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Individual's Religiosity Enhances Trust: Latin American Evidence for the Puzzle

This paper explores the effect of religious observance and affiliation to the dominant religion (Catholicism) on trust in institutions and toward others, and market attitudes. The analysis is performed using a Latin American database of 20,000 respondents from 2004 by means of ordered probit models. The most interesting results are:

(i) *Trust toward others is positively correlated with both religious observance* and *Catholic affiliation* (and *practice*).
(ii) There is a *positive correlation between trust in the government, in the police, in the armed forces, in the judiciary and in the banking system and religious practice* in general. Identical positive findings are obtained for *Catholic affiliation* and *practice*, although they may be affected by a majority effect.

Moreover, there is no evidence to support the hypotheses of a negative effect of religion on social capital.

JEL codes: Z12, Z13
Keywords: trust, economic behavior, religious practice, Catholics.

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

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economic analysis of religious behavior within an economic model, and the study of the consequences of religion and religiosity on economic behavior (see Iannaccone 1998). This paper falls in the second sphere.[1] This study shows that *individual religiosity* (both denominations and practice) 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 that imposes constraints upon individuals[2] and that these restrictions might affect economic behavior. In this case, the whole economic system would then be driven by such an institution. Guiso, Sapienza, and Zingales (2003, hereafter GSZ) 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 and Ehrenberg (1975) used a classical intertemporal choice model to explore the *secularization hypothesis*[3] that predicts a negative effect of education on churchgoing[4] (and religious activities). However, recent empirical studies show 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 (1986) shows a *negative* influence of religiosity on education. Yet with Brañas-Garza (2004) she illustrates just the opposite effect (a positive correlation between education and church-attendance) for Spanish Catholics.

According to Sacerdote and Glaeser (Forthcoming), 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*.[5] Therefore, highly educated people participate more in social church-related activities. Barro and McCleary (2006) 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.

The other main research field is the nexus between religion and economic growth. Barro and McCleary (2003) explore the role of individual religious beliefs and church

1. The 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.

2. An obvious example could be the Koranic precept (al-Qur'an 30:39), which prohibits Muslims from charging interest rates (*ghara*).

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

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

5. Although 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) "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).

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 honesty,[6] the work ethic, thrift, and openness to strangers).[7] 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.[8]

Putnam (1993) 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 (2001, hereafter ZK) and GSZ 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.[9] 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, p. 296). Another salient idea of their model is that the greater the social (ethnical, religious, etc.) distance between subjects, the greater the incentives to cheat.[10] Their model has two outstanding results: high-trust societies have higher growth rates, and social polarization disminishes growth (via a reduction in trust).

The empirical part of ZK finds support for both ideas using a sample of 41 countries (WVS data set). 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 that is not explained by investment motives.

GSZ analyze (using WVS) the relationship between religion and several societal attitudes (regarding trust and cooperation, women, the government, the law, the market

6. See the paper by Torgler (2006) that connects religiosity and tax morale.

7. "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, p. 771).

8. Although the correlation between church attendance and growth is negative, the relationship found between economic growth and religiosity is due to the simultaneous inclusion 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.

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

10. Basically they follow the Hamilton Rule.

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 (2003) and ZK both provide some evidence but it is not conclusive. For the former (as in GSZ) there is a positive Catholic effect on economic growth; in contrast, ZK find negative effect of Catholic denomination on trust. The other salient question is whether the Protestant denomination (versus Catholic) is more beneficial for economic growth, that is, the Weberian thesis. GZS 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, p. 280).

Our goal is to obtain (robust) empirical evidence that 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 toward 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 America[11]—shows that in 2004 the religious market was basically dominated by the Catholic *denomination*. In a sample of 19,372 individuals, 72% declare themselves to be Catholics, 15% are Evangelical/Protestants, 3% belong to other religions,[12] while 10% have no religious affiliation.[13] 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.

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%).

11. The Latinobarómetro survey has been conducted annually since 1995 by the Latinobarómetro Corporation, a private nonprofit organization located in Santiago, Chile.

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

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

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%

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 a leap in growth in recent decades that has been accompanied by a decline in the number of adherents to the Catholic faith (see Iannaccone 1998)

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 practice—churchgoing, for instance—are much greater in this denomination (see Sacerdote and Glaeser Forthcoming). On the other hand, belonging to a minority could be much more costly (see GSZ).

Finally, the level of religious practice (*attendance*) is also noteworthy. Of the 17,579 individuals (90% of the sample) who declared themselves to have some religious affiliation,[14] 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 *nonobservant*, while the remaining 143 did not answer or did not know.

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

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. Model (1) aims to test the relationship between religious practice (*attendance*) and the attitudes considered, controlling for the Catholic bias of the sample.

