8%	2.3%	7.3%
Honduras	55.1%	32.0%	2.4%	10.5%
Mexico	79.4%	4.4%	1.3%	14.9%
Nicaragua	63.6%	25.9%	3.1%	7.4%
Panama	80.6%	15.4%	2.3%	1.8%
Paraguay	84.6%	6.0%	2.2%	7.2%
Peru	79.0%	13.3%	5.7%	2.0%
Uruguay	52.9%	6.4%	3.7%	37.0%
Venezuela	85.8%	6.1%	2.0%	6.1%
Total	71.9%	14.9%	2.8%	10.4%

Table 1 shows that Honduras, El Salvador, Guatemala and Nicaragua are the most “competitive” religious markets in the region because of the important “market share” held by the Evangelical/Protestant denomination. On the other hand, Colombia, Mexico, Venezuela and Paraguay, followed by Ecuador and Argentina -the predominantly Catholic Latin American countries- exhibit the most concentrated markets, with very few respondents

out of the main club.

The latter observation means that the Catholic religion is the most prominent club within these societies. This is not trivial because networking benefits or pure Azzi–Ehrenberg’s “consumption motives” arising from religious practise –churchgoing for instance– are much greater in this denomination (see Sacerdote and Glaeser 2001[12]). On the other hand, belonging to a minority could be much more costly (see GSZ(2003 [11])).

Finally, the level of religious practise (*attendance*) is also noteworthy. Of the 17,579 individuals (90% of the sample) who declared themselves to have some religious affiliation,²² 2,217 (12.6%) are *very observant*; 6,088 (34.6%) are *observant* and 7,155 (40.7%) are *not very observant*. 1,976 subjects (11.2%) declared themselves to be *non-observant*, while the remaining 143 did not answer or did not know.

We explore the Latin American database by means of ordered probit models, controlling for country fixed effects. We consider two model specifications for each dependent variable. The first (# 1) aims to test the relationship between religious practise (*attendance*) and the attitudes considered, controlling for the Catholic bias of the sample.

²²The remaining 1,793 respondents declared that they had no religious affiliation.

Following GZS [11], we consider a second specification in order to distinguish the effect of religiosity from that of adhering to a country's dominant religion and, therefore, being part of the majority.^{23,24} This model (# 2) differs from the first in the religious variables considered. We include a dummy which captures those individuals who declared any religious denomination (*any religious affiliation*). A second dummy controls for the effect of religious practise and affiliation to the dominant religion, Catholicism (*active Catholics*). The most interesting results are summarized below:

i) Trust towards others is correlated with religious practise. In sharp contrast to the previous literature (see Putnam [?] or La Porta *et al.* [9]), the signs of *Catholic affiliation* and *practise* are also positive (and significant).

ii) There is a positive correlation between trust in the government, in the police, in the judiciary, and religious practise in general. Similar results are found for Catholics.

²³“A dominant religion often becomes enmeshed with the national culture and transmitted from generation to generation, not necessarily because of some deep convictions but by force of habit. Thus, being raised religiously and attending the services of the country's dominant religion might mean very different things from being raised religiously and attending the services of a minority religion” (GZS, 2003[11]). The attitudes of individuals who belong to minorities living in countries dominated by people of different religious denominations may be affected by the discrimination they suffer, regardless of their religiosity level.

²⁴We also introduced a dummy for those individuals who declare themselves as Protestants, but it was never significant.

iii) Correlations between religious practise (and Catholic affiliation) and attitudes toward the *market system, the role of the market, and private firms* are very weak but never negative.

Thus, our paper shows the initial pieces of the puzzle which links religion and social capital. The results are given for religious practise (regardless of religious affiliation) after controlling for the Catholic denomination. This is important because it separates Catholic bias from pure effects arising from personal involvement in any religion.

Hypotheses

Following ZK [16] we will check if subjects' trust in institutions and/or rules is correlated to religiosity. Thus, our goal is to obtain *empirical evidence about the correlation between individual religious attitudes and trust attitudes*. Building upon the analysis of GZS [11], we use several measures of trust instead of only one.

We also study the effect of religiosity on attitudes toward the market and the economic system.

In the following, HORIZONTAL trust will refer to the level of trust among

peers, and VERTICAL trust to the confidence that individuals have in institutions (the government, the police, etc.).

In his study on Italian Catholics, Putnam [11] attributes the prevailing lack of trust toward others in southern Italy to the country's strong Catholic tradition. He remarks that the Catholic tradition enlarges the vertical bond with the Church by undermining the horizontal bond with fellow citizens. Interestingly, in their cross-country analysis, La Porta et al. [9] find some evidence for this theory. We will explore these effects among Latin-Americans.

In short, in the next sections we will explore the connection between individual religiosity and several attitudes. Specifically, we will check if individual religiosity affects both vertical and horizontal trust, and we will study the Catholic bias.

Database and Methodology

The measures regarding individuals' attitudes, which are used as dependent variables in our models, were based on the following questions:

- Horizontal trust: Generally speaking, would you say that most people can be trusted (1), or that you cannot be too careful in dealing with people

(0)?

- Vertical trust: How much confidence do you have in each of these institutions (government, police, armed forces, judiciary, banks): a great deal of confidence (4), quite a lot of confidence (3), not very much confidence (2), or none at all (1)?

- Attitude toward the market system (“system”): Generally speaking, would you say that you are very satisfied (4), quite satisfied (3), not very satisfied (2), or not at all satisfied (1) with how the market economy performs in your country?

- For each of the following statements can you tell me how much you agree with each (strongly agree (4), agree (3), disagree (2), or strongly disagree (1))?: i) the market economy (“market”) is the only system which will lead to the development of the country; ii) private firms (“firm”) are essential to the country’s development.

We also included variables related to individuals’ characteristics:

- Health: In the last twelve months, would you say that your physical health has been very bad (1), bad (2), fair (3), good (4), very good (5).

- Socio-demographic variables: *gender, age, maritalstatus, education*.²⁵

²⁵Omitted values are *Edu1* (illiterate) and *Edu2* (incomplete primary education). The remaining values are: *Edu3* (primary education), *Edu4* (incomplete secondary educa-

- Deprivation index (*dindex*) built by considering the ownership of several goods: television, refrigerator, home, computer, washing machine, telephone, car, second home for holidays, drinking water, and hot water.

Finally, we used two variables regarding subjects' religiosity:

- What is your religion?
- How observant are you?: very observant (4); observant (3); not too observant (2); not observant (1).²⁶

Our purpose is to determine to what extent the different characteristics of individuals affect the formation of horizontal and vertical trust and attitudes towards firms and the market economy. In order to do so we estimate two different ordered probit models.

It is important to note that this paper differs from GSZ [11] in a number of ways: *i*) we use ordered probit models instead of OLS regression; *ii*) we use data from a new survey, the Latinobarómetro, carried out in 2004; *iii*) we capture religiosity through religious practise (a categorical variable which reflects intensity); *iv*) our variables regarding the market are different (due

tion), *Edu5* (secondary education), *Edu6* (incomplete higher education), *Edu7* (higher education).

²⁶Note that we use religious practice as a proxy of subject religiosity. Although the transfer seems sensible we must not overlook the fact that recent papers use both attendance to mass and praying as proxies of religiosity (see Brañas-Garza and Neuman 2007[5])

to the database).

Our results are shown in the next section.

Results

Before reporting the results regarding the religious factor, we analyze the set of “control” variables.

Interestingly, MALE seems to be positively correlated with horizontal trust, and more strongly with trust in the judiciary, and the armed forces. It is also correlated with favorable attitudes toward the economic system, the market, and private firms. The last on the list indicates that males are more pro-competition than women.

AGE shows a significant role in both vertical and horizontal trust, although the effects are not symmetrical. For instance, older individuals trust more in peers and in the government, but they trust less in the armed forces, the judiciary, and banks. However, satisfaction with the market system and positive view of private firms is positively correlated with age.

The role of EDUCATION is heterogeneous as well. Generally speaking, education is uncorrelated with horizontal trust, except for highly educated

people who trust more in peers. Trust in the government is negatively correlated with education level, while trust in the police is not significantly correlated. Also, education has a positive correlation with trust in banks, and highly educated people trust less in the armed forces but are more supportive of the role of private firms. In short, highly educated people believe in the market but not in institutions.

