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The Economic Effects of Christian Moralities

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Abstract

This article examines the different influences that Catholicism and Protestantism exert on economically relevant values. It argues that Catholic theology and practice facilitate personal transactions while Protestantism favors values and types of moral and legal enforcement better adapted for impersonal trade. Protestantism may thus be more conducive to economic growth through anonymous exchange while Catholicism may provide better support for personal contracting. Several components of this hypothesis are confirmed using statistical models with data from the 1998 ISSP international survey on religion. These show that Protestants are more trusting of anonymous counter parties, develop more reliable institutions for legal enforcement and are more willing to spend resources on monitoring and punishing other members of the community. Catholicism is more protective of the family and small-group relationships, and provides more tolerant and less motivating beliefs. Relatively smaller and less consistent differences appear in terms of worldly personal success and incentives.

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1. Introduction

This article argues that the Catholic and Protestant branches of Christianity help produce different values with potential economic consequences. Its central hypothesis is that these two sets of beliefs and enforcement technologies reduce transaction costs in different types of economic relations and may, therefore, support different economic activities and institutions. As a consequence, they could also be conducive to different forms of economic development.

The rest of this section briefly reviews the relevant literature, as well as the methodology of this study and its main contributions.

1.1. Literature

There are numerous empirical studies on the economic effects of religion (see, for an introduction, Iannacone, 1998). In addition to abundant historical and sociological studies that rely on qualitative evidence, quantitative studies have used several types of data and strategies. However, most of these quantitative studies suffer one of two problems as a consequence of the nature of their data.

First, it is understandably hard to draw general conclusions from individual observations within a single country.

Within the sociology and economics of religion, most works focus on real variables, trying to explain the relationship between religious traits such as affiliation or participation and diverse measures of behavior and achievement at the individual level. Connections have been found, among others, between religiosity and wages (Chiswick, 1983), school attendance (Freeman, 1986), health (Ellison, 1991), and criminal behavior (Evans *et al.*, 1995). Correlation does not mean causality, however, as it is often impossible to rule out the possibility that both the religious and behavioral variables may have a common cause. In addition, Guiso, Sapienza and Zingales (2003) stress that the effect of religion is better identified using individual attitudes or values than outcomes or actual behavior. They argue that behavioral outcomes are the result of both personal attitudes and the environment, so observed outcomes may be caused by specific interactions of attitudes and environmental variables. They point out, for instance, how Catholics in the USA may have greater earnings

due to the better performance of Catholic schools. The cause, in this case, may lie in the particular and non-transferable interaction of Catholic education traditions with some US-specific variables. The problem could be even more complicated because not only attitudes but also environmental variables may be related to religious background. Catholic education may, for example, be more effective in a predominantly Protestant environment.

Second, studies that use country measurements and averages within a cross-section of countries tend to find it difficult to identify the effects of religion as it is mixed up with other institutional factors. International comparisons find significant correlations between religion and economic performance or institutions but it is difficult to ensure that they are not merely the consequence of some common causal factor.

Cross-country studies have found connections between religious characteristics or country background and a variety of country-level economic characteristics, such as values assumed to be conducive to capitalist development, as well as historical or recent economic performance. Thus, La Porta *et al.* (1997) and Inglehart (1999) find that trust is lower in Catholic countries; Blum and Dudley (2001) estimate that wages increased more in Protestant European cities between 1500 and 1750; Stulz and Williamson (2001) argue that predominantly Catholic countries tend to offer less protection to lenders because of an alleged Catholic bias against usury; Barro and McCleary (2002) obtain that growth relates positively to beliefs and negatively to the degree of “belonging” to a certain religion, which they measure as church attendance, suggesting that the effect of religion depends on efficiency in the production of belief; Inglehart and Norris (2004) confirm that the authority of established religions tends to decrease in wealthy countries.

1.2. Methodology and contributions

The methodology of this article is similar to that used by Glaeser and Glendon (1998), Sacerdote and Gleason (2001), and Guiso, Sapienza and Zingales (2003) in relying on an international collection of survey data at the individual level and controlling for fixed country effects, as well as certain personal characteristics. This within country analysis, by controlling for most potential causes, comes closer to identifying the effects of religion. In fact, with the inclusion of country controls, the effect of religion will be underestimated to the extent that it has become embedded in national traits. Our results are in line with Glaeser and Glendon

(1998) who, after modeling the incentives in Calvinist predestination, confirm empirically that Catholicism and Protestantism associate with different social interactions; and with Guiso, Sapienza and Zingales (2003), who perform an extensive comparison of personal values with potentially important economic effects across the main religions and also find that Catholicism and Protestantism offer pros and cons with respect to economic attitudes. Catholics seem to be more thrifty and more favorable to private property and competition, while Protestants tend to trust people and favor incentives more.

The present work differs from, and complements, previous works in several important ways. Primarily, previous studies are limited to a single feature, or supply heterogeneous empirical correlations between religion and economic performance or attitudes. In this second case, their findings are hard to evaluate whereas the empirical tests in this article are developed from an analytical framework that allows a set of testable hypotheses to be drawn up, painting a more systematic and theoretical picture of the links between causes and effects. Such a systematic comparative analysis is produced here by focusing on substitution effects between different moral and legal enforcement mechanisms, as well as between transaction costs in personal and impersonal relations, paying explicit attention to the homogeneity of values in addition to their level. Likewise, the effect of religion is estimated not only on values but also on a set of outcomes and some “values” that may more correctly be interpreted as proxies of the quality of the institutional framework, a kind of outcome at the social level. (Guiso, Sapienza and Zingales [2003] are probably right when arguing that values are more directly connected to beliefs while outcomes may be influenced by interactions of values and the specific environment. This is, however, truer with country data than with individual data as used here). Furthermore, the intensity of religious beliefs is measured explicitly instead of using indirect proxies, such as religious practice or upbringing, which may represent very different factors (mainly social relations and education, respectively). This allows the separate consideration of variables related to upbringing, which are used as crude proxies of beliefs in some other works, while in some case beliefs themselves are considered as fixed (see Guiso, Sapienza and Zingales [2003], who treat a “does not belief in God” [*Atheist*] dummy as fixed). Lastly, our data comes from the 1998 ISSP religion module,¹ which compiled surveys conducted in 1998 and 1999 (8 countries) in a total of 32 countries, instead of the World Values Survey data used in most other studies. The use of ISSP data reduces the size of the

¹ For information and codebook, visit <http://www.issp.org/> (accessed July 18, 2003).

sample and the number of countries and variables. The quality of the data and the measurement of some variables, however, seem to be more dependable.

The rest of the article is structured as follows. Section 2 analyzes the potential economic effects of Catholicism and Protestantism in terms of the moral and legal enforcement systems they encourage; the attitudes that may be implicit in their sets of religious beliefs, specially about salvation; and the diverse degree of homogeneity of the moral standards they promote. Section 3 defines the main working hypothesis that Protestantism strengthens mutual and legal enforcement and reduces the transaction costs of impersonal relations, and explains the methods and data that will be used to test it. Section 4 comments the results, which confirm the hypothesis, and explores some complementary propositions. Section 5 concludes with a summary and some elements for interpretation and further work.

2. Comparative analyses of Christian moral enforcement

Substantial differences exist between Catholicism and Protestantism in both the structure of their beliefs and their enforcement mechanisms. As a consequence, they are likely to produce different values, incentives and behavior. The two key elements in Catholic morality are the theology of salvation by works and faith and the central role of the Church as an agent of moral enforcement, epitomized by private confession to priests, a main divide of the Reformation. Their counterpart in Protestant practice are salvation by divine grace alone and the development of substitute enforcement mechanisms, by both first and second parties as well as legal institutions.

These characteristics cause all sorts of different effects. Most prominently, while Catholicism focuses on reducing the transaction costs of personal interactions, Protestantism favors a reduction in the costs of impersonal trade. The more detailed comparison in this section will make it possible to formalize more precise and testable hypotheses.

2.1. The structure of beliefs on salvation

Catholic theology has a transactional nature that contains a simple motivating logic based on free will. As believers earn eternal salvation by good works in earthly life, they are motivated to behave well. In contrast, Protestant theologies, especially Calvinism before Arminianism, banished free will and emphasized predestination: salvation is achieved by “grace” alone—God chooses who goes to heaven and who goes to hell. Since Max Weber,² however, many writers have considered that Catholic salvation by works and faith produces inferior economic incentives to Protestant beliefs. The rationale is twofold. First, the availability of forgiveness through Catholic confession of sins to a priest eliminates the potential effect of a pure system of salvation by works. Second, even Calvin complemented mere predestination—which, in itself, does not seem very motivating—by emphasizing that believers must examine their own hearts because, without good works, there can be no faith and no salvation. This introspection could easily be interpreted by believers as a way of knowing that they have been chosen to be saved.³ A reinforcement of self-examination is therefore to be expected. Calvinist theology may thus produce not only motivation for good works but also an emphasis on methodic self-examination, which should make individuals more rational and self-restrained. Good conduct does not warrant salvation, but merely serves as a signal to the believer, who is therefore moved to constant self-examination, with increased moral awareness.⁴ This emphasis on the signaling function of good works, often coupled with worldly success, is also present in Lutheranism.

² See Weber (1920a, 115-116 and note 66).

³ The doctrine was developed by Calvin but the idea of the “calling” by God is also important in other Puritan churches, such as Methodism, Pietism and Baptism (Giddens, 1976: xiii). There are substantial differences between Protestant churches, but also within the Catholic church, which advises against distinguishing between the different Protestant churches, as discussed more deeply in section 3.5.

⁴ The formal comparison drawn by Glaeser and Glendon (1998) of Catholic “free-will” and predestination theologies is fruitful here, even if it introduces some strong simplifications, by assuming that (1) under free will believers do no benefit from observable moral actions; (2) under predestination, good unobservable works do not have any motivating power (for instance, by informing believers about their salvation); and, probably most important, (3) there is no forgiveness of sins, a crucial element in Catholic free will theology. The basic tradeoff therefore focuses on the social value of observable versus unobservable actions. Despite the limitations caused by these assumptions, the model is useful in pointing out an important quality of Protestant theology: its greater reliance on what I call second-party enforcement.

Different interpretations of the Weber thesis have prompted innumerable essays and some works at the macroeconomic level, trying to explain growth differentials as a consequence of the dominance of different religions. The thesis seems to have been refuted in terms of comparative economic growth because, for instance, Catholic communities experienced higher growth rates during the relevant period.⁵ However, the difficulties of measuring these phenomena, the fact that predominantly Protestant countries have until recently experienced higher growth rates, and the claimed current dominance of individualistic forms of ethics and religiosity have kept the Weber thesis alive.

As will be pointed out below, many of the effects of both religions may depend on the effectiveness of alternative enforcement mechanisms. However, differences in the theology of salvation may also have important consequences in terms of values, often linked to greater Catholic emphasis on forgiveness, which should trigger less motivating but more accessible beliefs and perhaps favor social tolerance and redistribution policies. Furthermore, the role of the Church should be considered more valuable by Catholics.

As a corollary of greater Catholic forgiveness, Catholic and Protestant belief structures may also trigger different age profiles of belief intensity. In particular, Catholic salvation by works, especially if coupled with lenient forgiveness standards, could encourage increased intensity of belief in older age, as modeled by Azzi and Ehrenberg (1975), argued recently by Barro and McLeary (2002: 3-4) and tested by Klick (2003). The opposite may happen in some versions of Protestantism because, under predestination, people may lose their faith as they realize they are not among the chosen few. In addition, mutual control taking place informally among non-specialized equals may become less effective for older people given their shorter horizon.

In any case, assuming that older people are less productive but wealthier, this hypothesized difference in age profiles might focus the economic consequences of Catholic beliefs on redistribution and those of Protestant beliefs on production, given that redistribution and production are the economic activities that are most readily available to strong believers in each religious group. This may have consequences for the types of social interaction that the two religions favor most. By being altruistic, redistributive elders,

⁵ Mainly, Samuelson (1993). For Iannaccone, the thesis lacks empirical support (1998: 1474). The debate goes on, however. For instance, Blum and Dudley (2001) find evidence of

supposedly more prevalent in Catholicism, would promote altruism within their families and close circles (Becker, 1981). Even if both religions promote a similar degree of compliance with a rule to help others, Protestants are relatively less motivated to comply via redistribution because, unlike Catholics, they are more motivated to comply at a younger age, when they have fewer resources to redistribute and more to produce. Production may therefore be their main option for good works. Furthermore, given their background of social relations and trust, older Catholics would tend to redistribute among family members and institutions they know well (including the Church), while among Protestants redistribution would be more anonymous. Anecdotal examples of redistribution are consistent with this conjecture. It is common for Italian and Spanish parents to finance the standard of living of their children, who leave home much later and often do so to live in a home purchased with their parents' money. Transfers by Protestant parents to their children often take the form of investment activities, like higher education. Catholics often bequest to create a hospital or school in a specific village, while Protestants donate to create foundations that benefit unknown people according to merit.

2.2. Enforcement mechanisms

As with any other set of rules, moral rules need effective enforcement, which can be provided by different mechanisms. Given that rules of behavior are usually defined with respect to social interactions between parties, three possibilities can be distinguished depending on which party is responsible for enforcement. Under “first-party” enforcement, it is the individual in breach who evaluates and sanctions his own conduct. Evaluation takes place in relation to his own reading of the moral code and the sanction consists of psychological suffering, often related to guilt. “Second-party” enforcement is based on verification and sanction by the party suffering the consequences of breach. In the moral sphere, these second parties are usually members of a group or community of peers, who exert pressure on noncompliant members through diverse means, from shaming to ostracizing or even killing them. Lastly, under “third-party” enforcement, specialized agents verify the behavior of group members and punish those who do not follow the rules. Catholic theology

positive economic consequences of Protestantism in terms of cooperation. A broader recent defense of Weber's thesis has been offered by Landes (1998).

emphasizes third-party moral enforcement because it places the church in the role of intermediary between God and the faithful.