Following GZS, 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.[15, 16] Model (2) differs from the first in the religious variables considered. We include a dummy that captures those individuals who declared any religious denomination (*any religious affiliation*). A second dummy controls for the effect of religious practice and affiliation to the dominant religion, Catholicism (*active Catholics*). The most interesting results are summarized below:

(i) *Trust toward others is correlated with religious practice*. In sharp contrast to the previous literature (see Putnam 1993, La Porta et al. 1997), the signs of *Catholic affiliation* and *practice* are also positive (and significant).
(ii) There is a *positive correlation between trust in the government, in the police, in the judiciary, and religious practice* in general. Similar results are found for Catholics.
(iii) Correlations between religious practice (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 that links religion and social capital. The results are given for religious practice (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.

1. HYPOTHESES

Following ZK 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, 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.

15. "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). 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.

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

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 1993 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. (1997) 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.

2. DATABASE AND METHODOLOGY

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

(i) *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)?
(ii) *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)?
(iii) *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?
(iv) 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:

(i) *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).
(ii) *Socio-demographic variables: gender, age, marital status, education.*[17]

17. Omitted values are *Edu*1 (illiterate) and *Edu*2 (incomplete primary education). The remaining values are: *Edu*3 (primary education), *Edu*4 (incomplete secondary education), *Edu*5 (secondary education), *Edu*6 (incomplete higher education), and *Edu*7 (higher education).

(iii) 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:

(i) What is your religion?
(ii) How observant are you?: very observant (4); observant (3); not too observant (2); not observant (1).[18]

Our purpose is to determine to what extent the different characteristics of individuals affect the formation of horizontal and vertical trust and attitudes toward 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 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 practice (a categorical variable that reflects intensity); and (iv) our variables regarding the market are different (due to the database).

Our results are shown in the next section.

3. 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 procompetition 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.

18. Note 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 at Mass and praying as proxies of religiosity (see Brañas-Garza and Neuman 2007).

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 that implies that a lower social status is associated with more trust toward others. As expected, this index is negatively correlated with the banking system.[19]

Now we focus on *Religion*.

Model (1) in Table 2 show that religious *practice* (*attendance*) is very important and positive. There are a number of correlations that 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,

(i) Horizontal trust is positively correlated with religious practice.
(ii) There is a positive correlation between trust in the government, the police, armed forces, banks, the judiciary, and religious practice.
(iii) Practicing 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 that labels (model (2)) those individuals who declare themselves Catholics and simultaneously with a high level of church attendance (hereafter active Catholics).

(iv) Like GSZ, and contrary to Putnam (1993), we find a positive correlation between horizontal trust and Catholic affiliation.
(v) Vertical trust is positively and significantly correlated with Catholic affiliation and practice.

The comparisson between Catholics (model (1)) and active Catholics (model (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.