HEALTH is definitely a key factor. In almost all cases good health translates into an increasing level of both vertical and horizontal trust, and, also, a negative view about the market system and private firms.

MARITAL status also has consequences on trust. Single subjects are more trusting of peers and have a positive view of the economic system. However, single status is nearly uncorrelated with vertical trust.

The DEPRIVATION index is positively correlated with horizontal trust which implies that a lower social status is associated with more trust toward others. As expected, this index is negatively correlated with the banking system.²⁷

²⁷Our result that poor people show greater horizontal trust is, in certain sense, contrary to ZK [16]. That paper shows that the greater the polarization the less trust there is.

TABLE 2: MODELS RESULTS

	Horizontal Trust		Government		Police		Armed Forces		Judiciary	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Male	0.030*	0.042	0.030	0.028	-0.011	-0.011	0.166***	0.150***	0.081***	0.063***
	[0.029]	[0.027]	[0.019]	[0.018]	[0.020]	[0.018]	[0.021]	[0.019]	[0.020]	[0.019]
Age	0.004***	0.004***	0.004***	0.004***	0.000	0.000	-0.002*	-0.001	-0.004***	-0.003***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Edu3	0.013	0.013	-0.063***	-0.059**	-0.027	-0.024	-0.024	-0.019	0.031	0.020
	[0.046]	[0.043]	[0.030]	[0.031]	[0.031]	[0.029]	[0.033]	[0.031]	[0.032]	[0.030]
Edu4	-0.023	-0.026	-0.063*	-0.069**	0.014	-0.005	-0.027	-0.033	0.061*	0.039*
	[0.047]	[0.044]	[0.033]	[0.031]	[0.033]	[0.031]	[0.034]	[0.032]	[0.033]	[0.031]
Edu5	-0.012	0.009	-0.046	-0.056*	0.040	0.037	-0.041	-0.035	0.024	0.028
	[0.046]	[0.043]	[0.032]	[0.030]	[0.032]	[0.030]	[0.032]	[0.031]	[0.032]	[0.030]
Edu6	0.081	0.075	-0.013	-0.010	0.047	0.051	-0.037	-0.028	0.086***	0.095**
	[0.061]	[0.057]	[0.042]	[0.039]	[0.041]	[0.039]	[0.043]	[0.040]	[0.041]	[0.038]
Edu7	0.260***	0.270***	-0.027	-0.029	0.025	-0.004	-0.133***	-0.140***	0.033	0.019
	[0.056]	[0.052]	[0.040]	[0.038]	[0.040]	[0.037]	[0.041]	[0.039]	[0.040]	[0.037]
Health	0.069***	0.074***	0.109***	0.119***	0.070***	0.077***	0.056***	0.065***	0.089***	0.076***
	[0.018]	[0.017]	[0.012]	[0.011]	[0.012]	[0.011]	[0.013]	[0.012]	[0.012]	[0.012]
Married	0.095	0.064	0.030	0.033	0.034	0.035	-0.038	-0.030	0.010	0.005
	[0.046]	[0.044]	[0.035]	[0.033]	[0.034]	[0.033]	[0.035]	[0.033]	[0.034]	[0.032]
Single	0.126**	0.147***	0.054	0.051	0.045	0.034	0.006	0.003	0.037	0.025
	[0.054]	[0.051]	[0.040]	[0.038]	[0.040]	[0.038]	[0.041]	[0.039]	[0.039]	[0.038]
Divorced	0.143**	0.127**	0.010	0.003	0.016	-0.003	0.068	0.043	0.062	0.025
	[0.066]	[0.062]	[0.046]	[0.044]	[0.046]	[0.044]	[0.048]	[0.046]	[0.048]	[0.045]
Cath. Affiliation	0.073*		0.106***		0.086***		0.058**		0.046*	
	[0.039]		[0.025]		[0.025]		[0.026]		[0.025]	
Attendance	0.030*		0.073***		0.076***		0.035**		0.060***	
	[0.018]		[0.012]		[0.012]		[0.012]		[0.012]	
Active Catholic		0.071**		0.144***		0.129***		0.089***		0.056***
		[0.028]		[0.020]		[0.019]		[0.021]		[0.020]
Any Religious Aff.		0.078		0.079		0.137		0.288***		0.233***
		[0.105]		[0.090]		[0.084]		[0.087]		[0.081]
Obs.	16,557	18,590	16,866	18,954	16,927	19,022	15,712	17,633	16,571	18,612

Note: Robust standard errors in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

TABLE 2 CONT.: MODELS RESULTS

	Banks		System		Market		Firms	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Male	0.030 [0.020]	0.020 [0.018]	0.108*** [0.021]	0.111*** [0.020]	0.069*** [0.020]	0.055*** [0.020]	0.096*** [0.020]	0.085*** [0.019]
Age	-0.005*** [0.001]	-0.005*** [0.001]	-0.001 [0.001]	-0.001 [0.001]	0.002** [0.001]	0.001* [0.001]	0.004*** [0.001]	0.004*** [0.001]
EDU3	0.111*** [0.032]	0.110*** [0.030]	-0.017 [0.034]	-0.013 [0.032]	0.067** [0.034]	0.055* [0.032]	0.013 [0.031]	0.022 [0.030]
EDU4	0.189*** [0.033]	0.171*** [0.031]	0.016 [0.035]	-0.005 [0.033]	0.044 [0.035]	0.024 [0.033]	0.019 [0.033]	0.022 [0.032]
EDU5	0.179*** [0.031]	0.179*** [0.029]	0.010 [0.035]	-0.004 [0.033]	0.045 [0.036]	0.020 [0.034]	0.105*** [0.033]	0.107*** [0.032]
EDU6	0.276*** [0.040]	0.276*** [0.038]	-0.002 [0.046]	-0.022 [0.043]	0.019 [0.046]	-0.006 [0.043]	0.204*** [0.044]	0.183*** [0.041]
EDU7	0.307*** [0.038]	0.268*** [0.036]	-0.036 [0.044]	-0.071* [0.041]	-0.070 [0.046]	-0.108** [0.043]	0.224*** [0.043]	0.217*** [0.041]
Health	0.092*** [0.012]	0.094*** [0.011]	0.124*** [0.013]	0.128*** [0.013]	0.014 [0.013]	0.021* [0.012]	0.061*** [0.013]	0.059*** [0.012]
Married	-0.008 [0.035]	-0.013 [0.033]	0.098*** [0.037]	0.082** [0.035]	-0.001 [0.036]	0.000 [0.034]	0.039 [0.035]	0.034 [0.033]
Single	0.002 [0.040]	-0.011 [0.038]	0.130*** [0.043]	0.109*** [0.041]	-0.004 [0.042]	0.006 [0.040]	-0.033 [0.041]	-0.040 [0.039]
Divorced	-0.336*** [0.047]	-0.346*** [0.044]	-0.011 [0.051]	-0.002 [0.049]	-0.032 [0.050]	-0.031 [0.048]	-0.183*** [0.048]	-0.206*** [0.046]
Cath. Affiliation	0.089*** [0.025]		0.025 [0.026]		0.043* [0.026]		-0.006 [0.025]	
Attendance	0.027** [0.012]		0.040*** [0.013]		0.025** [0.013]		0.002 [0.012]	
Active Catholic		0.084*** [0.020]		0.084*** [0.021]		0.048** [0.021]		0.001 [0.020]
Any Religious Aff.		0.322*** [0.087]		0.113 [0.093]		0.014 [0.090]		-0.032 [0.091]
Obs.	16,508	18,648	15,416	17,323	14,843	16,673	15,590	17,512

Note: Robust standard errors in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

Now we focus on RELIGION.

Our model #1 in table 2 show that religious PRACTISE (*attendance*) is very important and positive. There are a number of correlations which

consistently appear to be significant regardless of the dependent variable: horizontal and vertical trust, satisfaction with the economic system, and the role of the market. Only the estimation for the role of private firms is not significant. In short,

- a) Horizontal trust is positively correlated with religious practise.
- b) There is a positive correlation between trust in the government, in the police, armed forces, banks, in the judiciary and religious practise.
- c) Practising people are more satisfied with the economic system and have a positive view of the market.