The effects of religion on values and actions depend not only on the set of beliefs that each religion endorses but also on the efficiency of their enforcement mechanisms. This efficiency depends not only on the kind of mechanism used but also on how they are structured and managed. Comparing the effects of religions therefore becomes an inherently empirical issue. For example, Catholic enforcement centered for centuries on the active role of the Church, well exemplified by auricular confession of sins to a priest. This enforcement technology offers the advantages of specialization and the disadvantages of greater transaction costs but it is not intrinsically inferior to its alternatives (Arruñada, 2003). Much hinges on organizational performance, on how such transaction costs are managed and contained, and how well adapted they are to the environment. For instance, for absolution of sins to destroy the incentives generated by the theology of salvation by works, the performance of confessors should be low. Effectiveness may be damaged more seriously by environmental changes, such as higher educational levels and the productivity gap of personal services, both of which possibly make first-party moral enforcement, in which the individual punishes him or herself, comparatively more efficient.

By emphasizing salvation by grace alone, Protestantism transformed faith into a more subjective experience, greatly reducing the role of the Church as a mediating agent between God and believers. Consequently, it also reduced the enforcement role of the Church, a change that is well exemplified by the eventual suppression in Protestant churches of the practice of confessing sins orally to priests.

This debasement of specialized third-party moral enforcement was balanced by reinforcing first and/or second-party moral enforcement as well as third-party enforcement of a legal, rather than a moral, nature. The effect of Protestantism on changes in the relative weight of these three enforcement solutions is clear with respect to a reduction in third-party moral enforcement, but difficult to discern in the other dimensions. For example, it is unclear to what extent early Calvinism depended on first-party or, more likely, on second-party enforcement.⁶

⁶ This is revealed in Weber in the contradiction implicit in his reliance on both first-party enforcement in *The Protestant Ethic*, and second-party enforcement in “The Protestant Sects”.

2.3. Homogeneity of morality and transaction costs

Important differences may be expected in the degree of homogeneity of moral standards produced by the two religions among their adherents.

Primarily, Catholic practice favors more diverse moral standards. The main sources of variety in Catholicism are the theology of salvation by works and the practice of oral confession. Salvation by works involves an element of individual fine-tuning because works cannot be evaluated without considering the possibilities of each individual and moral standards have to be adjusted to specific circumstances both in general and for each case. In fact, solutions were devised for specific cases, with a whole body of literature being developed, traditionally known as “casuistry.”⁷ Oral confession also adjusted moral standards to each individual: priests were trained to adjust the moral code to the strength of the penitent, even negotiating penance with them. In addition, the theology of Purgatory made it possible for merits to be traded amongst believers and with the Church, which reinforced inequality. Even if the sale of indulgences allowed the church to reinvest in belief production, and therefore led to higher average standards, this was achieved at the cost of greater moral disparity among believers (in addition to considerable rent-seeking, as emphasized by Ekelund, Hébert and Tollison [1992, 2002]).

Conversely, greater homogeneity in the moral standards of Protestantism derives from its greater reliance on second-party moral enforcement and legal institutions. Compared to the secret judgments of the confessional, such reliance is likely to produce more equal treatment, as modeled by Glaeser and Glendon (1998) who give an interpretation of predestination as external (both second-party and legal) enforcement. The issue probably goes beyond the role of predestination beliefs and is more related to substitution between enforcement mechanisms. Examples abound, starting with John Calvin’s insistence on treating all believers equally, or the community responsibility system practiced by the American sects described by Weber (1920b), which is somehow similar to the late medieval system analyzed by Greif (2002). If individuals are liable for the debts of their colleagues, they will insist that they meet the standards of the group, both on admission and later on. Perhaps more importantly, legal enforcement applies the same principle on a larger scale, by providing impartial enforcement

⁷ Compare Shavell (2002), who claims that “moral rules cannot be too detailed and nuanced in character”, and Kaplow and Shavell (2001, 2002).

of obligations without paying attention to who the parties are and, in particular, regardless of whether they are locals or outsiders. Probably the most important consequence of homogenous standards, overlooked in Glaeser and Glendon (1998), lies in lower transaction costs of impersonal trade. The evolution from personalized exchange to anonymous exchange supported by institutional enforcement has been considered crucial in development at least since North and Thomas (1973) and Granovetter (1985). It has also been established that trust and civic norms exhibit a strong and significantly positive relationship to economic growth (Knack and Keefer, 1997; Zak and Knack, 2001). Findings in evolutionary psychology lend new support to this argument, as it contends that, in the ancestral environment of evolutionary adaptation, human beings were much less likely to trade with strangers than with the well-known members of their own band of hunter-gatherers. Our mental resources may therefore be ill-adapted for trading with anonymous strangers, especially when transactions have some element of abstraction, as market transactions usually do.⁸ For this reason, the full development of markets requires institutional support to improve our rationality in, for example, our ability to deal with strangers, and Protestantism seems particularly suited for this purpose.

Both religions may have been suitable for supporting human interaction in different kinds of environment and transaction. In comparison with the more homogeneous Protestant ethics, the more diverse Catholic moral standards may increase transaction costs in impersonal trading but make personal trade easier. Adaptation to diverse circumstances may have been advantageous for developing fine-tuned and, therefore, more effective moral incentives in the diverse situations faced by the Church and its followers. These well-adapted incentives and standards probably performed better than more general solutions, mainly in the self-control sphere, and did so without incurring substantial costs. This is so because, when parties know each other, they can use additional information when transacting. (Morality is therefore less relevant in the social sphere). This is more likely to happen in rural environments and, more generally, for family-related contracts. With its relatively more homogeneous standards, Protestantism is better adapted for impersonal trading between anonymous parties, such as those in commerce, finance and industry. This requires, however, that potential traders be in a

⁸ See Fiske (1991) and Cosmides and Tooby (1992), who provide a more solid ground to the pioneering and rival arguments by Polanyi (1944) and, mainly, Hayek (1944, 1973-1976). Favoring people we know is consistent with findings in experiments (for instance, Ostrom, Walker, and Gardner, 1992; and Valley *et al.*, 2002).

similar situation, bringing the argument closer to a view according to which beliefs follow previous economic changes, as argued by Tawney (1926) and Samuelson (1993). The argument is also backed by the success of Puritanism among some rural emigrants (Walzer, 1965).

3. Methodology

On the basis of the previous analysis, empirical tests will be structured around the following three sets of hypotheses, related to (1) direct differential effects on individuals' psychology, and the indirect institutional effects that alter the constraints on individuals' behavior by means of (2) substitutions between enforcement mechanisms and (3) changes in the relative transaction costs of personal and impersonal trade.

3.1. Direct effects

Differences in the more direct effectiveness of Christian religions will be examined through several variables.

First, effects on work ethics and wealth will be checked by comparing several measures of worldly success: education level, following Glaeser and Glendon (1998), measured here as the highest achieved level of *Education*; number of weekly *Working Hours*; working as a *Supervisor* or *Self Employed* worker; individual *Earnings*, standardized within each country; and subjective *Social Class*. (Detailed explanation of all variables is given in Annex 6.1).

Second, individual attitudes towards productive and distributive activities will be examined focusing on happiness, science and government. Differences in the stated level of *Happiness* will provide insights into the psychologies of attainment and satisfaction. Given its role in Weber's argument, the model will also estimate how the degree of fatalism varies between members of both religious groups. Fatalism is estimated through an index built from the responses to five variables measuring individuals' agreement with several statements, such as "There is little that people can do to change the course of their lives," "To me, life is meaningful only because God exists," "Life does not serve any purpose" and their

disagreement with “Life is only meaningful if you provide the meaning yourself” and “We each make our own fate.” Two proxies are used to test the claim that Catholicism is less open to scientific discovery. They measure respondents’ *disagreement* with the statements that we trust too much in science and not enough in religious faith (*Balanced Science Faith*) and that modern science produces more harm than good (*Science Good*). Similarly, it is also predicted that Catholics are more inclined to favor redistribution policies, which are in a sense a kind of forgiveness of those unwilling to work hard enough. This inclination will be tested through two variables measuring support of government responsibility in providing jobs for everyone who wants one (*Gov. Respons. Jobs*) and reducing income differences between rich and poor (*Gov. Respons. Inequality*).

Third, the power of beliefs on salvation within both branches of Christianity will be examined by measuring how respondents’ values and actions change with the intensity of their beliefs and upbringing. It is hypothesized that these effects will be smaller for Catholics, considering their more lenient theology and, in particular, their easier access to divine forgiveness. Proxies of beliefs and upbringing are explained below in section 3.4.

Lastly, the possibility that Catholicism and Protestantism may produce different patterns of incentives during the lifetimes of their followers will be checked by testing how the relationship between respondents’ faith and age differs between both religious groups. The key prediction here is that Catholic faith should increase at older ages, as individuals strive to reconcile with God before they die.

3.2. Institutional effects: Substitution between enforcement mechanisms

Moral enforcement by first, second and third parties can act as a substitute. Similarly, greater reliance on the rule of law can substitute for lesser moral enforcement, making religion less important in motivating good behavior. It is posited here that Catholicism relies more on third-party moral enforcement while Protestantism depends more on legal institutions and second-party moral enforcement. These substitution possibilities will be examined through several tests that estimate how each enforcement system is viewed by respondents of each religion.

First, differences in first- and third-party moral enforcement will be examined by considering the effects of education on the intensity of religious practice. It is expected that higher education levels will affect Protestants and Catholics differently, as educated Catholics will tend to practice relatively less, given that their religious practice contains a greater element of third-party moral enforcement (most clearly in the practice of oral confession to priests), which is less necessary and efficient for more educated people (Arruñada, 2003). Religious practice is summarized into an index built with four variables measuring prayer frequency, participation in church activities, self-description as a religious person and frequency of attendance at religious services (Annex 6.2.4). Views on third-party moral enforcement will also be proxied through a variable measuring respondents' confidence in churches and religious organizations (*Trust Church*).

Secondly, attitudes towards second-party enforcement—informal punishment of moral misbehavior—will be measured by differences across religions in three variables. First, volunteer unpaid work done during the previous year in political, charitable, religious and other activities. These four variables were collapsed into a single index constructed as their first principal component (*Volunteer*; see Annex 6.2.2 for details). It is assumed that volunteer work proxies for willingness of people to participate in second-party enforcement. This assumption seems specially plausible when considering that many such activities may act as enforcement mechanisms. Second, by comparing respondents' tolerance of income tax fraud (*Tolerance of Tax Fraud*) and to the reporting of incorrect information to obtain government benefits (*Tolerance of Benefit Fraud*). A complementary interpretation of these two proxies would start by assuming that subjective values on public funding and expenditure are consequential for the possibility of arranging effective legal enforcement. Consequently, differences in respondents' tolerance of these public frauds could also be taken as proxies of legal enforcement, and this interpretation ties in with the traditional inclination of the Catholic Church to not consider tax avoidance as a sin.

Lastly, the prediction that predominantly Protestant countries will have developed more trustworthy institutions will be tested by the level of cross-country confidence on parliament (*Trust Parliament*), the court and legal system (*Trust Legal System*), business and industry (*Trust Businesses*), and schools and the educational system (*Trust Education System*). The logic behind the first three proxies is straightforward, as Parliament establishes the legal rules and courts enforce them, while the trustworthiness of businesses results from both the law and its enforcement. The analysis provides no ready predictions for confidence in the educational

system, in particular when considering that secular schools could be seen as part of the legal enforcement system while religious schools could act as moral enforcers. Furthermore, the importance of religious schools varies notably across countries.

3.3. Institutional effects: Transaction costs of personal and impersonal trade

The overall effect of the two religions on different transaction costs will be tested by distinguishing between personal and impersonal trade and further distinguishing within personal transactions between family relations and close friends.

The influence of religion on the family will be examined by considering differences in attitudes towards sins that are closely related to contracts and relationships within the family. These are measured through respondents' stated tolerance towards sexual relations with others than the spouse (*Tolerance of Adultery*) and legal abortion in the case of a serious defect in the baby (*Tolerance of Abortion*). These attitudes are compared with those on three other sexual sins that seem less damaging to the strength of families: sexual relations before marriage (*Tolerance of Premarital Sex*), sexual relations between adults of the same sex (*Tolerance of Homosexuality*) and living together as a couple without intending to marry (*Tolerance of Concubinage*). *Family Size* will also be used as a measure of emphasis and success in promoting family values.

The transaction costs of impersonal trade will be estimated by attitudes with respect to rule-cheating friends and a measure of interpersonal generalized trust.

Friends' loyalty is measured through respondents' reactions to the hypothetical case in which they are riding in a car driven too fast by a close friend who hits a pedestrian and asks the respondent to tell the police that he was obeying the speed limit. The two questions ask, first, if the friend has a right to expect the respondent to tell the police that he was obeying the speed limit (*Cover Up Rights*) and, second, if the respondent would in fact lie to the police (*Cover Up Perform*).

Trust is measured through reactions to the question, "Generally speaking, would you say that people can be trusted or that you can't be too careful in dealing with people?" (*Trust People*). This variable can be related to so-called "social capital" (Putnam, 1993) and is

thought to convey trust in strangers (Knack and Keefer, 1997: 1256-58). The relevance of this trust variable is clear when considering how important initial expectations are in making cooperative strategies viable in repeated games, for instance, in implementing a “tit for tat” strategy.

In addition, the homogeneity of moral standards within each religion will be directly tested by comparing the standard deviations of the values, actions and beliefs in each subsample as well as the residuals of the regressions on values, actions and beliefs between the two groups, expecting a higher variance among Catholics.

3.4. Models

The tests will rely on several econometric models built with data from the 1998 ISSP Survey, which will be used to examine differences in values and actions between Protestants and Catholics. Observations for members of other religions and no religion have been dropped.

To compare the different effects of both religions, the following OLS regression, or a slightly modified version, was estimated for each of the different 31 dependent variables:

$$\begin{aligned}
 Y_i = & \alpha_{0p} & + & \alpha_{0c} \textit{ Catholic} \\
 & + \beta_{1p} \textit{ Faith} & + & \beta_{1c} \textit{ Catholic dummy} * \textit{ Faith} \\
 & + \beta_{2p} \textit{ Upbringing} & + & \beta_{2c} \textit{ R-Catholic dummy} * \textit{ Upbringing} \\
 & & + & \sum_t (\beta_t \textit{ Control}_m \textit{ variables}) \\
 & & + & \sum_r (\beta_r \textit{ Country}_n \textit{ dummies})
 \end{aligned} \tag{1}$$

where each dependent variable, Y_i , represents a value, conduct or action, as stated by respondents to the survey, from their weekly working hours to their trust on strangers.