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

TABLE 2

MODELS RESULTS

	Horizontal trust		Government		Police		Armed forces		Judiciary		Banks		System		Market		Firms	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Male	0.050*	0.042	0.030	0.028	−0.011	−0.011	0.166***	0.150***	0.081***	0.063***	0.030	0.020	0.108***	0.111***	0.069***	0.055***	0.096***	0.085***
	[0.029]	[0.027]	[0.019]	[0.018]	[0.020]	[0.018]	[0.021]	[0.019]	[0.020]	[0.019]	[0.020]	[0.018]	[0.021]	[0.020]	[0.021]	[0.020]	[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***	−0.005***	−0.005***	−0.001	−0.001	0.002**	0.001*	0.004***	0.004***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[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	0.111***	0.110***	−0.017	−0.013	0.067**	0.055*	0.013	0.022
	[0.046]	[0.043]	[0.030]	[0.029]	[0.031]	[0.029]	[0.033]	[0.031]	[0.032]	[0.030]	[0.032]	[0.030]	[0.034]	[0.032]	[0.034]	[0.032]	[0.031]	[0.030]
edu4	−0.023	−0.026	−0.063*	−0.069**	0.014	−0.005	−0.027	−0.033	0.061*	0.059*	0.188***	0.171***	0.016	−0.005	0.044	0.024	0.019	0.022
	[0.047]	[0.044]	[0.033]	[0.031]	[0.033]	[0.031]	[0.034]	[0.032]	[0.033]	[0.031]	[0.033]	[0.031]	[0.035]	[0.033]	[0.035]	[0.033]	[0.033]	[0.032]
edu5	−0.012	0.009	−0.045	−0.056*	0.040	0.037	−0.041	−0.035	0.024	0.028	0.179***	0.179***	0.010	−0.004	0.045	0.020	0.105***	0.107***
	[0.046]	[0.043]	[0.032]	[0.030]	[0.032]	[0.030]	[0.032]	[0.031]	[0.032]	[0.030]	[0.031]	[0.029]	[0.035]	[0.033]	[0.036]	[0.034]	[0.034]	[0.033]
edu6	0.081	0.075	−0.013	−0.010	0.047	0.051	−0.037	−0.028	0.096**	0.095**	0.276***	0.276***	−0.002	−0.022	0.019	−0.006	0.204***	0.183***
	[0.061]	[0.057]	[0.042]	[0.039]	[0.041]	[0.039]	[0.043]	[0.040]	[0.041]	[0.038]	[0.040]	[0.038]	[0.046]	[0.043]	[0.046]	[0.043]	[0.044]	[0.041]
edu7	0.260***	0.270***	−0.027	−0.029	0.025	−0.004	−0.133***	−0.140***	0.033	0.019	0.307***	0.268***	−0.036	−0.071*	−0.070	−0.103**	0.224***	0.217***
	[0.056]	[0.052]	[0.040]	[0.038]	[0.040]	[0.037]	[0.041]	[0.039]	[0.040]	[0.037]	[0.038]	[0.036]	[0.044]	[0.041]	[0.046]	[0.043]	[0.043]	[0.041]
Health	0.069***	0.074***	0.109***	0.119***	0.070***	0.077***	0.056***	0.065***	0.059***	0.076***	0.092***	0.094***	0.124***	0.128***	0.014	0.021*	0.061***	0.059***
	[0.018]	[0.017]	[0.012]	[0.011]	[0.012]	[0.011]	[0.013]	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]	[0.013]	[0.013]	[0.013]	[0.012]	[0.013]	[0.012]
Married	0.056	0.064	0.030	0.033	0.034	0.035	−0.038	−0.030	0.010	0.006	−0.008	−0.013	0.098***	0.082**	−0.001	0.000	0.039	0.034
	[0.046]	[0.044]	[0.035]	[0.033]	[0.034]	[0.033]	[0.035]	[0.033]	[0.034]	[0.032]	[0.035]	[0.033]	[0.037]	[0.035]	[0.036]	[0.034]	[0.035]	[0.033]
Single	0.126**	0.147***	0.054	0.051	0.045	0.034	0.006	0.003	0.037	0.025	0.002	−0.011	0.130***	0.109***	−0.004	0.006	−0.033	−0.040
	[0.054]	[0.051]	[0.040]	[0.038]	[0.040]	[0.038]	[0.041]	[0.039]	[0.039]	[0.038]	[0.040]	[0.038]	[0.043]	[0.041]	[0.042]	[0.040]	[0.041]	[0.039]
Dindex	0.143**	0.127**	0.010	0.003	0.016	−0.003	0.068	0.043	0.062	0.025	−0.336***	−0.345***	−0.011	−0.002	−0.032	−0.031	−0.183***	−0.206***
	[0.066]	[0.062]	[0.046]	[0.044]	[0.046]	[0.044]	[0.048]	[0.046]	[0.048]	[0.045]	[0.047]	[0.044]	[0.051]	[0.049]	[0.050]	[0.048]	[0.048]	[0.046]
Cath. Affiliation	0.073*		0.106***		0.086***		0.058**		0.046*		0.098***		0.025		0.043*		−0.006	
	[0.039]		[0.025]		[0.025]		[0.026]		[0.025]		[0.025]		[0.026]		[0.026]		[0.025]	
Attendance	0.030*		0.073***		0.076***		0.035***		0.060***		0.027**		0.040***		0.025**		0.002	
	[0.018]		[0.012]		[0.012]		[0.012]		[0.012]		[0.012]		[0.013]		[0.013]		[0.012]	
Active Catholic		0.071**		0.144***		0.129***		0.089***		0.096***		0.084***		0.084***		0.048**		0.001
		[0.028]		[0.020]		[0.019]		[0.021]		[0.020]		[0.020]		[0.021]		[0.021]		[0.020]
Any Religious Aff.		0.078		0.079		0.137		0.288***		0.233***		0.322***		0.113		0.014		−0.032
		[0.105]		[0.090]		[0.084]		[0.087]		[0.081]		[0.087]		[0.093]		[0.090]		[0.091]
Obs.	16,557	18,590	16,866	18,954	16,927	19,022	15,712	17,633	16,571	18,612	16,598	18,648	15,416	17,323	14,843	16,673	15,590	17,512

NOTES: Robust standard errors in brackets. Asterisks denote significant at 10% (*), 5% (**), and 1% (***).

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 in analogous to that found in Barro and McCleary (2003) and GSZ but the opposite to that shown in ZK.

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. 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.

4. CONCLUSIONS

Following the idea that religion may affect economic performance through its effect on individual's attitudes, we explored the role of religious practice 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 practice 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.

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