Now we focus on the CATHOLIC denomination. We obtain similar results considering self-reported Catholic affiliation (model #1) and a dummy which labels (model #2) those individuals who declare themselves Catholics and simultaneously with a high level of church-attendance (hereafter active Catholics).

- d) Like GSZ [11]), and contrary to Putnam [11]), we find a positive correlation between horizontal trust and Catholic affiliation.
- e) Vertical trust is positively and significantly correlated with Catholic affiliation and practise.

The comparisson between Catholics (#1) and active-Catholics (#2) yields

analogous results. With the exception of system we do not find differences between the two approaches.

In sharp contrast, we find that belonging to ANY RELIGIOUS AFFILIATION does not affect social capital. Model #2 shows that, once controlled by active-Catholics, pure affiliation (even to Catholic denomination) does not add any value regarding most of the attitudes considered (with the exception of trust in the armed forces, the judiciary, and the banks).

Another interesting result is the positive sign of the significant coefficients in all cases. Thus we found no negative effect of religious activity on any of the attitudes considered, regardless of religious denomination.

The same holds true with respect to the Catholic denomination, that is, we observe a positive effect of Catholicism on social capital. This positive effect is analogous to that found in Barro and McCleary [3] and GSZ [11] but the opposite to that shown in ZK [16].

We point out that the results regarding Catholic affiliation should be considered bearing in mind that we perform our analysis with a “highly Catholic” database. Therefore, there might be a “majority effect”. Unfortunately our database has this limitation.

Finally, we compare our results with those reported by GSZ [11]. We

find identical results regarding the positive effects of religiosity on horizontal trust and vertical trust in the police, the armed forces, government and the legal system (represented here by the judiciary). However, we also find some discrepancies. In particular, we do not find the negative effect of religion on attitudes toward competition as obtained by GSZ [11].

Conclusions

Following the idea that religion may affect economic performance through its effect on individual's attitudes, we explored the role of religious practise and Catholic affiliation on several attitudes that might foster economic growth. The analysis was carried out using data from 18 Latin American countries. We find a positive correlation between religion and most of the attitudes considered.

We found that trust toward others (horizontal trust) is positively correlated with religious practise and with affiliation to the dominant religion (Catholicism). As regards trust in institutions (vertical trust), our results show that there is a positive relationship between subjects' level of religiosity and their trust in five key institutions (the government, the police, the

armed forces, the judiciary and banks). We also introduced variables related to market attitudes, and found that their correlation with religiosity is not so evident, although it is never negative.

In the light of these results, this paper fits the initial pieces into the puzzle linking religion and attitudes related to the economic system using data from Latin America. However, in order to conclude that religion affects both horizontal and vertical trust and therefore reinforces its spillover on economic performance, further research is needed. In particular, it would be necessary to investigate causality from religion to the attitudes considered.

References

- [1] Azzi C., Ehrenberg R.G. Household Allocation of Time and Church Attendance. *Journal of Political Economy* 1975; **83(1)**: 27-56.
- [2] Barro R., McCleary R. Religion and Political Economy in an International Panel. *Journal for the Scientific Study of Religion* 2006; **45(2)**: 149-175.
- [3] Barro R., McCleary R. Religion and Economic Growth Across Countries. *American Sociological Review* 2003; **68**: 760-781.

- [4] Brañas-Garza P., Neuman S. Parental Religiosity and Daughters' Fertility: The Case of Catholics in Southern Europe. *Review of Economics of the Household* 2007; **5(3)**: 305-327.
- [5] Brañas-Garza P., Neuman S. Religiosity within an Economic Framework: the Case of Spanish Catholics. *Review of Economics of the Household* 2004; **2(1)**: 5-22.
- [6] Guiso L., Sapienza P., Zingales L. People's Opium? Religion and Economic Attitudes. *Journal of Monetary Economics* 2003; **50(1)**: 225-282.
- [7] Iannaccone L.R. Introduction to the Economics of Religion. *Journal of Economic Literature* 1998; **36**: 1465-1496.
- [8] Neuman S. Religious Observance within a Human Capital Framework: Theory and Application. *Applied Economics* 1986; **18(11)**: 1193-202.
- [9] La Porta R., Lopez-de-Silanes F., Shleifer A., Vishny R. Trust in Large Organizations *American Economic Review* 1997; **87(2)**: 222-279.
- [10] Productivity Commission. Social Capital: Reviewing the Concept and its Policy Implications. *Research Paper 2003*, AusInfo, Canberra.

- [11] Putnam R. D. **Making Democracy work. Civic tradition in modern Italy.** Princeton, Princeton University Press 1993.
- [12] Sacerdote B., Glaeser E. Education and Religion. *NBER* 2001; WP 8080.
- [13] Stark R., Finke R. **Acts of Faith.** University of California Press 2000.
- [14] Torgler B. The importance of faith: Tax morale and religiosity. *Journal of Economic Behavior and Organization* 2006; **61(1)**: 81-109.
- [15] World Bank. The Initiative on Defining, Monitoring and Measuring Social Capital, Social Capital Initiative. The World Bank, Washington.1998, *WP 2*.
- [16] Zak P.J., Knack S. Trust and growth. *The Economic Journal* 2001; **111**: 295–321.

CHAPTER 4:

Educational achievement and religion: Some Latin American evidence

Introduction

Religion and religiosity may play a key role in individuals' attitudes and, more specifically on *economic attitudes*. In recent years a great number of studies (for instance, Barro & McCleary [2], Brañas-Garza & Neuman [5], Brañas-Garza et al. [4], Guiso et al. [11] or Lehrer & Chiswick [17], among many others) analyze the impact of religion on people's attitudes and economic behavior. A non exhaustive list of topics includes the connection between religion and choice of partner, marriage, divorce, fecundity, the allocation of

the woman's time at home and in the labor market, investment in human capital, investment in private education and remuneration.

The possible connection between religion and education has become in a central topic in this field. Barro & McCleary [3], Brown & Taylor [7], Chiswick [8], Lehrer [13], [16], Neuman [18], Sacerdote & Glaeser[19], among others, show the relevance of religious attitudes (and denomination) on educational choices (and performance) with mixed results, that is, positive or negative effects of religiosity on educational achievement.

This paper reports evidence of the relationship between religious denomination and educational achievement in Latin America.

Figure 1 shows the spectacular rising of some doctrines in Latin America as well the remarkable decline of the Catholic in the last 10 years (1995-2007)²⁸. This sharp change makes the study of the connection "religion-education" much more interesting.

In light of this trend, it is interesting to analyze whether different religions beliefs foster educational achievements. Its worth noting that still there are salient differences among the above religious denominations.

²⁸During the 1998 the Latinobarometro was not delivered.

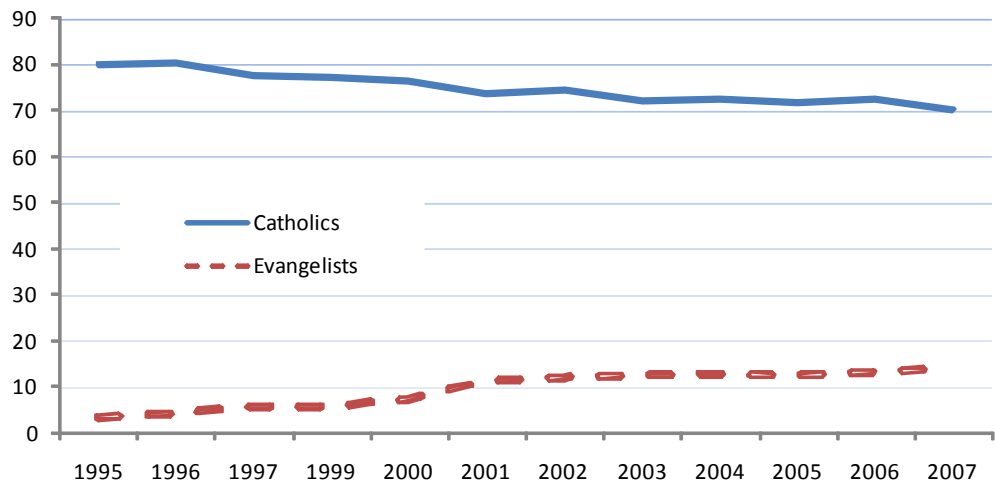


Figure 1: RELIGIOUS TREND (1995-2007)

Figure 2 shows the cumulative distribution of educational achievement by Catholics and Evangelists. It is easy to check that the Evangelist distribution (first order) stochastically dominates the Catholic one, that is, the level of education of the Evangelist groups is always below the Catholic level. Note that this is true for all the levels. This later implies that the Evangelist denomination has a (negative) effect on educational achievement.