The independent variables are as follows:

Catholic is a binary variable that takes value one for respondents who state that they belong to this religious group, zero otherwise. It has been built combining the data on respondents’ religious denomination.

Faith measures the intensity of respondents' faith. Simplicity plus the substantial collinearity among the four belief variables available (the afterlife, heaven, hell and miracles) advise to use a composite index of belief intensity, built as the first principal component of the four variables.

Upbringing measures the degree of religious indoctrination that respondents received during their childhood. This is taken directly from a survey question asking respondents how often they attended religious services when they were around 11 or 12 years old.

Interactive variables, built as products, are used to test differences in the effects of faith and upbringing between the two religions. *R-Catholic* is a dummy that takes value one for those who stated that they were raised as Catholics.

In addition, slightly different models taking intensity of belief and religious practices as dependent variables were used to test some specific hypotheses.

The models allow us to distinguish between the fixed and variable effects of religion on values and behavior. The fixed effects are related to membership or, more broadly, to "belonging" to a particular religious group, and do not vary across believers of a given faith. Their coefficients (α_{0c}) estimate the difference between belonging to Catholicism and Protestantism, because observations for other religions have been dropped. Furthermore, given that belief and upbringing variables were standardized in the sample, these fixed effects measure attitudes for the average believer in the whole sample.

In addition to these effects of belonging, the two religions provide different sets of beliefs that may influence believers' values and actions differently. The variable effects try to ascertain these differences by measuring how values and actions change with intensity of belief and upbringing. To compare such changes between religions, their associated coefficients (β_{1c} and β_{2c}) estimate the differential impact of beliefs and upbringing for Catholics.

With the exception of indices and some other variables, most of the dependent variables are expressed in terms of categories with a natural order (for example: "1, always wrong; 2, almost always wrong; 3, wrong only sometimes; 4, not wrong at all"). Ordinary least squares will be used, however, because we are interested in examining differences in values as a consequence of differences in religion and belief intensity, not in estimating the probabilities of particular responses. Furthermore, there are no particular reasons for accepting the

particular assumptions of ordered models. Equations for working hours have been estimated through tobit regression.

Coefficients are estimated from within country variation, as all of these regressions include country dummies. Controls were also used for sex (*Women*), *Age*, *Age Squared* (this to allow for nonlinear effects), marital status (through three dummies: *Widowed*, *Divorced & Separated* and *Single*, taking married people as the omitted category), *Education* (except for the education equations themselves), and individual *Earnings* (except for regressions in which *Earnings* is the dependent variable). Reported equations were estimated without any weight adjustments, which did not materially affect the results.

3.5. Data

The limitations affecting these data must be borne in mind when analyzing the results.

First, they are built from statements on values instead of observations on actual behavior.⁹ In our case, given the kind of questions, one should not expect particularly serious biases (as, for example, in surveys that ask about issues loaded with “political correctness”, such as racism or women rights), even if a proclivity to lying could vary systematically across religions. This may bias some variables, as it has been argued that the ethics of Protestants, relying more on second-party enforcement, triggers a higher degree of hypocrisy (for instance Glaeser and Glendon, 1998: 434, 442). This possibility advises caution when interpreting some results. In particular, it may be difficult to disentangle the effects of religion and second-party and legal enforcement.

Second, many of these tests use values to test hypotheses about actions. Some support for this approximation is given by empirical tests showing that, when responding on values, people tend to convey information on their own predispositions.¹⁰

Third, they are current data, when interest may lie in historic effects. However, if social norms change slowly, current values may be a good approximation of the effects of past

⁹ See Bertrand and Mullainathan (2001) for a recent analysis which emphasizes that, when using subjective variables as dependent variables, measurement errors are likely to correlate in a causal way with the explanatory variables.

beliefs. This is also one reason for focusing on inter-religion comparisons and distinguishing the effects of being a member of a certain religion from those of holding religious beliefs with a certain intensity. Moreover, confidence in the data is also enhanced by the internal consistency of the whole set of models, which portrays a fairly coherent structure of values and actions.

Fourth, it is not advisable to obtain more detailed results using specific dummies for the main Protestant denominations because most sub-samples are too small. Furthermore, comparing the Catholic and Protestant religions as a whole comes closer to testing the long-term consequences of the different theologies and practices since the Reformation. In addition, the data do not distinguish between different Catholic groups. Even though they are not different churches, their diversity in moral strictness and religious practice is also substantial. The confirmed greater homogeneity of Protestant values also advises taking the whole Protestant subsample as a whole.

Fifth, large sample size tends to cause statistical significance even with slight real effects. However, in this case, when evaluating such real significance, it must be remembered that the effects of religions are underestimated because only within country variation is considered. Much of the influence that religion has exerted throughout history has been through changes in the fabric of different societies. This effect is embodied here in the country dummy variables. This ensures that observed differences are not wrongly attributed to religion, but it also reduces the apparent explanatory power of religion.

Lastly, it should be mentioned that the ISSP surveys provide highly correlated questions for some issues. Given that results did not change materially, only one variable was used in such cases. In addition, for Northern Ireland and the Netherlands there is no data on individual earnings and family income, respectively. To make it possible to use the observations from both countries, the missing income data has been estimated as the predicted values of an OLS regression of the available income data on family size and education level. Family income is also assumed to be income by other family members in the 635 observations for which asserted family income is lower than individual earnings.

¹⁰ For instance, self-reported trust has also been shown to be a good proxy of trustworthiness actions in an experimental setting (Glaeser *et al.*, 2000).

4. Results: The different effects of Catholic and Protestant religions

Table 1 presents summary statistics of the data used for the analysis, with the whole sample and with Catholics and Protestants separately. Tables 2, 3 and 4 present the main results, obtained by estimating the effects of both religions on a variety of values, conducts and facts. Catholicism is represented by an artificial binary variable, with Protestantism as the omitted category. Models without interactions are reported only when there is a significant change in the parameter of this *Catholic* dummy. Results for control variables are reported but those for country dummies are omitted. Tables 5 to 10 report complementary models and analyses. The Annex contains a detailed description of the variables and data on the analyses of the principal components used to build the indices.

4.1. Control variables

The use of the control variables and country effects is supported by their statistically significant correlations with the dependent variables. Those for control variables, presented in the last rows of Tables 2, 3 and 4, show the expected signs and a few of them are interesting in themselves.

For instance, women in the sample work fewer hours and earn less. They are also more fatalistic, happy and skeptical of science, as well as more supportive of the church and government intervention. They volunteer less, have a worse opinion of public fraud, distrust parliament and businesses more and dislike covering up for friends. This greater strictness is also visible in that they are less tolerant of premarital sex and adultery but are more indulgent regarding homosexuality.

Respondents' age also correlates positively with fatalism and confidence in the church, and negatively with tolerance of public fraud, willingness to cover up for friends and indulgence regarding sexual behavior. Other variables show significant nonlinear correlations with age. Those relating to employment and income, as well as positive attitudes to science, support of government intervention, volunteer work and tolerance of adultery and abortion start increasing with age but end up decreasing. The opposite happens with happiness and

confidence in institutions, which correspondingly reach a minimum level at some point. (Both age variables are standardized and these comments are based on their net effect). Given the cross-section nature of the data, these correlations between values and age may result from both a change in values with aging or from adoption of different values by different generations. Generational change is more clearly the case for variables that have a continuous effect, such as education. Significant non-linearities, as with working hours, are harder to explain on this basis, however. We discuss the role of age more deeply below.

Dummies for marital status also exhibit significant effects on most dependent variables. For example, people who form part of a couple are happier, while divorced and separated people present relatively antisocial traits: they volunteer less, show greater tolerance of public fraud, and trust institutions, churches, religions and strangers less. Divorced as well as single people show greater support for government intervention and are more tolerant in sexual matters. Singles are also more willing to cover up for friends and distrust businesses, the education system and the church, but their values are not different from those of married people for other institutional enforcement variables.

Regressions yield the expected signs for the education parameters, showing that education correlates negatively with fatalism, support for government intervention, tolerance of public fraud and family size. It correlates positively with working as a supervisor, earnings, social class, happiness, holding a positive view on science, volunteering, confidence in institutions, sexual tolerance and trust in strangers. Education also shows some more effects. More educated people do not think it right for their friends to ask to be covered up but are not less willing to cover them up. In addition, more educated people trust the church slightly less.

Lastly, the level of individual earnings shows positive correlations with working hours and being a supervisor, self-employed and upper class, as well as, less obviously, with happiness and support for science. People who earn more have greater confidence in institutions but not in the church and, coherently, do not support a political role for religion. They also oppose government intervention and benefit fraud but they are in a mid-position regarding tax fraud and are willing to cover up for friends.

4.2. Direct effects

Results show consistent differences between Catholicism and Protestantism in variables allegedly relating to the most direct effects of religions. However, these differences appear more in the psychology of individuals than in the observable outcomes of their economic activities. As shown in Table 2, in our battery of measures of worldly success, the parameters of most dummy and interactive variables are not significant and those which are significant do not show a consistent pattern. For example, Protestants seem more educated but their beliefs exhibit a stronger detrimental effect on education and, consequently, differences disappear for the average member of each religion. Furthermore, despite the fact that average Protestants work harder, their earnings are slightly lower those of Catholics.

The declared level of happiness is also greater among Protestants as a consequence of a significant effect of belonging. This result is difficult to interpret, however, given the complex and poorly understood evolutionary psychology of happiness emotions.¹¹ For the same reason, happiness could be taken not only as an outcome but also as an input, with opposing consequences in terms of economic performance: as an outcome, being happier is a sign of success; as an input, being unhappy is an incentive to work harder. In a different vein and in line with Weber's argument, Catholics are also less fatalistic than Protestants.

With less ambiguous consequences and confirming received wisdom, average Catholics hold a slightly less positive opinion on the goodness of science. This is a consequence of more intense beliefs among Catholics, which exert a less detrimental effect on their opinion on science than Protestant beliefs do. Catholics are also more supportive of government intervention but, again, the additional effect of beliefs is smaller for Catholics.

The estimated coefficients of proxies on the intensity of beliefs and upbringing also show a picture that is only partly consistent with the Weber story. First, as expected, the intensity of Protestant religious beliefs and upbringing shows significant and consistent correlations with most subjective values and stated actions, with beliefs showing greater effects than upbringing and both having mostly the same signs. These signs are positive for happiness, fatalism, confidence in institutions and the church, family size and, to a small degree, trust in strangers. Negative correlations are estimated for earnings, attitudes towards science, tolerance of public

¹¹ See Pinker (1997: 389-393) for a summary of the issues. Frey and Stutzer (2002) survey the implications for economists of happiness research on the side of outcomes.

fraud, indulgence in sexual matters and willingness to cover up for friends. Beliefs and upbringing relate in opposite ways to education and support for government intervention. Education increases with upbringing and decreases with beliefs, while support for government intervention decreases with upbringing and increases with beliefs.

Differences between Protestants and Catholics are not great, however. The “effects” of Catholic beliefs are the same as those of Protestant beliefs for earnings, happiness, support for government intervention on employment, tolerance of benefit fraud, adultery, abortion and loyalty to friends and trust on strangers. Similarly, the effects of Catholic upbringing are the same as Protestant upbringing for education, happiness, attitudes to science, support for government intervention on employment, tolerance of benefit fraud, institutional confidence, tolerance of adultery and abortion, loyalty to friends and trust on strangers.

More in line with Weber’s argument, correlations of Catholic beliefs with subjective values and actions show the same signs as Protestant beliefs but with significantly weaker estimated effects in the case of education, attitudes on science, government intervention, fatalism, volunteer work, tolerance of tax fraud and sexual tolerance. The same happens for Catholic upbringing with respect to fatalism, volunteer work, tax fraud and sexual tolerance. The estimated correlations between Catholic beliefs and upbringing also differ radically from their Protestant counterparts in a few variables. Thus, the negative correlation between education and faith observed for Protestants all but disappears for Catholics, and, perhaps accordingly, the positive correlation between working hours and both Protestant beliefs and upbringing changes into a significantly negative correlation for Catholics.

Overall, differences between the effects of Catholic and Protestant beliefs and upbringing seem less unidirectional than some interpretations of the Weber thesis would suggest. It is true that Catholic beliefs and upbringing exert half the impact their Protestant counterparts show with respect to volunteer work and abhorrence of tax fraud. Contrary to the Weber thesis, however, the impact of Catholic beliefs is to make some values more conducive to capitalist development, instead of less. In comparison with Protestant beliefs, Catholic faith shows a less negative impact on attitudes toward science, reduces to insignificance support for government intervention and increases confidence in institutions.

Lastly, the possibility that age may have different effects for the two religions is tested by examining how intensity of belief and religious practice change with age. To perform this test, three changes were introduced in the independent variables with respect to the main model. First, the interactions between the two age variables and the *Catholic* dummy are now

estimated, allowing for different age profiles between religions. Second, the two religious categories (Protestants and Catholics) are now divided in four, to consider the possible impact of cohort effects for people born before and after 1960, as is explained in more detail in section 4.5 below. Third, a new interactive variable takes into account that education may have different effects for each religion.

Results of this modified model, given in Table 5, support the hypothesis that intensity of belief increases with late age more for Catholics than for Protestants. Both religions seem to provide completely different patterns of belief intensity for different ages (Figure 1), which is consistent with Klick's (2003) findings that Catholics older than 65 give more money to the church than younger Catholics and that this difference is greater for Catholics. The inclusion of cohort effects compensates for the fact that the tests are being made on cross-section data, when only panel data would allow direct observation of evolution in church giving practice.

The observed patterns may reflect differences in how belief intensity changes with age, perhaps because of easier access to absolution in Catholicism. To the extent that beliefs have consequences on behavior, this divergence could affect intertemporal choices and could help, for instance, in explaining a variety of regularities, such as the longer duration of parental support in predominantly Catholic countries. Results given in Table 7 provide some preliminary confirmation of this conjecture, as Catholics and Protestants show small but significantly different age patterns with respect to working hours and earnings (for which Catholics show a smoother age profile than Protestants), as well as for happiness (for which Catholics' profile is steeper), volunteer work and trust in strangers (for which Protestants show a flat profile with age while Catholics exhibit curves that reach, respectively, a maximum and a minimum at middle age).

4.3. Substitution between enforcement mechanisms

Results generally confirm the hypothesis that Catholicism and Protestantism favor different enforcement mechanisms.