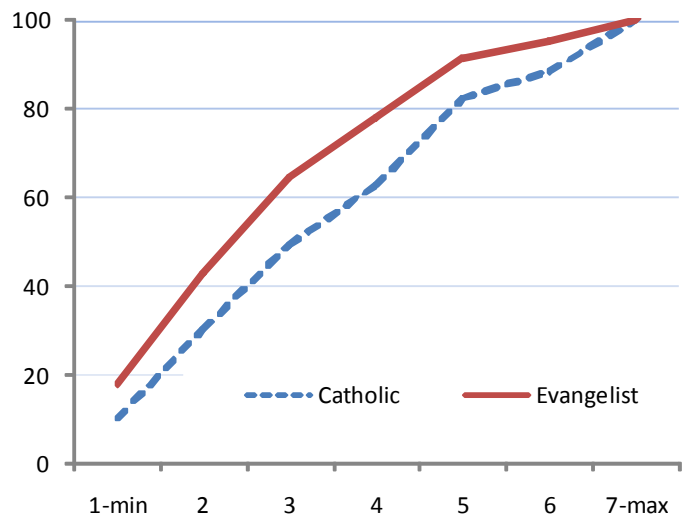


Figure 2: EDUCATION: CATHOLICS VS. EVANGELISTS IN 2004

When identifying educational achievement (or destruction) with some religious group, a person receives stimulus that could cause positive effects on productivity, on remuneration and ultimately on well-being. If we accept that individual's labor market performance and in particular, his/her remuneration depends on worker's educational level then, the analysis of the relationship between religion and educational achievement has high relevance.

This paper quantifies the effect of religious adherence on education achieve-

ment and, more precisely, the differential consequences of belonging to the Catholic or the Evangelist groups in Latin America.

The structure of this paper is as follows. Section two is devoted to the literature on the subject. Section three describes the data and methodology applied in this analysis and section four deals with the main results and conclusions.

Overview of the literature

The literature on the role that religion plays in people's behavior is not scarce. Iannaccone [12] published an extensive review of it, and Brañas-Garza et al (2009) focused on the effects of religion on educational achievement.

In a seminal work, Azzi and Ehrenberg [1] analyzed the relationship between people's educational levels and churchgoing. The authors employed a classic intertemporal choice model to explore the secularization hypothesis which predicts that education has a negative effect on churchgoing. However, recent empirical studies show that schooling and education (and earnings) could have both positive and negative effects on religious activity (and vice versa). These controversial results were obtained in the following analy-

sis. For example, considering a sample of Israelis, Neuman [18], found that religiosity has a negative influence on education and Brañas-Garza and Neuman [6] found the opposite effect: a positive correlation between education and church-attendance for Spanish Catholics. In the same vein, Freeman [10] found that there was a positive association among young black people churchgoing and their level of school attendance.

According to Sacerdote and Glaeser [19], religion has positive spillover effects on education since religious participation enlarges people's networks. Education increases the returns from network participation and other forms of social capital, and therefore highly educated people participate more in church-related social activities. Barro and McCleary [2] offered a different explanation that is based on the idea that both religious belief and scientific analysis require a considerable degree of abstraction. Thus, highly educated people would also be more able or willing to use this kind of reasoning to support religious beliefs and would therefore be more religious, which contrasts sharply with Weberian theses.

Some research is devoted to analyze the differences in educational achievement between Protestants and Catholics (in general, Protestants are further divided into fundamentalists and non-fundamentalists). Darnel and Sherkat

[9] held that among Protestant fundamentalists religion has a negative effect on people's educational achievements.

Sander [21], using data from the General Social Survey for 1980-90, showed that among men and women who are Episcopalians, Catholics, Methodists and Mormons, the positive effects of religion on educational achievement are stronger than among Baptists, Lutherans, other Protestant denominations and non-religious people.

Lehrer [16] found that in the USA the educational achievement levels of Protestant fundamentalists are significantly lower than those of non-fundamentalist Protestants and Catholics. The author employed the scheme of the demand and supply of education investment funds (Chiswick[8] and Lehrer [16]) and analyzed the effect of religious affiliation on additional investment in education and the returns from education. *“On the demand side, religious affiliation can affect the returns from investments in education: among religious groups characterized by larger benefits from schooling, the incentives to pursue education are stronger and thus a higher level of attainment is expected, ceteris paribus. On the supply side, religious affiliation can affect the parents' willingness and ability to supply funds for investments in schooling: a higher level of education is expected for religious groups in*

which the parents have a greater willingness and ability to supply funds for such investments, ceteris paribus" (Lehrer, [15]). The application of this approach yields results that are coherent with the profile that emerges from the literature: Jews have the highest levels of educational achievement, Protestant fundamentalists have the lowest and Catholics and Protestants are in the middle of the distribution.

To explain this significant difference among religious denominations, Lehrer [15] argued that the educational levels of conservative Protestants are lower than those of other Protestants because Protestant theology is more conservative, for example, it does not tend to promote investment in education. However, the author did not find evidence about that greater levels of religiosity worsen educational achievement still further, and showed that educational levels are low in heterogeneous group of people that do not identify with a religious group.

Focusing on another aspect of the relationship between religion and education, Lehrer [13] assessed the impact of religious affiliation on high school desertion. This is also a relevant line of research given that it has serious consequences in people's opportunities: the level of remuneration, the probability of being unemployed, the access to additional training courses and

marriage stability. This study showed that in the USA, non-Hispanic young Caucasians who had grown up in a non-religious or conservative Protestant situation had a lower probability than Protestants of finishing high school. Moreover, among African-Americans, the probability that conservative Protestants would complete high school is lower than that of other Protestants and in this case, Catholics also had a lower probability than Protestants of finishing high school.

Considering Hispanic people, Lehrer [13] did not find significant differences in educational achievement among religious groups. Considering this ethnic group, the author showed that there was only one significant difference: people with no religious affiliation are less likely to finish high school.

Regarding religiosity, Lehrer [14] showed that in all religious denominations, churchgoing at the age of 14 was positively connected with the probability of finishing high school.

In Australia, Vella [22] analyzed the impact of attending private Catholic secondary schools and showed that this fact hiked the probability of completing high school (17 percentage points) and so that, people could access to tertiary education.

Data

The data set is the 2004 Latinobarómetro survey. Latinobarómetro is a public opinion survey that is carried out on annual basis and around 19,000 respondents are surveyed in 18 Latin American countries (in each country the survey is representative), altogether this group of countries has more than 400 million inhabitants. The survey was conducted in the following countries: Argentina, Bolivia, Brazil, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

The survey includes socio-economic micro-data about gender, age, education, city of residence, marital status, health status, etc., and in addition there are a set of questions about religion, these set includes the following:

beliefs: *whether the person identifies with a religious belief.*

denomination: *Religious denomination.*

attendance: *How often the person attends religious services.*

Given the estimation purposes and the multinomial dependent variable, an ordered probit model was estimated and the marginal effects of changes in the significant explanatory variables were computed.

The dependent variable (*educ1*) reflects the educational achievement and it is a multinomial variable that takes seven values depending on the educational level. These values correspond to the following categories: illiterate (*min* = 1), incomplete primary, complete primary, incomplete secondary, complete secondary, incomplete university and complete university (*max* = 7).

The dataset also includes the parents' educational achievement (*educ2*). This explanatory variable is identically measured as *educ1*, that is, corresponds to the same set of categories.

The model includes the following group of independent variables:

- Socio-demographics: *Male* takes the value “1” if being a male and zero if being a female; *Age* equals respondent's age²⁹; *Bigcity* takes the value “1” if the individual lives in a big city and “0” in other case; *Country*: There is a dichotomy variable for each country that equals “1” if respondent lives in this country.³⁰
- Some additional variable such as *Privation* that approximates individ-

²⁹In this study I focus on educational achievement, so I selected people aged 25 or older, because it is expected that, at this age, a person completes the full educational cycle.

³⁰Dominican Republic is the omitted country.

ual's level of income.³¹ This index yields a continuous variable that ranges from 0 to 1, zero indicates that the household has all the considered goods and one means the opposite; and *Health* that describes people's state of health and it completes the set of socio-economic indicators. Health could take five values from the worst to the best state of health.

- And, finally, *Religious denomination* labels. We consider three main cases:
 - *Catholic* = 1 if the individual states that he/ she identifies with the Catholic faith and “0” in other case.
 - *Evangelical* = 1 if the individual states that he/ she belongs to an Evangelical church (unspecified).
 - *Other* = 1 if the individual states that he/ she belongs to any of the following religious groups: Baptist Evangelical, Methodist Evangelical, Pentecostal Evangelical, Adventist, Jehovah's Wit-

³¹I used the index of household goods privation (privation), which gives a weighting if the household possesses a particular good depending on how generalized the consumption of this good is in the sample as a whole. If a household does not have particular good and most households do have it, this lack will have a high weighting in the aggregated privation index. On the other hand, if the household has not a good and most households in the sample to not have it either then this lack will have a very low weight in the privation index.

nesses, Mormon, Protestant, Afro-American cults, Umbanda, etc., believer, does not identified with a church, or unspecified other.

Note that, a group of individuals was omitted from the subject pool. Those people who do not belong to any religious group (those who answered that they are agnostic, atheist or that they do not identified with a specific religious group).

In addition, we elaborate two variables to capture the relative importance of the Catholic and the Evangelical faiths in respondent's country of residence. Theses variables seek to grasp the religious context in each country: *share_cat* and *share_evan*.

Table 1 shows the descriptive statistics of the main variables of the study. Our dataset provides a balance distribution of males/females; additionally, our data reflects a general improvement of education from parents to offsprings ($educ1 - educ2 = 1.1 > 0$).

Table 2 completes the information provided in figure 2. It shows the educational achievement for Catholics, Evangelicals and others. It can be seen that almost 65% of Evangelicals have completed primary school or less as an investment in education while the figure for Catholics is 48%.

Table 1: MAIN VARIABLES (STATS)

	Mean	St. dev.
<i>a)</i> education	3.72	1.83
education (parents)	2.60	1.64
<i>b)</i> male	0.48	0.50
age	43.78	14.33
bigcity	0.47	0.49
privation	0.39	0.26
health	3.44	0.87
<i>c)</i> catholics	0.72	0.44
evangelist	0.12	0.33
other	0.05	0.23
share_cath.	71.90	11.27
share_evang.	14.70	9.13

At the bottom of the table, 8% of Evangelicals have attended higher education level while among Catholics the figure is nearly 18%.

Table 2: DENOMINATIONS & EDUCATION

<i>level</i>	<i>value</i>	<i>Catholics</i>	<i>Evangelists</i>	<i>Others</i>
illiterate	1	10.3	18.0	8.7
incomplete primary	2	19.6	24.5	21.9
complete primary	3	19.1	22.2	17.1
incomplete secondary	4	13.7	13.3	12.7
complete secondary	5	19.4	13.3	21.1
incomplete university	6	6.3	3.8	6.4
complete university	7	11.5	4.8	12.1

$N = 9754$ $N = 1701$ $N = ??$

Figure 3 shows the distribution of subject's level of education in the two cases, Catholics (left) and Evangelicals (right). Figure 3 also reports parental education, that is, the responders father's level of education. An interesting approach is provided by the comparisson by figures for parents/offsprings in both sub-samples: it can be seen that educational achievements of Evangelicals are clearly poorer than those of Catholics.

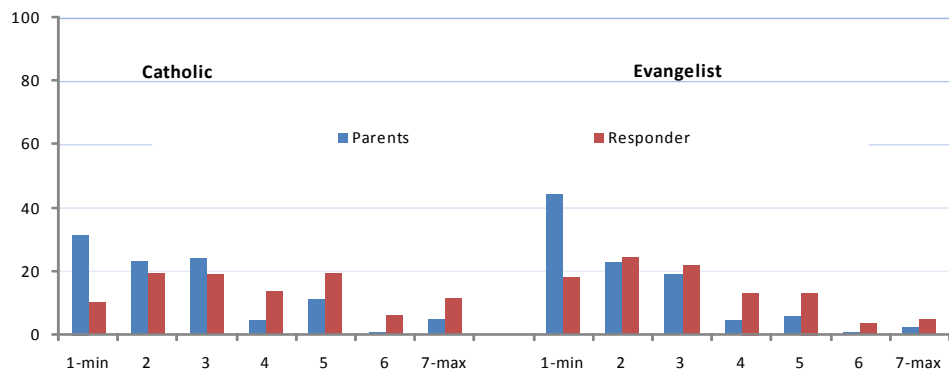


Figure 3: GENERATIONAL ACHIVEMENT (PARENTS/RESP.)

Results

I estimated two versions of the model.

- The first version considers country fix effects (Table 3) and,
- the second version includes two variables that reflect some country characteristic. In particular, I included the share of Catholics and Evangelicals in the country (Table 5).

The first version of the model indicates that the significant variables that shape individual’s educational achievement are: gender, age, evangelical, educ2, bigcity, privation and health.

Table 3: MODEL 1

	educ1	educ1	educ1	educ1
male	0.129***	0.109***	0.111***	0.091***
	[0.020]	[0.020]	[0.021]	[0.021]
age	-0.024***	-0.017***	-0.018***	-0.020***
	[0.001]	[0.001]	[0.001]	[0.001]
catholic	-0.024	0.025	0.046	-0.007
	[0.038]	[0.038]	[0.038]	[0.039]
evangelist	-0.206***	-0.120**	-0.117**	-0.132***
	[0.047]	[0.048]	[0.048]	[0.050]
other	0.019	0.060	0.060	0.061
	[0.057]	[0.057]	[0.057]	[0.055]
educ2		0.373***	0.3545***	0.302***
		[0.009]	[0.009]	[0.009]
bigcity			0.319***	0.209***
			[0.022]	[0.023]
dindex				-1.510***
				[0.052]
healths				0.129***
				[0.013]
Observations	13455	13455	13455	13227
Pseudo R-squared	0.07	0.13	0.13	0.16
Nota: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Note: country coefficients not reported.

More specifically:

It is found that a *better socio-economic situation* (measured by privation, less privation of goods in the household) and a better state of health (health) hike the probability of attaining higher educational achievement.

Individuals who live in bigger cities, who are *male* and who are *younger* tend to have a higher level of educational achievement.

I find a close relationship between a person's education level and the level achieved by his/her parents: the better the performance of his/her parents, the more likely that their children show a good performance.

Regarding the effect of *religious groups*, which is the main motivation in this analysis, I find that while being Catholic does not play relevant role; however, being evangelical appears to be significant. The model shows that identifying with this religious group impacts negatively on an individual's chances of achieving a higher educational level.

Result 1: belonging to an Evangelical church increases the probability of worsening educational performance.

In the second version of the model (model 2, table 4), instead of dummy variables per country of residence, I consider *the religious context of the country*, as indicated by the share of people that identify with Catholic or Evangelical faith (*share_cat* and *share_evan*, respectively).

Firstly, the results for the socio-economic variables remain unchanged with the same level of significance and sign as in the first version of the model.

Secondly, the model shows a very interesting result: the religious context matters. In particular, both variables are significant and the results are the

following:

Table 4: MODEL 2

	educ1	educ1	educ1	educ1
male	0.119***	0.097***	0.097***	0.084***
	[0.020]	[0.020]	[0.020]	[0.021]
age	-0.022***	-0.015***	-0.015***	-0.018***
	[0.001]	[0.001]	[0.001]	[0.001]
catholic	-0.052	-0.000	0.009	-0.030
	[0.038]	[0.037]	[0.037]	[0.037]
evangelist	-0.212***	-0.127***	-0.129***	-0.133***
	[0.045]	[0.046]	[0.046]	[0.047]
other	-0.049	0.007	-0.004	-0.014
	[0.053]	[0.053]	[0.053]	[0.051]
share_cat	-0.005***	0.001	0.001	0.006***
	[0.001]	[0.001]	[0.001]	[0.001]
share_evan	-0.035***	-0.020***	-0.018***	-0.009***
	[0.001]	[0.001]	[0.001]	[0.001]
educ2		0.390***	0.374***	0.324***
		[0.009]	[0.009]	[0.009]
bigcity			0.233***	0.119***
			[0.021]	[0.021]
dindex				-1.260***
				[0.045]
healths				0.097***
				[0.012]
Observations	13455	13455	13455	13227
Pseudo R-squared	0.04	0.12	0.12	0.14
Nota: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%				

In societies with a high level of Catholic participation, this variable is not a significant determinant of achieving a higher educational level (the sign is negative and positive in the final model, and the estimated coefficient is always 0.00). Depending on Result 1, if Evangelicals participate in the country with similar intensity as Catholics do, the impact on educational

achievement is negative.