First, with respect to first-party enforcement, education presents a positive and significant relation with Catholic religious practice, but, as predicted, this effect is only around a fourth of that for the education of Protestants (Table 5), and this result holds for every one of the four practices combined in the religious practice index. This is consistent with the claim that

Catholicism relies more on third-party moral enforcement and Protestantism on second-party enforcement: for Catholics, education substitutes for third-party moral enforcement but no similar effect is to be expected for Protestants, who rely on second-party moral enforcement. Strong Catholic believers and Catholics with a more Catholic upbringing also trust the church more (Table 3), leading to average Catholics trusting their church significantly more, which might facilitate the specialized third-party moral enforcement typical of Catholicism.

Second, results are also consistent with greater Protestant support of second-party and legal enforcement. First, volunteer work is clearly higher for Protestants than for Catholics, in terms of both belonging and variable effects. A similarly clear result is obtained for public fraud, as Protestants state that they are less tolerant of tax and benefit fraud, two proxies that are linked to both second-party and legal enforcement.

Third, as predicted, both groups of Christians show similar confidence in institutions when country dummies are included—that is, when the differences are measured between respondents in the same country. The only barely significant difference is that Catholics show lower confidence in businesses, a result consistent with both the less institutional nature of this variable and the alleged Catholic bias against businesses. More important is that, when country dummies are removed, confidence in institutions is greater for Protestants than for Catholics (Table 6). This is fully consistent with the hypothesis if, when stating how much confidence they have in institutions, respondents are evaluating the institutions of their own country. Overall, results are therefore consistent with the interpretation that institutions in predominantly Protestant countries are better in the view of both religious groups.

Results on confidence in the educational system depart from the results on institutions, as Catholics show greater confidence when country controls are excluded. Applying the same interpretation as for institutions, this means that predominantly Catholic countries have better schools. Assuming that the Church controls a greater part of the educational system in Catholic countries, such superiority could be related to the idea—fashionable now in some countries—that Catholic schools perform relatively well.

Finally, the greater institutional confidence shown by those Catholics who believe more strongly, even in the presence of country controls, could be subject to different interpretations. It could mean, for instance, that Catholic beliefs instill greater social conformity but this conjecture remains speculative with the data available.

4.4. Substitution in transaction costs of personal and impersonal trade

Results also confirm that the two religions may reduce different transaction costs in a way consistent with a better fit of Catholicism and Protestantism with, respectively, predominantly personal and impersonal exchange.

Catholics are equally or less tolerant of adultery and abortion while they are clearly more tolerant of premarital sex, homosexuality and concubinage, both in terms of fixed and variable effects. This difference is supportive of greater Catholic emphasis on strengthening family relations because the sexual sins most repudiated by Catholics relatively affect more the productivity, size and stability of families: adultery is a breach of the marriage contract and abortion directly sacrifices group to individual interests. In line with this stronger emphasis on family values, those indoctrinated as Catholics have, and probably also create, larger families.

Catholicism also seems to favor personal relations outside the family, even to the detriment of legal enforcement, as shown both by the greater willingness of Catholics to cover up for their friends. They also exhibit less trust in strangers, confirming the result also obtained by Guiso, Sapienza and Zingales (2003: 263) and in some cross-country studies (La Porta *et al.*, 1997; Inglehart, 1999).

The prediction that Catholicism produces more diverse moral standards is also consistent with the data. Standard deviations are significantly greater for the Catholic sub-sample, both in the original data (Table 1) and in the residuals of the regressions (Table 10). Significant exceptions are obtained, however, for working as a supervisor, support for government intervention, volunteer work, tolerance of homosexuality and religious practice.¹²

¹² Relative heterogeneity among Catholics may be a recent phenomenon, however. For instance, some sociological studies in the 1950s and 1960s on USA Catholics found that their beliefs and practices were less diverse than those of mainline Protestants. See detailed references in Williams and Davidson (1996: 273).

4.5. Old and new Catholicism

Guiso, Sapienza and Zingales (2003: 265, 275-280) provide some evidence consistent with the interpretation that the lack of substantial effects of Catholicism on institutions at the micro level is a consequence of a change in values after the Second Vatican Council, which substantially reformed Catholicism, while the structure of Catholic societies is still affected by their more traditional Catholic past. This would explain the relatively poor performance of their institutions at the macro level, found by La Porta *et al.* (1999).

Guiso, Sapienza and Zingales test their argument by distinguishing between Catholics who grew up before and after the Council. This may be insufficient, however, because it does not check for possibly similar differences between older and younger Protestants. Therefore, instead of comparing Catholics and Protestants, as in our previous analysis, or comparing Catholics raised before or after the Council, as in Guiso, Sapienza and Zingales, let us distinguish between two kinds of Catholics and Protestants—“old” and “new”—and their corresponding interactions, taking old Protestants as the omitted category. *NewProt*, *OldCath* and *NewCath* are therefore dummies that identify new Protestants, old Catholics and new Catholics, with the age divide set at 1960, assuming that Catholics born after 1960 are raised in post-conciliar Catholicism, as in Guiso, Sapienza and Zingales. *NewProt* Faith*, *OldCath* Faith* and *NewCath* Faith* identify the interactions with belief intensity and *NewProt* Upbringing*, *OldCath* Upbringing* and *NewCath* Upbringing* with religious upbringing. Given the presence of the age variables and interactions, the new and old dummies proxy for potential cohort effects while the age variables allow for different effects of age across both religions.

The model is therefore:

$$\begin{aligned}
Y_i = & \alpha_{0op} & + \alpha_{0np} \textit{NewProt} + \alpha_{0oc} \textit{OldCath} + \alpha_{0nc} \textit{NewCath} \\
& + \beta_{1op} \textit{Faith} & + \beta_{1np} \textit{NewProt} * \textit{Faith} \\
& & + \beta_{1oc} \textit{OldCath} * \textit{Faith} \\
& & + \beta_{1nc} \textit{NewCath} * \textit{Faith} \\
& + \beta_{2op} \textit{Upbringing} & + \beta_{2np} \textit{R-NewProt} * \textit{Upbringing} \\
& & + \beta_{2oc} \textit{R-OldCath} * \textit{Upbringing} \\
& & + \beta_{2nc} \textit{R-NewCath} * \textit{Upbringing} \\
& & + \beta_{3cg} \textit{Catholic} * \textit{Age} + \beta_{3cq} \textit{Catholic} * \textit{Age Squared} \\
& & + \sum_t (\beta_t \textit{Control}_m \textit{ variables}) \\
& & + \sum_r (\beta_r \textit{Country}_n \textit{ dummies}) \tag{2}
\end{aligned}$$

The results presented in Tables 7, 8, and 9 do not support the claim that there was a substantial change in specifically Catholic values at the time of the Second Vatican Council. Some differences appear between new and old Catholics, but most tend to reinforce the Catholic stereotype. Furthermore, there are equally important differences between their Protestant counterparts. In addition, some similar changes take place in the new cohorts of both religions, suggesting significant cohort effects in some values.

According to the fixed, belonging, effects, new Protestants are more educated, lower class and happier, they volunteer less, have smaller families and trust strangers less than older Protestants. Compared to older Catholics, those Catholics educated after the Council work less as supervisors, see themselves in a lower social class, are more fatalistic, show less confidence in parliaments, have smaller families and also trust strangers less. Overall, not only do newer Catholics seem no less Catholic but, if anything, both groups of newest believers seem more “Catholic” than their parents.

Results are similar when considering differences in the effect of beliefs and upbringing. Stronger beliefs incline new Protestants to consider themselves in a lower social class, to be more skeptical of the value of science and more supportive of government intervention in the labor market, as well as to volunteer less, trust the Church more, be more tolerant of premarital sex and less willing to cover up for friends, and to trust strangers less. Most of these traits bring them closer to the Catholic standard, while religious upbringing seems to exert more ambiguous effects on new Protestants: with skepticism regarding science and less trust in strangers but also more fatalistic views, more volunteer work and less sexual

tolerance. Strong beliefs in new Catholics, as compared to their effect on old Catholics, are associated with fewer working hours and self-employment, hardly significant and opposing differences in preferences towards government intervention, less confidence in institutions, more tolerance of sexual behavior (with the exception of homosexuality, for which they show less tolerance) and less trust in strangers. Therefore, it seems that new Catholicism moves believers closer to the Catholic stereotype. (New Catholics also believe more strongly than their parents but do not practice more, as shown in the models presented in Table 5). Lastly, religious upbringing has few significantly different effects for new Catholics, related only to lower education and tolerance of tax fraud, as well as to greater confidence in businesses.

Overall, no big changes appear between the two cohorts of Catholics at the time of the Second Vatican Council. Whatever the effects of Catholicism, its effects seem to be equally present in believers raised before and after the Council.

5. Summary and concluding remarks

Using individual survey data from 32 countries, this article compares Protestant and Catholic values and actions thought to be relevant in economic activity. Results confirm that these two branches of Christianity still support different value systems with potentially important consequences in terms of enforcement mechanisms and differential transaction costs for different types of interactions.

The analysis distinguishes between direct effects, which affect individuals' psychology, and institutional effects, which modify the constraints on individuals' behavior. These institutional effects have been subdivided into substitution of enforcement mechanisms and changes in relative transaction costs of personal and impersonal relations.

With respect to direct effects, the influence of greater intensity of belief and religious upbringing on values is smaller for Catholics than for Protestants, which is consistent with a more forgiving Catholic theology and more lenient enforcement. The same happens with the nonlinear relationship observed between the age of Catholics and the intensity of their belief, which first decreases but then increases in later age. Differences observed in proxies of worldly success (education, effort, earnings) and in those attitudes with more directly productive consequences (towards science, for example) are, however, small and altogether

hardly consistent. Overall, differences between the direct effects of Catholic and Protestant beliefs and upbringing seem less unidirectional than a simple thesis would suggest.

Differences in institutional effects are clearer. Results confirm that Protestantism favors moral enforcement by second parties, as well as the development of trustworthy political and legal institutions. Protestants volunteer more and are less tolerant of public fraud. In addition, institutions in predominantly Protestant countries are better regarded. Conversely, Catholicism provides stronger support for personal relations within the family and between friends. Greater Catholic tolerance of sexual sins evaporates for sins that are more likely to damage the family. Catholics are also more willing to cover up for their friends but trust strangers less than Protestants do. Furthermore, their values are more heterogeneous than those of Protestants.

Overall, both religions seem suited to different economic environments. However, it is risky to ascribe simplistic consequences to Protestant and Catholic values, such as being more or less conducive to capitalist development. A main reason is the difficulty of ascribing causality in the institutional enforcement variables. Moreover, it is also possible that the two sets of values are conducive to different types of capitalist development. Catholic values would favor family firms and networks of small firms more than anonymous trading and large corporations with specialization of ownership and control. Comparison of the typical structure of firms in parts of Northern and Southern Europe seems to support this conjecture. Further work is obviously necessary to explore these issues.