These results can be clearly seen by analyzing the marginal effects of the following variables: catholic, evangelical, share_cat and share_evan, which are given in Table 5.

Table 5: MARGINAL EFFECT

	Predict with countries	Marginal effect: evangelist	Predict with share	Marginal effect: share_cat	Marginal effect: share_evan
Illiterate	0.0562	0.0160	0.0640	-0.0007	0.0012
Incomplete elementary	0.2453	0.0308	0.2425	-0.0013	0.0021
Complete elementary	0.3238	0.0021	0.3103	-0.0002	0.0003
Incomplete secondary	0.1603	-0.0121	0.1582	0.0004	-0.0008
Complete secondary	0.1548	-0.0224	0.1588	0.0010	-0.0016
University incomplete	0.0321	-0.0068	0.0346	0.0003	-0.0005
University Complete	0.0274	-0.0076	0.0316	0.0004	-0.0007

Considering the first version of the model, it is found that the impact of evangelical and share_evan is negative from incomplete secondary onwards. This means that evangelical and share_evan reduce the probability of attaining the incomplete secondary level or higher levels.

As regards share_cat, the impact on the probability of attaining the lowest levels up to complete primary is negative and for others levels, the impact is positive.

Regarding complete secondary and complete university levels, the model shows that the mean probability of complete secondary is 15.5%, but if the individual identifies with Evangelical faith the probability is 13.2%. Moreover, the probability of attaining complete university is 2.7%, but it is only 1.9% for Evangelicals.

The second version of the model shows the following marginal effects: the mean probability for complete secondary is 15.9%, but in a Catholic context it is 16.0% and in an Evangelical context 15.7%.

The mean probability for complete university is 3.2% and in a Catholic context it is also 3.2% but in the Evangelical context it is up to 3.1%.

Result 2: there is a negative relationship between the average educational level in the country and the percentage of Evangelical in the country, but the relationship between educational achievement and the percentage of Catholics is positive.

Conclusion

The aim of this paper is to analyze the impact of both individual's religious belief and the religious context of his/ her country of residence on the indi-

vidual's educational achievement levels and on the average educational level in the country.

In Latin America, where participation in Evangelicals religions is increasing, two important results emerge:

- i)* Belonging to an Evangelical denomination increases the probability of low educational achievement.
- ii)* Given a specific Latin American country, there is a negative relationship between individual's educational achievement and the share of the Evangelical church in that country. Conversely, the relationship with the percentage of Catholics is positive.

References

- [1] Azzi C., Ehrenberg R.G. Household Allocation of Time and Church Attendance. *Journal of Political Economy* 1975; **83 (1)**: 27-56.
- [2] Barro R., McCleary R. Religion and Political Economy in an International Panel. *Journal for the Scientific Study of Religion* 2006; **45 (2)**: 149-175.

- [3] Barro R., McCleary R. Religion and Economic Growth Across Countries. *American Sociological Review* 2003; **68**: 760-781.
- [4] Brañas-Garza P., Rossi M., Zaccarelli D. Individual's religiosity enhances trust: Latin American evidence for the puzzle. *Journal of Money, Credit and Banking* 2009; **41**: (1-2): 555-666.
- [5] Brañas-Garza P., Neuman S. Parental Religiosity and Daughters' Fertility: The Case of Catholics in Southern Europe. *Review of Economics of the Household* 2007; **5(3)**: 305-327.
- [6] Brañas-Garza P., Neuman S. Religiosity within an Economic Framework: the Case of Spanish Catholics. *Review of Economics of the Household* 2004; **2 (1)**: 5-22.
- [7] Brown S., Taylor K. Religion and education: evidence from the National Child Development Study. *Journal of Economic Behavior and Organization* 2007; **63(3)**: 439-450.
- [8] Chiswick B. Differences in education and earnings across racial and ethnic groups: tastes, discrimination and investment in child quality. *The Quarterly Journal of Economics* 1988; **103(3)**: 571-597

- [9] Darnell A., Sherkat D. The impact of protestant fundamentalism on educational attainment. *American Sociological Review* 1997; **62(2)**: 306-315
- [10] Freeman R. Who escapes? The relation of churchgoing and other background factors to the socioeconomic performance of black male youth from inner-city tracts. In Freeman and Holzer (eds.) **The black youth employment crisis**. University Chicago Press, 1986.
- [11] Guiso L., Sapienza P., Zingales L. People's Opium? Religion and Economic Attitudes. *Journal of Monetary Economics* 2003; **50(1)**: 225-282.
- [12] Iannaccone L. R. An introduction to the economics of religion. *Journal of Economic Literature* 1998; **36(3)**: 1465-1495
- [13] Lehrer E. Young women's religious affiliation and participation as determinants of high school completion. *D.P. IZA* 2005; **1818**.
- [14] Lehrer E. Religious affiliation and participation as determinants of women's educational attainment and wages. *D.P. IZA* 2005; **1725**.
- [15] Lehrer E. Religion as a determinant of economic and demographic behavior in the United States. *D.P. IZA* 2004; **1390**.

- [16] Lehrer E. Religion as a determinant of educational attainment: an economic perspective. *Social Science Research* 1999; **28**.
- [17] Lehrer E., Chiswick C. Religion as a determinant of marital stability. *Demography* 1993.
- [18] Neuman S. Religious Observance within a Human Capital Framework: Theory and Application. *Applied Economics* 1986; **18(11)**: 1193-202.
- [19] Sacerdote B., Glaeser E. Education and Religion. *NBER working paper* 2001; **8080**.
- [20] Sander W. Religion and human capital. *Economic Letters* 2002; **75(3)**: 303-307
- [21] Sander W. The effects of ethnicity and religion on educational attainment. *Economics of Education Review* 1992; **11(2)**:119-135.
- [22] Vella F. Do catholic schools make a difference? Evidence from Australia. *Journal of Human Resources* 1999; **34(1)**: 208-224
- [23] Rose-Ackerman S. Trust, honesty and corruption: reflection on the state-building process. *European Journal of Sociology* 2001; **42**: 27-71.

CHAPTER 5:

Conclusiones

El reconocimiento de que las diferencias en el desempeño económico, tanto a nivel de los individuos o las familias como de los países, no pueden ser explicadas exclusivamente en base a los factores tales como el capital físico, los recursos naturales y el capital humano ha llevado en las últimas décadas a investigar el impacto en ese desempeño del capital social.

Grootaert y Van Bastelaer [1] proponen una noción de capital social que abarca tres dimensiones: señalan que a nivel micro el capital social comprende las redes horizontales de individuos y familias y las normas y valores asociados subyacentes en estas redes; a nivel meso captura las relaciones horizontales y verticales entre grupos; y a nivel macro abarca el entorno institucional y

político que está detrás de toda actividad económica y social.

El capital social, así definido, que permite la agilización de las transacciones entre individuos, familias y grupos, puede adoptar tres formas:

1. la participación de los individuos en redes sociales incrementa la disponibilidad de información (referida, por ejemplo, a localización de nuevos mercados o fuentes de crédito) y reduce sus costos;
2. la participación en redes locales y las actitudes de confianza mutua facilitan a los grupos alcanzar decisiones e implementar acciones colectivas;
3. las redes y ciertas actitudes reducen el comportamiento oportunista por parte de miembros de la comunidad: las presiones sociales y el miedo a la exclusión pueden inducir a los individuos a adoptar determinado comportamiento esperado para beneficio del grupo.