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Table 1. Summary statistics

<i>Variable</i>	<i>Catholics and Protestants</i>					<i>Catholics</i>					<i>Protestants</i>				
	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>Education</i>	16081	2.30e-09	1	-2.366	1.768	10327	-1.068961	1.018545	-2.366	1.768	5754	.1918519	.935766	-2.366	1.768
<i>Working Hours</i>	14799	23.67126	22.71609	0	96	9766	23.09031	23.21377	0	96	5033	24.79853	21.67578	0	96
<i>Supervisor</i>	14317	.187679	.3904692	0	1	9676	.1598801	.3665138	0	1	4641	.2456367	.4305105	0	1
<i>Self Employed</i>	15758	.1002031	.3002801	0	1	10168	.1072974	.3095062	0	1	5590	.0872987	.2822976	0	1
<i>Earnings</i>	16081	-.0352171	.9598623	-1.922	22.988	10327	-.0330283	.9563631	-1.922	22.988	5754	-.0391455	.9661816	-1.864	19.849
<i>Social Class</i>	14210	3.096833	1.173785	1	6	9421	2.98238	1.172358	1	6	4789	3.321988	1.14375	1	6
<i>Happiness</i>	15842	3.016728	.7264849	1	4	10181	2.94863	.7418273	1	4	5661	3.139198	.6811848	1	4
<i>Fatalism</i>	14485	.0000295	.9999876	-2.054	3.601	9307	.0263361	.9503386	-2.054	3.601	5178	-.0472543	1.082012	-2.054	3.601
<i>Balanced Science Faith</i>	14504	3.052055	1.132889	1	5	9496	2.95377	1.10686	1	5	5008	3.238419	1.158097	1	5
<i>Science Good</i>	15229	3.377635	1.107714	1	5	9734	3.296076	1.126022	1	5	5495	3.522111	1.059313	1	5
<i>Gov. Respons. Jobs</i>	15715	3.20999	.9506411	1	4	10137	3.368748	.8693012	1	4	5578	2.921477	1.021695	1	4
<i>Gov. Respons. Inequality</i>	15479	3.191744	.9588006	1	4	9992	3.334668	.8871276	1	4	5487	2.931474	1.027354	1	4
<i>Trust Church</i>	15629	3.217416	1.093622	1	5	10096	3.28229	1.113271	1	5	5533	3.099042	1.046611	1	5
<i>Volunteer</i>	15468	.0002461	.9998484	-.649	5.005	10090	-.0801738	.9483577	-.649	5.005	5378	.151127	1.073872	-.649	5.005
<i>Tolerance of Tax Fraud</i>	15625	2	.9054791	1	4	10018	2.028848	.9329451	1	4	5607	1.948457	.8518625	1	4
<i>Tolerance of Benefit Fraud</i>	15749	1.591847	.7627668	1	4	10098	1.668647	.8009412	1	4	5651	1.45461	.6677273	1	4
<i>Trust Parliament</i>	15401	2.659632	.9923668	1	5	9830	2.63001	1.013358	1	5	5571	2.711901	.952046	1	5
<i>TrustLegal-m</i>	15527	2.914085	1.061287	1	5	9954	2.831023	1.06796	1	5	5573	3.062444	1.032865	1	5
<i>Trust Businesses</i>	15216	2.847595	.9144681	1	5	9724	2.777149	.941904	1	5	5492	2.972323	.8496299	1	5
<i>Trust Education System</i>	15545	3.392988	.9073184	1	5	9978	3.427741	.9296386	1	5	5567	3.330699	.8624585	1	5
<i>Tolerance of Premarital Sex</i>	15517	3.079783	1.172239	1	4	9920	3.012198	1.189459	1	4	5597	3.199571	1.131308	1	4
<i>Tolerance of Homosexuality</i>	14598	2.054734	1.287193	1	4	9332	1.958637	1.2513	1	4	5266	2.225028	1.331647	1	4
<i>Tolerance of Concubinage</i>	15797	3.456922	1.343177	1	5	10112	3.370748	1.344927	1	5	5685	3.610202	1.326409	1	5
<i>Tolerance of Adultery</i>	15680	1.536033	.8333887	1	4	10023	1.540557	.8564535	1	4	5657	1.528018	.7908835	1	4
<i>Tolerance of Abortion</i>	15283	3.021789	1.2129	1	4	9788	2.894667	1.260671	1	4	5495	3.248226	1.086655	1	4
<i>Family Size</i>	15263	3.170871	1.667137	1	17	10063	3.346815	1.722084	1	17	5200	2.830385	1.49786	1	17
<i>Cover Up Rights</i>	14177	1.282782	.5594791	1	3	9214	1.316041	.5889545	1	3	4963	1.221036	.4943298	1	3
<i>Cover Up Perform</i>	13895	1.8647	.8578898	1	4	8900	1.874831	.9089683	1	4	4995	1.846647	.758153	1	4
<i>Trust People</i>	15816	2.321952	.7931344	1	4	10184	2.203456	.7874618	1	4	5632	2.536222	.7576767	1	4
<i>Faith</i>	16081	.0000601	.9999884	-1.809	1.318	10327	.1207345	.9556533	-1.809	1.318	5754	-.2165205	1.040538	-1.809	1.318
<i>Upbringing</i>	16081	-.0001207	.999989	-2.123	1.208	10327	.2755372	.8440918	-2.123	1.208	5754	-.4948582	1.06534	-2.123	1.208
<i>Religious Practice</i>	15549	-4.76e-06	1.000003	-2.083	2.261	10068	1.375139	.9228343	-2.083	2.261	5481	-.2526116	1.083608	-2.083	2.261
<i>Catholic</i>	16801	.6421864	.4793718	0	1	10327	1	0	1	1	5754	0	0	0	0
<i>R-Catholic</i>	16801	.6384553	.4804628	0	1	10327	.9697879	.1711787	0	1	5754	.0437956	.2046579	0	1
<i>NewProt</i>	16081	.122567	.3279497	0	1	10327	0	0	0	0	5754	.3425443	.4746018	0	1
<i>OldCath</i>	16081	.404639	.4908373	0	1	10327	.6300959	.4828019	0	1	5754	0	0	0	0
<i>NewCath</i>	16081	.2375474	.4255936	0	1	10327	.3699041	.4828019	0	1	5754	0	0	0	0
<i>Women</i>	16081	.5457994	.4979135	0	1	10327	.549724	.4975455	0	1	5754	.5387556	.4985391	0	1
<i>Age</i>	16081	-7.68e-10	1	-1.765	2.863	10327	-.0202362	1.004054	-1.765	2.863	5754	.0363189	.9917339	-1.765	2.862
<i>Age Squared</i>	16081	9.57e-10	1	-1.291	3.943	10327	-.0175447	.9985887	-1.291	3.943	5754	.0314884	1.001844	-1.291	3.943
<i>Widowed</i>	16044	.0871354	.2820421	0	1	10319	.093323	.2908986	0	1	5725	.0759825	.2649933	0	1
<i>Divorced & Separated</i>	16044	.0648217	.2462187	0	1	10319	.0555286	.2290203	0	1	5725	.0815721	.2737355	0	1
<i>Single</i>	16044	.2120419	.4087671	0	1	10319	.2144588	.4104662	0	1	5725	.2076856	.4056859	0	1

Table 2. Comparison of direct effects of Christian religions (omitted category: Protestants)

	<i>Education</i>	<i>Education</i>	<i>Working Hours</i>	<i>Working Hours</i>	<i>Supervisor</i>	<i>Self Employed</i>	<i>Earnings</i>	<i>Social Class</i>	<i>Happiness</i>	<i>Fatalism</i>	<i>Balanced Science Faith</i>	<i>Science Good</i>	<i>Science Good</i>	<i>Gov. Respons. Jobs</i>	<i>Gov. Respons. Inequality</i>
Independent variables:															
<i>Catholic</i>	-0.049** (0.020)	-0.020 (0.020)	-0.840 (0.725)	-1.259* (0.717)	-0.014 (0.009)	-0.010 (0.007)	0.037* (0.020)	-0.032 (0.027)	-0.067*** (0.016)	-0.170*** (0.022)	0.042 (0.027)	-0.036 (0.026)	-0.046* (0.026)	0.094*** (0.020)	0.103*** (0.021)
<i>Faith</i>	-0.065*** (0.012)		1.165** (0.454)		-0.002 (0.006)	0.004 (0.004)	-0.035*** (0.013)	0.000 (0.016)	0.036*** (0.010)	0.479*** (0.014)	-0.404*** (0.016)	-0.128*** (0.016)		0.056*** (0.012)	0.070*** (0.013)
<i>Catholic * Faith</i>	0.047*** (0.015)		-1.882*** (0.548)		0.001 (0.007)	-0.004 (0.005)	0.013 (0.015)	-0.012 (0.019)	-0.014 (0.012)	-0.164*** (0.017)	0.184*** (0.020)	0.059*** (0.020)		-0.017 (0.015)	-0.048*** (0.016)
<i>Upbringing</i>	0.076*** (0.012)		0.021 (0.449)		-0.003 (0.006)	0.001 (0.004)	0.000 (0.013)	0.015 (0.016)	0.022** (0.010)	0.114*** (0.014)	-0.102*** (0.017)	-0.009 (0.016)		-0.036*** (0.012)	-0.019 (0.013)
<i>Catholic * Upbringing</i>	0.005 (0.016)		-1.454** (0.568)		0.004 (0.007)	-0.007 (0.005)	-0.004 (0.016)	0.006 (0.020)	-0.009 (0.013)	-0.068*** (0.017)	0.027 (0.021)	-0.004 (0.021)		-0.002 (0.016)	-0.009 (0.017)
Control variables:															
<i>Women</i>	0.119*** (0.014)	0.125*** (0.014)	-10.419*** (0.501)	-10.579*** (0.498)	-0.062*** (0.006)	-0.051*** (0.005)	-0.535*** (0.014)	0.137*** (0.018)	0.033*** (0.011)	0.035** (0.015)	0.001 (0.019)	-0.065*** (0.018)	-0.084*** (0.018)	0.082*** (0.014)	0.068*** (0.015)
<i>Age</i>	-0.181*** (0.043)	-0.156*** (0.043)	51.639*** (1.827)	51.400*** (1.825)	0.146*** (0.019)	0.126*** (0.015)	1.073*** (0.044)	-0.451*** (0.055)	-0.433*** (0.035)	0.223*** (0.048)	0.009 (0.058)	0.073 (0.058)	0.078 (0.058)	0.059 (0.044)	0.194*** (0.047)
<i>Age Squared</i>	-0.082* (0.042)	-0.095** (0.043)	-69.048*** (1.940)	-69.047*** (1.940)	-0.167*** (0.019)	-0.124*** (0.015)	-1.083*** (0.043)	0.494*** (0.055)	0.383*** (0.034)	-0.087* (0.048)	-0.135** (0.057)	-0.114** (0.057)	-0.120** (0.057)	-0.077* (0.043)	-0.165*** (0.046)
<i>Widowed</i>	-0.135*** (0.027)	-0.138*** (0.027)	-0.937 (1.191)	-0.935 (1.191)	0.000 (0.012)	-0.017* (0.009)	0.131*** (0.027)	-0.251*** (0.034)	-0.360*** (0.022)	0.019 (0.030)	-0.040 (0.036)	-0.102*** (0.036)	-0.107*** (0.036)	0.039 (0.027)	0.004 (0.029)
<i>Divorced & Separated</i>	-0.042 (0.027)	-0.043 (0.027)	2.360** (0.937)	2.412** (0.937)	-0.000 (0.013)	-0.009 (0.009)	0.034 (0.028)	-0.227*** (0.035)	-0.319*** (0.022)	-0.064** (0.030)	0.015 (0.037)	-0.073** (0.035)	-0.062* (0.035)	0.063** (0.027)	0.068** (0.029)
<i>Single</i>	0.075*** (0.020)	0.078*** (0.020)	1.723** (0.685)	1.621** (0.685)	-0.037*** (0.009)	-0.017** (0.007)	-0.109*** (0.020)	-0.112*** (0.026)	-0.219*** (0.016)	-0.036* (0.022)	-0.007 (0.026)	0.024 (0.026)	0.023 (0.026)	0.039** (0.020)	0.066*** (0.021)
<i>Education</i>			-0.340 (0.285)	-0.431 (0.285)	0.040*** (0.004)	-0.007** (0.003)	0.335*** (0.008)	0.429*** (0.010)	0.070*** (0.006)	-0.045*** (0.009)	0.092*** (0.010)	0.199*** (0.010)	0.201*** (0.010)	-0.108*** (0.008)	-0.073*** (0.009)
<i>Earnings</i>	0.316*** (0.007)	0.319*** (0.007)	12.145*** (0.269)	12.154*** (0.269)	0.124*** (0.004)	0.025*** (0.003)		0.171*** (0.010)	0.035*** (0.006)	-0.047*** (0.009)	0.049*** (0.010)	0.057*** (0.010)	0.060*** (0.010)	-0.086*** (0.008)	-0.107*** (0.008)
Constant	0.469*** (0.033)	0.440*** (0.032)	24.650*** (1.130)	25.202*** (1.102)	-0.095 (0.101)	0.125*** (0.011)	0.103*** (0.034)	2.776*** (0.040)	3.383*** (0.027)	0.201*** (0.037)	3.958*** (0.327)	3.562*** (0.044)	3.483*** (0.043)	2.073*** (0.034)	2.289*** (0.036)
Observations	16044	16044	14763	14763	14300	15722	16044	14181	15806	14451	14470	15194	15194	15678	15442
R-squared	0.3371	0.3326	0.1000	0.0997	0.2122	0.1293	0.2379	0.3048	0.1880	0.2715	0.1738	0.1134	0.1073	0.2677	0.1971

Source of data: ISSP (1998). Notes: All models include country controls and are OLS regressions except *Working Hours* (tobit, Pseudo-R²). Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 3. Substitution between enforcement mechanisms (omitted category: Protestants)

	<i>First-party enforcement</i>		<i>Second-party enforcement</i>			<i>Third-party enforcement</i>				
	<i>Trust Church</i>	<i>Trust Church</i>	<i>Volunteer</i>	<i>Tolerance of Tax Fraud</i>	<i>Tolerance of Benefit Fraud</i>	<i>Trust Parliament</i>	<i>Trust Legal System</i>	<i>Trust Businesses</i>	<i>Trust Businesses</i>	<i>Trust Education System</i>
Independent variables:										
Catholic	-0.009 (0.023)	0.100*** (0.025)	-0.199*** (0.023)	0.105*** (0.022)	0.064*** (0.018)	-0.005 (0.023)	-0.029 (0.025)	-0.040* (0.021)	-0.022 (0.021)	0.021 (0.022)
Faith	0.376*** (0.014)		0.228*** (0.014)	-0.077*** (0.013)	-0.023** (0.011)	0.044*** (0.014)	0.052*** (0.015)	-0.004 (0.013)		0.013 (0.013)
Catholic * Faith	0.038** (0.018)		-0.119*** (0.017)	0.032** (0.016)	0.005 (0.013)	0.040** (0.018)	0.046** (0.019)	0.078*** (0.016)		0.022 (0.016)
Upbringing	0.136*** (0.015)		0.125*** (0.014)	-0.061*** (0.013)	-0.021* (0.011)	0.033** (0.014)	0.045*** (0.015)	0.005 (0.013)		0.011 (0.013)
Catholic * Upbringing	0.026 (0.019)		-0.051*** (0.018)	0.043** (0.017)	0.017 (0.014)	0.009 (0.019)	0.009 (0.020)	0.017 (0.017)		0.032* (0.017)
Control variables:										
Women	0.008 (0.017)	0.113*** (0.018)	-0.102*** (0.016)	-0.078*** (0.015)	-0.069*** (0.013)	-0.059*** (0.017)	-0.020 (0.017)	-0.070*** (0.015)	-0.057*** (0.015)	-0.018 (0.015)
Age	-0.113** (0.051)	-0.122** (0.055)	0.339*** (0.050)	-0.167*** (0.047)	-0.126*** (0.039)	-0.090* (0.051)	-0.286*** (0.054)	-0.282*** (0.047)	-0.285*** (0.047)	-0.198*** (0.047)
Age Squared	0.275*** (0.050)	0.318*** (0.055)	-0.249*** (0.049)	0.043 (0.046)	0.053 (0.038)	0.150*** (0.051)	0.312*** (0.053)	0.258*** (0.047)	0.268*** (0.047)	0.213*** (0.047)
Widowed	0.006 (0.031)	0.027 (0.034)	-0.012 (0.031)	0.094*** (0.029)	0.067*** (0.024)	-0.040 (0.032)	-0.015 (0.034)	-0.058** (0.029)	-0.056* (0.029)	-0.050* (0.030)
Divorced & Separated	-0.155*** (0.032)	-0.213*** (0.034)	-0.078** (0.031)	0.139*** (0.029)	0.091*** (0.024)	-0.165*** (0.032)	-0.199*** (0.033)	-0.117*** (0.029)	-0.121*** (0.029)	-0.118*** (0.029)
Single	-0.054** (0.023)	-0.038 (0.025)	0.025 (0.023)	-0.017 (0.021)	0.003 (0.018)	0.003 (0.023)	-0.016 (0.024)	-0.053** (0.021)	-0.050** (0.021)	-0.063*** (0.021)
Education	-0.021** (0.009)	-0.018* (0.010)	0.145*** (0.009)	-0.039*** (0.009)	-0.041*** (0.007)	0.070*** (0.009)	0.047*** (0.010)	0.024*** (0.009)	0.025*** (0.009)	-0.013 (0.009)
Earnings	-0.006 (0.009)	-0.019** (0.010)	-0.008 (0.009)	-0.009 (0.008)	-0.027*** (0.007)	0.021** (0.009)	0.033*** (0.009)	0.072*** (0.008)	0.070*** (0.008)	-0.004 (0.008)
Constant	3.230*** (0.039)	3.491*** (0.042)	0.323*** (0.038)	1.878*** (0.036)	1.519*** (0.030)	2.719*** (0.039)	2.788*** (0.041)	3.149*** (0.036)	3.153*** (0.035)	3.173*** (0.036)
Observations	15593	15593	15434	15588	15712	15365	15491	15180	15180	15509
R-squared	0.2499	0.1161	0.1447	0.0752	0.1013	0.1035	0.1258	0.1217	0.1177	0.0777

Source of data: ISSP (1998). Notes: All models are OLS regressions and include country controls. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 4. Substitution in transaction costs of personal and impersonal trade (omitted category: Protestants)

	<i>Tolerance of Premarital Sex</i>	<i>Tolerance of Homosexu- ality</i>	<i>Tolerance of Concubi- nage</i>	<i>Tolerance of Adultery</i>	<i>Tolerance of Abortion</i>	<i>Family Size</i>	<i>Cover Up Rights</i>	<i>Cover Up Perform</i>	<i>Trust People</i>
Independent variables:									
<i>Catholic</i>	0.164*** (0.024)	0.204*** (0.028)	0.119*** (0.027)	0.027 (0.019)	-0.115*** (0.026)	0.018 (0.035)	0.047*** (0.014)	0.074*** (0.022)	-0.047*** (0.018)
<i>Faith</i>	-0.398*** (0.014)	-0.270*** (0.017)	-0.406*** (0.017)	-0.140*** (0.012)	-0.313*** (0.016)	0.054** (0.022)	-0.022** (0.008)	-0.073*** (0.013)	0.027** (0.011)
<i>Catholic * Faith</i>	0.152*** (0.018)	0.121*** (0.021)	0.114*** (0.020)	0.015 (0.015)	-0.004 (0.019)	0.007 (0.026)	0.008 (0.010)	0.029* (0.016)	-0.001 (0.013)
<i>Upbringing</i>	-0.111*** (0.014)	-0.111*** (0.017)	-0.136*** (0.017)	-0.039*** (0.012)	-0.077*** (0.016)	0.001 (0.022)	-0.026*** (0.009)	-0.047*** (0.013)	0.009 (0.011)
<i>Catholic * Upbringing</i>	0.064*** (0.019)	0.041* (0.022)	0.048** (0.022)	-0.010 (0.015)	0.016 (0.020)	0.063** (0.028)	-0.013 (0.011)	-0.004 (0.017)	0.014 (0.014)
Control variables:									
<i>Women</i>	-0.028* (0.017)	0.310*** (0.019)	0.010 (0.019)	-0.099*** (0.014)	0.099*** (0.018)	-0.064*** (0.024)	-0.079*** (0.010)	-0.121*** (0.015)	-0.001 (0.013)
<i>Age</i>	0.045 (0.051)	-0.121** (0.060)	-0.044 (0.059)	0.205*** (0.042)	0.123** (0.056)	-0.332*** (0.075)	-0.220*** (0.030)	-0.254*** (0.047)	0.020 (0.039)
<i>Age Squared</i>	-0.376*** (0.050)	-0.163*** (0.059)	-0.322*** (0.059)	-0.244*** (0.041)	-0.189*** (0.055)	-0.350*** (0.074)	0.157*** (0.030)	0.161*** (0.047)	-0.009 (0.038)
<i>Widowed</i>	-0.028 (0.032)	0.034 (0.037)	0.136*** (0.037)	0.054** (0.026)	-0.061* (0.035)	-0.851*** (0.046)	0.027 (0.019)	0.010 (0.030)	-0.036 (0.024)
<i>Divorced & Separated</i>	0.236*** (0.032)	0.194*** (0.038)	0.386*** (0.037)	0.203*** (0.026)	0.118*** (0.035)	-0.988*** (0.047)	0.027 (0.019)	0.047 (0.029)	-0.080*** (0.024)
<i>Single</i>	0.073*** (0.023)	0.143*** (0.027)	0.160*** (0.027)	0.155*** (0.019)	-0.030 (0.026)	-1.016*** (0.034)	0.045*** (0.014)	0.054** (0.021)	0.019 (0.018)
<i>Education</i>	0.083*** (0.009)	0.131*** (0.011)	0.034*** (0.011)	0.076*** (0.008)	0.047*** (0.010)	-0.073*** (0.014)	-0.028*** (0.005)	0.010 (0.009)	0.101*** (0.007)
<i>Earnings</i>	0.049*** (0.009)	0.062*** (0.011)	0.038*** (0.011)	0.042*** (0.007)	0.043*** (0.010)	-0.044*** (0.013)	0.007 (0.005)	0.021** (0.008)	0.032*** (0.007)
Constant	2.653*** (0.039)	1.623*** (0.046)	2.991*** (0.046)	1.251*** (0.032)	3.063*** (0.043)	3.006*** (0.056)	1.315*** (0.169)	1.707*** (0.037)	2.414*** (0.030)
Observations	15480	14566	15760	15643	15249	15246	14143	13867	15779
R-squared	0.3465	0.2999	0.3182	0.1104	0.2852	0.3232	0.1042	0.0841	0.1626

Source of data: ISSP (1998). Notes: All models are OLS regressions and include country controls. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

**Table 5. Faith and religious practice across generations, age and education
(omitted category: "Old" Protestants)**

	<i>Faith</i>	<i>Faith</i>	<i>Religious Practice</i>	<i>Religious Practice</i>	<i>Religious Practice</i>	<i>Religious Practice</i>
<i>NewProt</i>	0.060 (0.050)	0.075 (0.048)	0.059 (0.050)	0.082* (0.046)	-0.003 (0.041)	0.018 (0.039)
<i>OldCath</i>	0.115*** (0.031)	0.033 (0.030)	0.089*** (0.031)	-0.042 (0.029)	0.026 (0.025)	-0.057** (0.024)
<i>NewCath</i>	0.205*** (0.037)	0.128*** (0.036)	0.132*** (0.037)	0.009 (0.034)	0.026 (0.030)	-0.049* (0.029)
<i>Age</i>	0.006 (0.097)	-0.010 (0.095)	0.155 (0.097)	0.139 (0.091)	0.126 (0.080)	0.123 (0.077)
<i>Age Squared</i>	-0.069 (0.085)	-0.085 (0.083)	0.030 (0.085)	0.000 (0.080)	0.097 (0.070)	0.073 (0.067)
<i>Catholic* Age</i>	-0.166 (0.120)	-0.221* (0.116)	0.016 (0.120)	-0.074 (0.112)	0.114 (0.099)	0.034 (0.095)
<i>Catholic* Age Squared</i>	0.346*** (0.105)	0.394*** (0.102)	0.082 (0.105)	0.155 (0.098)	-0.114 (0.086)	-0.047 (0.083)
<i>Education</i>	-0.031** (0.014)	-0.045*** (0.013)	0.103*** (0.014)	0.084*** (0.013)	0.127*** (0.011)	0.113*** (0.011)
<i>Catholic * Education</i>	0.034** (0.016)	0.028* (0.016)	-0.050*** (0.016)	-0.062*** (0.015)	-0.078*** (0.013)	-0.085*** (0.013)
<i>Upbringing</i>		0.294*** (0.012)		0.415*** (0.012)		0.231*** (0.011)
<i>Catholic * Upbringing</i>		-0.076*** (0.016)		-0.050*** (0.016)		0.040*** (0.014)
<i>Faith</i>					0.679*** (0.010)	0.609*** (0.011)
<i>Catholic * Faith</i>					-0.201*** (0.013)	-0.177*** (0.013)
Constant	0.621*** (0.039)	0.592*** (0.038)	0.359*** (0.040)	0.320*** (0.037)	-0.036 (0.033)	-0.018 (0.032)
Observations	16081	16081	15549	15549	15549	15549
R-squared	0.2175	0.2603	0.2454	0.3445	0.4894	0.5297
<i>NewProt = NewCath</i>	10.20	1.44	2.62	3.01	0.62	3.49
<i>Prob > F</i>	0.0014	0.2296	0.1054	0.0828	0.4327	0.0617
<i>OldCath = NewCath</i>	5.74	6.75	1.30	2.10	0.00	0.08
<i>Prob > F</i>	0.0166	0.0094	0.2533	0.1477	0.9931	0.7804

Source of data: ISSP (1998). Notes: "Old" categories defined by being born before 1960. All models are OLS regressions and include controls for sex, marital status, earnings and country of the respondent. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

**Table 6. Institutional enforcement without country controls
(omitted category: Protestants)**

	<i>Trust Parliament</i>	<i>Trust Parliament</i>	<i>Trust Legal System</i>	<i>Trust Legal System</i>	<i>Trust Businesses</i>	<i>Trust Businesses</i>	<i>Trust Education System</i>	<i>Trust Education System</i>
<i>Catholic</i>	-0.108*** (0.018)	-0.063*** (0.017)	-0.235*** (0.019)	-0.222*** (0.018)	-0.215*** (0.017)	-0.190*** (0.016)	0.071*** (0.017)	0.084*** (0.015)
<i>Faith</i>	0.008 (0.014)		-0.046*** (0.015)		-0.010 (0.013)		-0.006 (0.013)	
<i>Catholic * Faith</i>	0.086*** (0.018)		0.135*** (0.019)		0.090*** (0.016)		0.036** (0.016)	
<i>Upbringing</i>	0.026* (0.014)		-0.040*** (0.014)		0.010 (0.013)		-0.008 (0.012)	
<i>Catholic * Upbringing</i>	0.039** (0.018)		0.143*** (0.019)		0.034** (0.017)		0.055*** (0.017)	
<i>Women</i>	-0.084*** (0.017)	-0.067*** (0.017)	-0.038** (0.018)	-0.026 (0.018)	-0.086*** (0.016)	-0.073*** (0.016)	-0.026* (0.016)	-0.020 (0.016)
<i>Age</i>	-0.081 (0.053)	-0.076 (0.054)	-0.242*** (0.056)	-0.227*** (0.057)	-0.265*** (0.049)	-0.261*** (0.049)	-0.193*** (0.049)	-0.185*** (0.049)
<i>Age Squared</i>	0.127** (0.053)	0.133** (0.053)	0.260*** (0.056)	0.258*** (0.056)	0.257*** (0.049)	0.262*** (0.049)	0.194*** (0.048)	0.192*** (0.048)
<i>Widowed</i>	-0.048 (0.033)	-0.044 (0.033)	-0.012 (0.035)	-0.006 (0.035)	-0.087*** (0.031)	-0.084*** (0.031)	-0.013 (0.030)	-0.012 (0.030)
<i>Divorced & Separated</i>	-0.183*** (0.033)	-0.192*** (0.033)	-0.222*** (0.035)	-0.235*** (0.035)	-0.110*** (0.030)	-0.117*** (0.030)	-0.127*** (0.030)	-0.133*** (0.030)
<i>Single</i>	0.010 (0.024)	0.013 (0.024)	-0.033 (0.025)	-0.024 (0.026)	-0.036 (0.022)	-0.033 (0.022)	-0.066*** (0.022)	-0.063*** (0.022)
<i>Education</i>	0.069*** (0.009)	0.072*** (0.009)	0.055*** (0.009)	0.060*** (0.009)	0.031*** (0.008)	0.033*** (0.008)	-0.032*** (0.008)	-0.030*** (0.008)
<i>Earnings</i>	0.018** (0.009)	0.016* (0.009)	0.020** (0.010)	0.019* (0.010)	0.067*** (0.009)	0.066*** (0.009)	-0.001 (0.008)	-0.001 (0.008)
<i>Constant</i>	2.774*** (0.018)	2.748*** (0.017)	3.071*** (0.020)	3.091*** (0.018)	3.041*** (0.017)	3.031*** (0.016)	3.374*** (0.017)	3.374*** (0.016)
<i>Observations</i>	15365	15365	15491	15491	15180	15180	15509	15509
<i>R-squared</i>	0.0208	0.0123	0.0310	0.0194	0.0301	0.0239	0.0093	0.0071

Source of data: ISSP (1998). Notes: All models are OLS regressions. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 7. Comparison of direct effects of Christian religions across different generations (omitted category: “Old” Protestants)