Entre los diversos indicadores de capital social utilizados en los estudios empíricos se destacan los siguientes:

Confianza generalizada: medida de capital social a nivel micro, horizontal, con característica de bien público, que operaría principalmente reduciendo los costos de transacción.

Confianza en las instituciones (gobierno, policía, administración pública y sistema legal): medida de un elemento vertical de capital social que refleja el efecto de éste como un bien público que reduce los costos de transacción de las interacciones sociales y económicas que se dan en la sociedad (la confianza reflejaría la calidad de las instituciones).

Participación cívica (“instrumento de Putnam”): cantidad de organizaciones voluntarias en las que participa un ciudadano promedio (incluyendo partidos políticos, sindicatos, instituciones religiosas, clubes deportivos, asociaciones benéficas, organizaciones vecinales, asociaciones de comerciantes, cooperativas, grupos de mujeres, organizaciones de jóvenes, asociaciones de padres, comisiones escolares, grupos ecologistas, entre otras). Constituye una medida a nivel meso, intermedia (ni totalmente horizontal ni completamente vertical) que podría representar un elemento de capital social con características de bien cuasi-club (dado que los tipos de organizaciones considerados requieren afiliación), o implicar hasta cierto grado características de bien público. El beneficio potencial derivado de ser miembro de una organización voluntaria podría operar permitiéndole al individuo tener acceso a una mayor cantidad y diversidad de recursos e información a través de la interacción social con otros miembros.

Compromiso cívico: cantidad de actividades cívicas en las que el individuo ha participado en los últimos años (votar, contactar a alguna persona influyente, contactar a la prensa, participar en una campaña de información, intervenir en una campaña electoral, participar en una manifestación, contactar a un representante electo, notificar a la policía o a la justicia algún hecho, realizar una donación). Al ser todas actividades que implican alguna forma de cooperación en pro de un beneficio común, se considera una medida horizontal e inclusiva de capital social con características de bien público.

En cada caso, la elección de los indicadores utilizados dependerá de la disponibilidad de información, de los objetivos del estudio y de la conceptualización particular de capital social que se adopte.

Los ensayos presentados analizan diferentes temas relacionados con el capital social en distintos países. Todos tienen la característica de analizar un conjunto importante de países. Dos de ellos analizan especialmente a los países Latino Americanos (Paper #2 y Paper #3) y el restante (Paper #1) cubre 34 países que incluyen países en vías de desarrollo, países en transición y países desarrollados. Se realiza un especial énfasis en el impacto de la religiosidad y la denominación de la religión sobre distintos aspectos: confianza interpersonal, confianza en las Instituciones, confianza en la empresa privada

como agente importante del desarrollo económico, confianza en el sistema de mercado, percepción de corrupción en la sociedad y los logros educativos de por parte de los ciudadanos.

En el Paper #1 se analiza la percepción de los niveles de corrupción en un conjunto importante de países. En primer lugar se encuentra que algunas características individuales tienen un efecto significativo sobre la probabilidad de percibir un mayor nivel de corrupción: género, estado civil y nivel de educación de los ciudadanos. Por ejemplo, la probabilidad de percepción de corrupción aumenta si se considera una mujer en lugar de un hombre y cuando se consideran a las personas divorciadas. Por otra parte, las personas casadas, los que asisten con frecuencia a servicios religiosos y aquellos con un título universitario tienden a percibir menores niveles de corrupción.

En cuanto al empleo, los que trabajan en el sector privado y los que trabajan por cuenta propia tienen más probabilidades de percibir un mayor nivel de corrupción que el resto de los trabajadores.

El entorno macroeconómico aparece como un factor relevante. Un mejor desempeño económico (medido por el producto per cápita) reduce la percepción de la corrupción en tanto que la inestabilidad macroeconómica y la desigualdad (medida por la tasa de inflación y Índice Gini) la eleva.

Analizando el conjunto de países a través de su efecto marginal, se encuentra que los niveles de percepción son más altos que la media en los países Latinoamericanos, los ex países socialistas y la mayoría de los países del Este Asiático. Los efectos marginales más altos se hallaron en Brasil, México y Venezuela.

Por el contrario la mayoría de los países europeos se encuentran ubicados en el ordenamiento por debajo de la media, salvo Portugal que se encuentra en la mitad superior de la tabla. En el otro extremo están los países más ricos siendo Dinamarca el de percepción de corrupción más baja.

Por último, se muestra que el ordenamiento que surge de la modelización realizada en el artículo está altamente correlacionado con los indicadores y ordenamiento elaborado por Transparencia Internacional.

En el Paper #2 en base a la idea que la religión puede afectar el desempeño económico a través de su impacto en las actitudes individuales, se exploró el papel de la práctica religiosa y la afiliación a la fe Católica en varias actitudes que podrían fomentar el crecimiento económico.

Este análisis se realizó para 18 países de América Latina con la base del Latinobarómetro del año 2004. Se encontró una correlación positiva entre la religión y la mayoría de las actitudes ciudadanas consideradas.

La confianza hacia los demás (confianza horizontal) está positivamente correlacionada con la práctica religiosa y con la afiliación a la religión dominante (Catolicismo).

En lo que respecta a la confianza en las instituciones (confianza vertical), los resultados demuestran que existe una relación positiva entre la religiosidad de los individuos y su confianza en cinco instituciones clave (el gobierno, la policía, las fuerzas armadas, el poder judicial y el sistema bancario). También se introdujeron en el modelo variables relacionadas con actitudes hacia el mercado, no encontrando evidencia de correlación entre dichas actitudes y la religiosidad.

El objetivo del Paper #3 fue analizar el impacto de las creencias religiosas individuales y el contexto religioso de su país de residencia sobre los logros educativos individuales y sobre el nivel educativo promedio del país.

Este análisis se realizó para 18 países de América Latina con la base del Latinobarómetro del año 2004.

Dado que el punto central es el logro educativo se seleccionaron las personas de 25 y más años de edad, porque se espera que, a esta edad, una persona ha completado todo el ciclo educativo.

En América Latina, donde la participación en las iglesias Evangélicas es

cada vez mayor, se encuentran dos resultados interesantes:

- pertenecer a una iglesia Evangélica aumenta la probabilidad de bajo logro educativo;
- dado un país latinoamericano específico, se encontró una relación negativa entre logro educativo individual y la participación de la iglesia Evangélica en ese país. Al contrario, la relación con el porcentaje de Católicos es positiva.

References

- [1] Grootaert, C. y Van Bastelaer, T. (2002): Understanding and measurement social capital: a multidisciplinary tool for practitioners. *The World Bank*, Washington.
- [2] Productivity Commission. Social Capital: Reviewing the Concept and its Policy Implications (2003): *AusInfo Research Paper*, Canberra.
- [3] World Bank. The Initiative on Defining, Monitoring and Measuring Social Capital (1998): *The World Bank*, Washington.

CHAPTER 6:

Resúmenes en Castellano

Cumpliendo la normativa vigente de la Universidad de Granada a continuación se ofrece un resumen en castellano de los artículos que constituyen la tesis doctoral ya que los originales están escritos en Inglés.

artículo 1: La percepción de la corrupción

artículo 2: La religiosidad individual aumenta la confianza

artículo 3: Logro educativo y religión

Primer ensayo: The perception of corruption

En el primer ensayo (ver [1]) se estudió la percepción de la corrupción utilizando el modulo de Ciudadanía del 2004 del International Social Survey Program (ISSP [3]). Esta encuesta releva en alrededor de 40 países la opinión de los ciudadanos sobre una cantidad de aspectos de la vida política, económica y social.

El nivel de corrupción en una sociedad tiene impactos en los niveles de confianza y por consiguiente en la performance económica.

La percepción de corrupción esta teñida por aspectos culturales y en este sentido algunas acciones que en una sociedad pueden ser consideradas como corruptas en otras pueden estar socialmente aceptadas.

En este trabajo se uso una definición general de corrupción: el mal uso de la oficina pública con el propósito de la realización de ganancias privadas.

Según Cábelková [2] la realización de acciones corruptas depende de la percepción del nivel de corrupción por parte de los ciudadanos y el nivel de permisividad hacia estas acciones que manifieste el gobierno.

La percepción de la corrupción no tiene por qué estar relacionada con la experiencia real. Por consiguiente como resultado el nivel que se percibe de corrupción puede facilitar un aumento o una disminución de los niveles de

corrupción verdaderos.

En términos generales la percepción de corrupción puede favorecer la inestabilidad institucional y deteriorar la relación de confianza entre los individuos, las instituciones y el Estado.

La percepción de corrupción variará dependiendo de los valores y la moral del ciudadano. Mientras algunas personas estarán en desacuerdo con otorgar un soborno independientemente del nivel de corrupción que perciban en otros ciudadanos, la percepción tendrá un efecto importante en su conducta futura con respecto a estos actos delictivos.

La formación de la percepción de corrupción dependerá de la información a que estén expuestos los ciudadanos y su capacidad de procesar dicha información. En este sentido tienen un papel importante, la experiencia personal de los ciudadanos, la experiencia que le transmiten sus familiares y amigos y la información que dispersan los medios de prensa.

El estudio utilizó modelos probit sobre la siguiente pregunta realizada en la encuesta: teniendo en cuenta su experiencia, ¿cuán presente Ud. piensa que la corrupción está diseminada en los servicios públicos de su país?

El estudio encontró que algunas características individuales tienen un efecto significativo en la probabilidad de tener una percepción de altos niveles

de corrupción: el género, el estado civil y el nivel de educación.

Analizando las variables sobre empleo, aquellos ciudadanos que trabajan en el sector privado o son empleados por cuenta propia es más probable que perciban un nivel más alto de corrupción.

Por último aquellos que tienen una opinión más favorable sobre el funcionamiento de la democracia tienden a percibir niveles más bajos de corrupción.

El entorno macroeconómico tiene un impacto importante sobre dicha percepción. Mejor desempeño económico menores niveles de percepción de corrupción, en tanto que la inestabilidad y la desigualdad aumentan dicho nivel.

El trabajo, finalmente construye un ranking de países según los niveles de corrupción percibidos. Este ordenamiento, surgido del modelo, está altamente correlacionado con el de Transparencia Internacional.

Segundo ensayo: Individual religiosity enhances trust: Latin American evidence for the puzzle.

El objetivo del ensayo (ver [7]) busca encontrar evidencia sobre la idea respecto al impacto de la religiosidad sobre la confianza interpersonal y sobre la confianza en las instituciones (gobierno, policía, fuerzas armadas, poder judicial y el sistema bancario). En especial explora el rol del catolicismo sobre la construcción de capital social.

El trabajo utiliza la base del Latinobarómetro del año 2004 [4] ofreciendo evidencia sobre estos aspectos para uno de los más grandes mercados de religión. Esta encuesta explora los valores sociales en América Latina y se releva anualmente desde 1995 por la Corporación Latinobarómetro radicada en Santiago de Chile.

La encuesta muestra que la región es dominada por la denominación católica (72 %), seguida por la evangelista (15%) y otras denominaciones (3%), mientras que el 10 % no declara afiliación religiosa.

En el trabajo se utilizan modelos probit ordenados sobre las distintas variables dependientes.

Dichas variables dependientes se construyeron utilizando las siguientes

preguntas del Latinobarometro.

- Confianza horizontal: Hablando generalmente, Ud. podría decir que se puede confiar en la mayoría de la gente?
- Confianza vertical: Cuanta confianza tiene sobre las siguientes instituciones: gobierno, policía, fuerzas armadas, poder judicial y sistema bancario.
- Actitudes hacia el sistema de mercado: Generalmente hablando, podría decir que Ud. está satisfecho, bastante satisfecho, no muy satisfecho o no satisfecho acerca del desempeño de la economía de mercado en su país?
- Para cada una de las siguientes preguntas Ud. podría decir que esta fuertemente de acuerdo, de acuerdo, en desacuerdo o fuertemente en desacuerdo i) la economía de mercado es el único sistema que puede llevar al país al desarrollo; ii) las empresas privadas son esenciales para el desarrollo del país.

Centrándose en religión se encuentra que en los modelos de confianza la práctica religiosa es positiva e importante:

- a) confianza horizontal está positivamente correlacionada con la práctica religiosa.
- b) Hay correlación positiva entre confianza en el gobierno, en la policía, fuerzas armadas, sistema bancario y la práctica religiosa.
- c) Los individuos practicantes están más satisfechos con el sistema económico y tienen una visión positiva del funcionamiento del mercado.

Focalizándonos en la denominación católica encontramos:

- d) Correlación positiva entre confianza horizontal y afiliación católica.
- e) Confianza vertical está positivamente correlacionada con afiliación y práctica católica.

Otro resultado a destacar es que no se encuentra un efecto negativo de la actividad religiosa en cualquiera de las actitudes consideradas independientemente de la denominación religiosa.

Educational achievement and religion: Some Latin American evidence

El objetivo de este estudio consiste en analizar la relación entre la denominación religiosa y el logro educativo. Para America Latina este es un tema relevante en tanto si bien el catolicismo es la religión dominante otros grupos religiosos están aumentando su peso relativo.

Con este panorama resulta de interés analizar si las diferentes creencias religiosas impulsan los niveles educativos de los ciudadanos.

Cuando los individuos se identifican con algún grupo religioso, reciben estímulos que podrían ocasionar efectos positivos sobre su productividad, su remuneración y en última instancia sobre su bienestar.

Si consideramos que el desempeño de un individuo en el mercado de trabajo y en particular su remuneración depende del nivel educativo, el análisis de la relación entre religión y logros educativos tiene suma importancia.

Lehrer [5] encontró que en USA los niveles educativos alcanzados por los fundamentalistas Protestantes son significativamente más bajos que los logrados por los Protestantes no fundamentalistas y Católicos.

Para explicar estas diferencias entre las denominaciones religiosas Lehrer

[6] argumenta que los niveles educativos de los Protestantes fundamentalistas son menores debido a que la teología Protestante es más conservadora y tiende a no promover la inversión en educación. Por otra parte, la autora no encuentra evidencia que los niveles más intensos de religiosidad disminuya los niveles educativos de los individuos.

Para este estudio se utilizó la base del Latinobarómetro mencionada en la referencia de otro de los ensayos.

Dado que se está focalizando en los logros educativos se tomaron los individuos de 25 y más años de edad, dado que a esa edad es esperable que un individuo ha completado su ciclo educativo.

Se estimaron modelos probit ordenados reflejando la variable dependiente los distintos niveles educativos alcanzados por cada individuo: analfabeto, primaria incompleta, primaria completa, secundaria incompleta, secundaria completa, universidad incompleta y universidad completa.

Focalizando el análisis en el efecto de los grupos religiosos, se encontró que ser Católico no juega ningún rol, en tanto que para los individuos Evangélicos el efecto es significativo y negativo. Por consiguiente ser Evangélico incrementa la probabilidad de empeorar la performance educativa de los individuos.

En un segundo modelo se incluyó una variable que indica el contexto religioso del país a través de la participación de los individuos que se declaran Católicos y Evangelistas en cada país.

Los resultados muestran que el contexto religioso importa: en sociedades con alta participación relativa de Católicos la variable no es significativa para explicar altos niveles de logros educativos. En el caso de la participación de Evangelistas, se encuentra un resultado significativo y negativo.

En particular se encuentra que existe una relación negativa entre los niveles de educación promedio en el país y el porcentaje de Evangelistas en el país, en tanto que la relación entre logro educativo y el porcentaje de Católicos en el país es positivo.

References

- [1] Brañas-Garza, P., Rossi, M. y Zaclicever, D. (2009): Individual religiosity enhances trust: Latin American evidence for the puzzle. *Journal of Money, Credit and Banking* **41**(2-3): 555-666.
- [2] Cábelloková (2001): Perceptions of corruption in Ukraine: Are they correct? CERGE-EI.
- [3] International Social Survey Program (2004): Módulo de Ciudadanía. ISSP
- [4] Latinobarómetro (2004). Encuesta relevada 2004. Corporación Latino-barómetro. Chile.
- [5] Lehrer (1999): Religion as a determinant of educational attainment: an economic perspective. *Social Science Research*; **28**.
- [6] Lehrer (2004): Religion as a determinant of economic and demographic behavior in the United States. *D.P. IZA* **1390**.
- [7] Melgar, N., Rossi, M., Smith, T (Forthcoming): The perception of corruption, *International Journal of Public Opinion Research*.