	<i>Education</i>	<i>Working Hours</i>	<i>Supervisor</i>	<i>Self Employed</i>	<i>Earnings</i>	<i>Social Class</i>	<i>Happiness</i>	<i>Fatalism</i>	<i>Balanced Science Faith</i>	<i>Science Good</i>	<i>Gov. Respons. Jobs</i>	<i>Gov. Respons. Inequality</i>
<i>NewProt</i>	0.144*** (0.047)	-1.264 (1.615)	-0.016 (0.022)	-0.015 (0.016)	0.059 (0.048)	-0.207*** (0.063)	0.072* (0.038)	-0.018 (0.052)	-0.016 (0.065)	-0.014 (0.061)	-0.026 (0.048)	0.078 (0.051)
<i>OldCath</i>	-0.016 (0.029)	-0.931 (1.042)	-0.007 (0.014)	-0.015 (0.010)	0.070** (0.030)	-0.078** (0.038)	-0.043* (0.023)	-0.205*** (0.032)	0.054 (0.039)	-0.034 (0.038)	0.076*** (0.029)	0.154*** (0.031)
<i>NewCath</i>	0.030 (0.034)	0.236 (1.215)	-0.033** (0.016)	-0.014 (0.012)	0.062* (0.035)	-0.181*** (0.045)	-0.042 (0.028)	-0.130*** (0.038)	0.008 (0.046)	-0.061 (0.045)	0.104*** (0.035)	0.093** (0.037)
<i>Faith</i>	-0.050*** (0.014)	1.116** (0.551)	-0.008 (0.007)	0.005 (0.005)	-0.057*** (0.015)	0.032* (0.019)	0.047*** (0.012)	0.491*** (0.016)	-0.398*** (0.019)	-0.107*** (0.019)	0.036** (0.014)	0.059*** (0.015)
<i>NewProt * Faith</i>	0.029 (0.025)	0.263 (0.880)	0.015 (0.012)	0.001 (0.009)	0.038 (0.026)	-0.087*** (0.033)	-0.014 (0.020)	-0.026 (0.027)	-0.027 (0.034)	-0.059* (0.033)	0.060** (0.025)	0.039 (0.027)
<i>OldCath * Faith</i>	0.036** (0.017)	-1.399** (0.675)	0.010 (0.008)	0.000 (0.006)	0.023 (0.018)	-0.030 (0.023)	-0.021 (0.014)	-0.174*** (0.020)	0.178*** (0.024)	0.035 (0.023)	-0.013 (0.018)	-0.047** (0.019)
<i>NewCath * Faith</i>	0.032 (0.021)	-2.698*** (0.746)	-0.002 (0.010)	-0.014** (0.007)	0.048** (0.021)	-0.066** (0.026)	-0.029* (0.017)	-0.182*** (0.023)	0.176*** (0.028)	0.046* (0.027)	0.035* (0.021)	-0.014 (0.022)
<i>Upbringing</i>	0.031** (0.013)	0.108 (0.508)	0.001 (0.006)	0.001 (0.005)	0.014 (0.014)	0.010 (0.018)	0.024** (0.011)	0.093*** (0.015)	-0.086*** (0.018)	-0.006 (0.018)	-0.044*** (0.014)	-0.030** (0.015)
<i>NewProt * Upbringing</i>	0.076*** (0.024)	-0.333 (0.840)	-0.014 (0.011)	-0.007 (0.008)	-0.011 (0.024)	0.011 (0.032)	-0.025 (0.019)	0.062** (0.026)	-0.048 (0.032)	-0.017 (0.031)	0.030 (0.024)	0.032 (0.026)
<i>OldCath * Upbringing</i>	0.088*** (0.019)	-1.527** (0.702)	-0.006 (0.009)	-0.008 (0.007)	-0.036* (0.020)	0.024 (0.024)	0.001 (0.016)	-0.048** (0.021)	0.009 (0.026)	-0.008 (0.025)	0.006 (0.019)	-0.002 (0.021)
<i>NewCath * Upbringing</i>	0.045** (0.020)	-1.345* (0.724)	0.004 (0.009)	-0.003 (0.007)	-0.012 (0.021)	0.005 (0.026)	-0.012 (0.017)	-0.035 (0.023)	0.010 (0.027)	0.000 (0.027)	-0.002 (0.021)	0.005 (0.022)
<i>Age</i>	0.204** (0.091)	59.609*** (3.785)	0.156*** (0.043)	0.075** (0.032)	1.397*** (0.094)	-0.834*** (0.124)	-0.229*** (0.075)	0.231** (0.101)	0.092 (0.125)	0.116 (0.122)	-0.033 (0.094)	0.251** (0.100)
<i>Age Squared</i>	-0.270*** (0.080)	-78.153*** (3.677)	-0.191*** (0.038)	-0.068** (0.028)	-1.460*** (0.082)	0.837*** (0.108)	0.246*** (0.065)	-0.075 (0.089)	-0.233** (0.109)	-0.139 (0.107)	-0.014 (0.082)	-0.192** (0.087)
<i>Catholic*Age</i>	-0.401*** (0.109)	-10.860** (4.398)	-0.058 (0.051)	0.074* (0.038)	-0.496*** (0.113)	0.281* (0.145)	-0.239*** (0.089)	0.071 (0.121)	-0.187 (0.148)	-0.098 (0.146)	0.146 (0.112)	-0.119 (0.119)
<i>Catholic*Age Squared</i>	0.134 (0.095)	12.648*** (4.246)	0.068 (0.045)	-0.083** (0.034)	0.595*** (0.099)	-0.301** (0.127)	0.151* (0.078)	-0.082 (0.106)	0.198 (0.130)	0.060 (0.128)	-0.100 (0.098)	0.064 (0.104)
<i>Constant</i>	0.394*** (0.037)	24.592*** (1.295)	-0.086 (0.101)	0.131*** (0.013)	0.080** (0.038)	2.862*** (0.047)	3.355*** (0.030)	0.207*** (0.041)	3.960*** (0.328)	3.571*** (0.049)	2.077*** (0.038)	2.257*** (0.041)
<i>Observations</i>	16044	14763	14300	15722	16044	14181	15806	14451	14470	15194	15678	15442
<i>R-squared</i>	0.3506	0.1002	0.2130	0.1305	0.2433	0.3067	0.1898	0.2727	0.1743	0.1139	0.2687	0.1978
<i>NewProt = NewCath</i>	7.42	1.01	0.75	0.00	0.00	0.22	10.91	5.63	0.17	0.69	9.10	0.12
<i>Prob > F</i>	0.0065	0.3146	0.3855	0.9723	0.9559	0.6422	0.0010	0.0177	0.6797	0.4060	0.0026	0.7292
<i>OldCath = NewCath</i>	1.75	1.00	2.74	0.01	0.05	5.47	0.00	3.83	0.96	0.33	0.62	2.57
<i>Prob > F</i>	0.1857	0.3176	0.0980	0.9188	0.8159	0.0193	0.9684	0.0503	0.3269	0.5676	0.4323	0.1090
<i>NewProt * Faith = NewCath * Faith</i>	0.01	11.08	2.03	2.91	0.13	0.38	0.48	29.21	32.86	9.29	0.89	3.43
<i>Prob > F</i>	0.9209	0.0009	0.1541	0.0879	0.7168	0.5387	0.4883	0.0000	0.0000	0.0023	0.3465	0.0640
<i>OldCath * Faith = NewCath * Faith</i>	0.06	4.15	2.14	5.16	1.76	2.34	0.27	0.19	0.01	0.20	6.51	2.83
<i>Prob > F</i>	0.8009	0.0418	0.1436	0.0231	0.1845	0.1258	0.6019	0.6620	0.9288	0.6510	0.0107	0.0923
<i>NewProt * Upbringing = NewCath * Upbringing</i>	1.39	1.22	2.33	0.18	0.00	0.03	0.37	10.73	2.59	0.24	1.38	0.84
<i>Prob > F</i>	0.2388	0.2701	0.1267	0.6724	0.9658	0.8638	0.5431	0.0011	0.1075	0.6271	0.2405	0.3605
<i>OldCath * Upbringing = NewCath * Upbringing</i>	4.51	0.07	1.30	0.64	1.26	0.56	0.62	0.32	0.00	0.08	0.17	0.10
<i>Prob > F</i>	0.0337	0.7980	0.2542	0.4246	0.2626	0.4546	0.4306	0.5716	0.9881	0.7708	0.6778	0.7468

Source of data: ISSP (1998). Notes: “Old” categories defined by being born before 1960. All models are OLS regressions, except *Working Hours* (tobit, Pseudo-R²) and include controls for sex, age, marital status, education (except the *Education* model), earnings (except the *Earnings* equation) and country of the respondent. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 8. Substitution between enforcement mechanisms across different generations (omitted category: “Old” Protestants)

	<i>Trust Church</i>	<i>Volunteer</i>	<i>Tolerance of Tax Fraud</i>	<i>Tolerance of Benefit Fraud</i>	<i>Trust Parliament</i>	<i>Trust Legal System</i>	<i>Trust Businesses</i>	<i>Trust Education System</i>
<i>NewProt</i>	-0.041 (0.056)	-0.186*** (0.055)	0.061 (0.051)	-0.006 (0.042)	-0.048 (0.055)	-0.003 (0.058)	-0.020 (0.050)	0.031 (0.051)
<i>OldCath</i>	-0.006 (0.034)	-0.255*** (0.034)	0.110*** (0.031)	0.054** (0.026)	0.009 (0.034)	-0.026 (0.036)	-0.035 (0.031)	0.039 (0.031)
<i>NewCath</i>	-0.025 (0.041)	-0.309*** (0.040)	0.140*** (0.037)	0.064** (0.031)	-0.085** (0.040)	-0.026 (0.043)	-0.057 (0.037)	0.024 (0.037)
<i>Faith</i>	0.340*** (0.017)	0.266*** (0.017)	-0.069*** (0.015)	-0.019 (0.013)	0.050*** (0.017)	0.061*** (0.018)	0.004 (0.015)	0.012 (0.016)
<i>NewProt * Faith</i>	0.107*** (0.030)	-0.106*** (0.029)	-0.014 (0.027)	-0.004 (0.022)	-0.031 (0.029)	-0.038 (0.031)	-0.035 (0.027)	-0.000 (0.027)
<i>OldCath * Faith</i>	0.082*** (0.021)	-0.150*** (0.021)	0.031 (0.019)	0.010 (0.016)	0.038* (0.021)	0.052** (0.022)	0.082*** (0.019)	0.037* (0.019)
<i>NewCath*Faith</i>	0.057** (0.025)	-0.166*** (0.024)	0.009 (0.023)	-0.019 (0.019)	0.029 (0.024)	0.004 (0.026)	0.048** (0.022)	-0.002 (0.023)
<i>Upbringing</i>	0.136*** (0.016)	0.101*** (0.016)	-0.067*** (0.015)	-0.021* (0.012)	0.028* (0.016)	0.049*** (0.017)	0.012 (0.015)	0.008 (0.015)
<i>NewProt * Upbringing</i>	0.002 (0.028)	0.079*** (0.028)	0.006 (0.026)	-0.012 (0.021)	0.031 (0.028)	-0.001 (0.029)	-0.012 (0.026)	0.018 (0.026)
<i>OldCath * Upbringing</i>	0.011 (0.023)	-0.023 (0.022)	0.074*** (0.021)	0.031* (0.017)	0.005 (0.023)	-0.016 (0.024)	-0.018 (0.021)	0.027 (0.021)
<i>NewCath * Upbringing</i>	0.040 (0.024)	-0.023 (0.024)	0.026 (0.022)	0.005 (0.019)	0.020 (0.024)	0.033 (0.026)	0.043* (0.022)	0.046** (0.022)
<i>Age</i>	-0.182* (0.110)	0.028 (0.108)	-0.087 (0.100)	-0.186** (0.083)	-0.258** (0.109)	-0.229** (0.115)	-0.357*** (0.100)	-0.187* (0.101)
<i>Age Squared</i>	0.299*** (0.096)	0.022 (0.094)	0.017 (0.088)	0.132* (0.073)	0.280*** (0.095)	0.242** (0.101)	0.313*** (0.088)	0.204** (0.088)
<i>Catholic * Age</i>	0.039 (0.131)	0.238* (0.128)	-0.036 (0.120)	0.106 (0.099)	0.074 (0.131)	-0.088 (0.137)	0.078 (0.120)	-0.023 (0.120)
<i>Catholic * Age Squared</i>	0.016 (0.114)	-0.240** (0.112)	-0.031 (0.105)	-0.138 (0.087)	-0.061 (0.115)	0.113 (0.120)	-0.052 (0.105)	0.019 (0.105)
Constant	3.239*** (0.044)	0.400*** (0.043)	1.855*** (0.041)	1.522*** (0.034)	2.742*** (0.044)	2.793*** (0.047)	3.160*** (0.040)	3.163*** (0.041)
Observations	15593	15434	15588	15712	15365	15491	15180	15509
R-squared	0.2512	0.1472	0.0763	0.1022	0.1042	0.1264	0.1226	0.0780
<i>NewProt = NewCath</i>	0.09	6.20	2.96	3.38	0.53	0.19	0.66	0.02
<i>Prob > F</i>	0.7642	0.0128	0.0852	0.0661	0.4658	0.6660	0.4158	0.8869
<i>OldCath = NewCath</i>	0.21	1.85	0.63	0.10	5.09	0.00	0.34	0.15
<i>Prob > F</i>	0.6453	0.1742	0.4259	0.7522	0.0240	0.9994	0.5571	0.6944
<i>NewProt * Faith = NewCath * Faith</i>	2.64	3.86	0.63	0.37	3.84	1.65	8.63	0.00
<i>Prob > F</i>	0.1044	0.0494	0.4287	0.5446	0.0499	0.1991	0.0033	0.9447
<i>OldCath * Faith = NewCath * Faith</i>	1.33	0.57	1.22	3.04	0.14	4.43	2.86	3.70
<i>Prob > F</i>	0.2479	0.4487	0.2685	0.0814	0.7072	0.0354	0.0910	0.0546
<i>NewProt * Upbringing = NewCath * Upbringing</i>	1.42	10.81	0.45	0.46	0.12	1.03	3.71	0.92
<i>Prob > F</i>	0.2337	0.0010	0.5009	0.4989	0.7342	0.3113	0.0540	0.3383
<i>OldCath * Upbringing = NewCath * Upbringing</i>	1.45	0.00	4.60	1.95	0.35	3.71	7.54	0.67
<i>Prob > F</i>	0.2289	0.9847	0.0319	0.1630	0.5558	0.0540	0.0061	0.4132

Source of data: ISSP (1998). Notes: “Old” categories defined by being born before 1960. All models are OLS regressions and include controls for sex, age, marital status, education, earnings and country of the respondent. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 9. Substitution in transaction costs across different generations (omitted category: "Old" Protestants)

	<i>Tolerance of Premarital Sex</i>	<i>Tolerance of Homosexuality</i>	<i>Tolerance of Concubinage</i>	<i>Tolerance of Adultery</i>	<i>Tolerance of Abortion</i>	<i>Family Size</i>	<i>Cover Up Rights</i>	<i>Cover Up Perform</i>	<i>Trust People</i>
<i>NewProt</i>	-0.011 (0.055)	-0.083 (0.065)	-0.055 (0.064)	-0.008 (0.046)	0.009 (0.061)	-0.554*** (0.081)	-0.023 (0.034)	-0.008 (0.051)	-0.072* (0.042)
<i>OldCath</i>	0.144*** (0.034)	0.151*** (0.040)	0.076* (0.040)	0.004 (0.028)	-0.113*** (0.037)	0.123** (0.050)	0.039* (0.020)	0.071** (0.031)	-0.048* (0.026)
<i>NewCath</i>	0.197*** (0.040)	0.220*** (0.048)	0.144*** (0.047)	0.056* (0.034)	-0.115*** (0.044)	-0.701*** (0.059)	0.035 (0.024)	0.060 (0.038)	-0.111*** (0.031)
<i>Faith</i>	-0.409*** (0.017)	-0.263*** (0.020)	-0.406*** (0.019)	-0.142*** (0.014)	-0.296*** (0.018)	0.050** (0.025)	-0.013 (0.010)	-0.057*** (0.015)	0.041*** (0.013)
<i>NewProt*Faith</i>	0.090*** (0.029)	-0.013 (0.034)	0.037 (0.034)	0.027 (0.024)	0.002 (0.032)	0.038 (0.043)	-0.028 (0.018)	-0.047* (0.027)	-0.040* (0.022)
<i>OldCath*Faith</i>	0.136*** (0.021)	0.126*** (0.025)	0.099*** (0.024)	0.028 (0.017)	-0.038* (0.023)	0.018 (0.031)	0.009 (0.012)	0.022 (0.019)	-0.007 (0.016)
<i>NewCath*Faith</i>	0.221*** (0.024)	0.082*** (0.029)	0.146*** (0.029)	-0.005 (0.020)	0.019 (0.027)	0.012 (0.036)	-0.021 (0.014)	-0.002 (0.022)	-0.033* (0.019)
<i>Upbringing</i>	-0.113*** (0.016)	-0.094*** (0.019)	-0.127*** (0.019)	-0.052*** (0.013)	-0.061*** (0.017)	-0.007 (0.024)	-0.023** (0.010)	-0.045*** (0.015)	0.023* (0.012)
<i>NewProt * Upbringing</i>	-0.063** (0.028)	-0.067** (0.033)	-0.077** (0.033)	0.025 (0.023)	-0.126*** (0.031)	-0.009 (0.041)	-0.006 (0.017)	-0.008 (0.026)	-0.052** (0.021)
<i>OldCath * Upbringing</i>	0.073*** (0.023)	0.036 (0.026)	0.050* (0.026)	0.025 (0.019)	0.016 (0.025)	0.062* (0.033)	-0.014 (0.013)	-0.007 (0.021)	-0.008 (0.017)
<i>NewCath * Upbringing</i>	0.078*** (0.024)	0.019 (0.029)	0.041 (0.028)	-0.011 (0.020)	0.001 (0.026)	0.092*** (0.036)	-0.014 (0.014)	0.000 (0.022)	0.018 (0.019)
<i>Age</i>	0.180* (0.109)	-0.033 (0.127)	-0.027 (0.126)	0.270*** (0.090)	0.278** (0.119)	-0.886*** (0.161)	-0.241*** (0.065)	-0.374*** (0.100)	0.048 (0.083)
<i>Age Squared</i>	-0.415*** (0.095)	-0.260** (0.111)	-0.287*** (0.110)	-0.280*** (0.078)	-0.225** (0.104)	0.018 (0.141)	0.174*** (0.057)	0.294*** (0.088)	-0.047 (0.073)
<i>Catholic*Age</i>	-0.080 (0.130)	-0.086 (0.153)	0.079 (0.151)	-0.044 (0.107)	-0.149 (0.142)	-0.733*** (0.190)	0.012 (0.077)	0.172 (0.120)	-0.164* (0.099)
<i>Catholic*Age Squared</i>	-0.047 (0.113)	0.111 (0.133)	-0.139 (0.132)	0.007 (0.094)	-0.024 (0.124)	0.598*** (0.167)	-0.012 (0.067)	-0.197* (0.105)	0.150* (0.087)
Constant	2.642*** (0.044)	1.654*** (0.052)	3.003*** (0.052)	1.250*** (0.036)	3.054*** (0.049)	3.226*** (0.063)	1.335*** (0.170)	1.715*** (0.041)	2.445*** (0.034)
Observations	15480	14566	15760	15643	15249	15246	14143	13867	15779
R-squared	0.3512	0.3007	0.3197	0.1124	0.2896	0.3344	0.1048	0.0850	0.1641
<i>NewProt = NewCath</i>	17.29	26.28	11.59	2.34	5.09	4.10	3.68	2.17	1.06
<i>Prob > F</i>	0.0000	0.0000	0.0007	0.1259	0.0240	0.0429	0.0551	0.1407	0.3025
<i>OldCath = NewCath</i>	1.68	1.99	1.96	2.30	0.00	194.33	0.03	0.08	4.02
<i>Prob > F</i>	0.1951	0.1579	0.1613	0.1296	0.9676	0.0000	0.8557	0.7770	0.0449
<i>NewProt*Faith = NewCath*Faith</i>	18.00	6.84	9.24	1.59	0.26	0.34	0.17	2.49	0.09
<i>Prob > F</i>	0.0000	0.0089	0.0024	0.2075	0.6127	0.5595	0.6761	0.1148	0.7585
<i>OldCath*Faith = NewCath*Faith</i>	14.92	2.82	3.43	3.33	5.90	0.03	5.51	1.47	2.52
<i>Prob > F</i>	0.0001	0.0933	0.0642	0.0680	0.0152	0.8547	0.0189	0.2252	0.1128
<i>NewProt * Upbringing = NewCath * Upbringing</i>	20.08	5.48	10.37	1.91	13.56	4.85	0.16	0.08	8.39
<i>Prob > F</i>	0.0000	0.0192	0.0013	0.1666	0.0002	0.0277	0.6873	0.7736	0.0038
<i>OldCath * Upbringing = NewCath * Upbringing</i>	0.04	0.33	0.09	3.19	0.32	0.71	0.00	0.10	2.05
<i>Prob > F</i>	0.8458	0.5651	0.7645	0.0739	0.5716	0.3984	0.9715	0.7509	0.1525

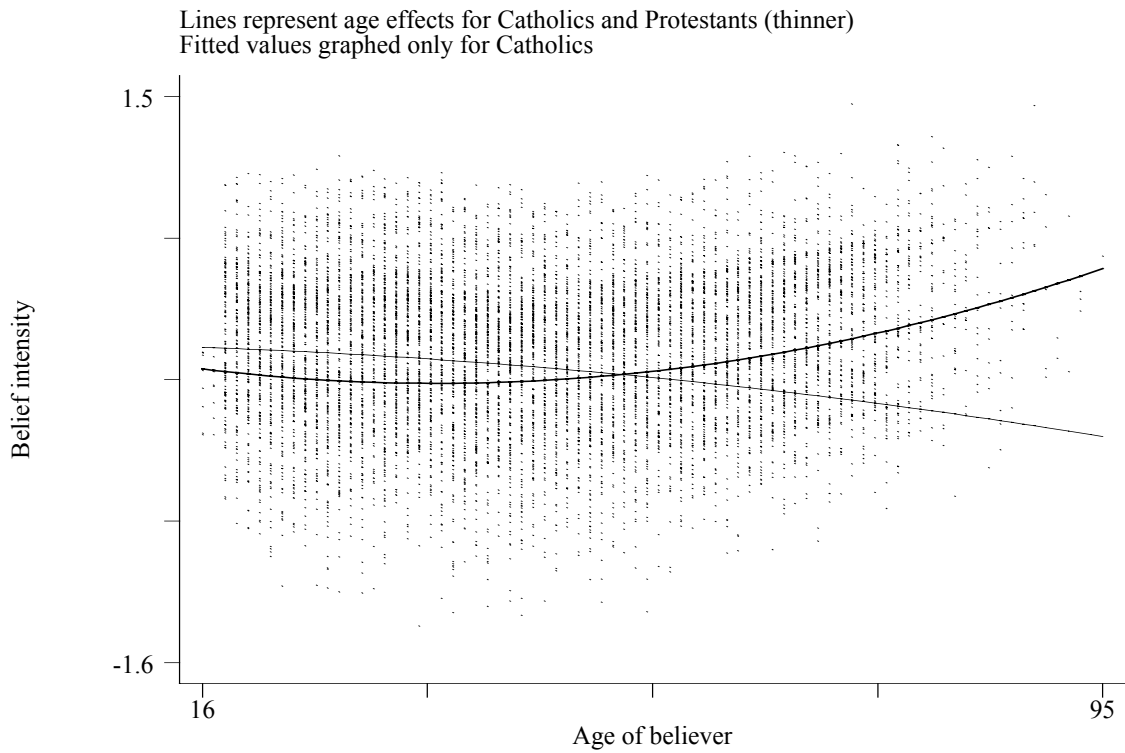
Source of data: ISSP (1998). Notes: "Old" categories defined by being born before 1960. All models are OLS regressions and include controls for sex, age, marital status, education, earnings and country of the respondent. Standard errors in parentheses. *, **, *** Significant at 10, 5 and 1%.

Table 10. Comparison of residual heterogeneity between Catholics and Protestants (standard deviations of OLS regression errors)

<i>Variable</i>	<i>Original name in ISSP 1998</i>	<i>Protestants</i>	<i>Catholics</i>	<i>Difference</i>	<i>Difference (in %)</i>
<i>Education</i>	v205reducatiioncategories	.8212432	.8106962	.0105470	1.28%
<i>Working Hours</i>	v213hoursworkedweekly	15.29922	17.79754	-2.498320***	-16.33%
<i>Supervisor</i>	v214rsupervisei	.3830501	.3278737	.0551764***	14.40%
<i>Self Employed</i>	v211rselfemployedi	.2711128	.2851219	-.0140091***	-5.17%
<i>Earnings</i>	v215rearningsi	.8283389	.8436817	-.0153428	-1.85%
<i>Social Class</i>	v219rsubjectivesocialclass	.9889573	.9734649	.0154924	1.57%
<i>Happiness</i>	v4howhappywouldyousayyouare?	.6275657	.6695739	-.0420082***	-6.69%
<i>Fatalism</i>	Index	.8679808	.8433133	.0246675*	2.84%
	v45peoplecandolittletochangelife	1.069873	1.150421	-.0805480***	-7.53%
	v46lifemeaningfulonlybecausegode	.9383892	1.007235	-.0688458***	-7.34%
	v47lifedoesnotserveanypurpose	.8777705	.9353011	-.0575306***	-6.55%
	v48lifemeaningfulifprovidgmeanin	1.043085	.9760154	.0670696***	6.43%
	v49weeachmakeourownfate	1.027136	1.034038	-.0069020	-.67%
<i>Balanced Science Faith</i>	v28toomuchtrustinsciencethanfaith	1.01438	1.037852	-.0234720*	-2.31%
<i>Science Good</i>	v27modernsciencemoreharmthangood	.9967726	1.068572	-.0717994***	-7.20%
<i>Gov. Respons. Jobs</i>	v5govrespprovidejobfeveryone	.8860997	.769092	.1170077***	13.20%
<i>Gov. Respons. Inequality</i>	v6govrespreduceincomediffriech+poor	.9285839	.8182215	.1103624***	11.89%
<i>Trust Church</i>	v22confidenceinchurches+religorg?	.9236414	.9597346	-.0360932***	-3.91%
<i>Volunteer</i>	Index	.9769296	.8958803	.0810493***	8.30%
	v32volunteerworkpoliticalactivit	.4541278	.4427834	.0113444**	2.50%
	v33volunteerworkcharitableactivi	.9452308	.8713413	.0738895***	7.82%
	v34volunteerworkreligiousactivit	.8783776	.7801983	.0981793***	11.18%
	v35anyotherkindofvolunteerwork	1.053341	.8190514	.2342896***	22.24%
<i>Tolerance of Tax Fraud</i>	v16taxpayernotreportincomelesstax	.8208731	.8975935	-.0767204***	-9.35%
<i>Tolerance of Benefit Fraud</i>	v17incorrectinfogetgovtbenefits	.6318022	.7699400	-.1381378***	-21.86%
<i>Trust Parliament</i>	v20howmuchconfidenceinparliament?	.9068857	.9574792	-.0505935***	-5.58%
<i>Trust Legal System</i>	v23confidenceincourts&legalsystem?	.9641901	1.007742	-.0435519***	-4.52%
<i>Trust Businesses</i>	v21confidenceinbusinessandindustry?	.81204	.8816003	-.0695603***	-8.57%
<i>Trust Education System</i>	v24confidenceinschool+educsystem?	.8335677	.8920156	-.0584479***	-7.01%
<i>Tolerance of Premarital Sex</i>	v7sexualrelationsbeforemarriage?	.8983335	.9744799	-.0761464***	-8.48%
<i>Tolerance of Homosexuality</i>	v9sexualrelations2adultssamesex?	1.1245	1.049304	.0751960***	6.69%
<i>Tolerance of Concubinage</i>	v14coupletogetherwithoutintendgtomarry	1.042416	1.144926	-.1025100***	-9.83%
<i>Tolerance of Adultery</i>	v8sexualrelationswothersthanspouse	.7418929	.8092914	-.0673985***	-9.08%
<i>Tolerance of Abortion</i>	v10legalabortionifseriousdefectinbaby	.9444908	1.068379	-.1238882***	-13.12%
<i>Family Size</i>	v252howmanypersonsinhousehold	1.199215	1.452739	-.2535240***	-21.14%
<i>Cover Up Rights</i>	v62rightsofrsclosetfriend	.4684909	.5601768	-.0916859***	-19.57%
<i>Cover Up Perform</i>	v63rsdecisioninthissituation	.7202443	.8726888	-.1524445***	-21.17%
<i>Trust People</i>	v19trustinpeopleorcantbetooocareful	.6936781	.7431952	-.0495171***	-7.14%
<i>Faith</i>	Index	.8496310	.8658773	-.0162463	-1.91%
	v39rbelieveinlifeafterdeath	.9830046	1.003271	-.0202664*	-2.06%
	v40rbelieveinheaven	.9503273	.9597179	-.0093906	-.99%
	v41rbelieveinhell	.9848036	1.054572	-.0697684***	-7.08%
	v42rbelieveinreligiousmiracles	.9863268	.9784765	.0078503	.80%
<i>Religious Practice</i>	Index	.7004904	.6776643	.0228261***	3.26%
	v58abouthowoftendoyoupray	2.539327	2.525775	.0135520	.53%
	v59howoftentakepartinchurchactiv	1.934341	2.022036	-.0876950***	-4.53%
	v60rdescribeshelfasreligious	.9949213	.9193944	.0755269***	7.59%
	v218rreligiousserviceshowoften	1.349921	1.451523	-.1016020***	-7.53%

Source of data: ISSP (1998). Notes: Calculated from residuals in regressions reported in Tables 2, 3 and 4. *, **, *** Significant at 10, 5 and 1%.

Figure 1. Estimated contribution of age to intensity of religious belief



Source of data: Regression in the second column of Table 5.

6. Annex

6.1. Description of variables¹³

<i>Variable name</i>	<i>Original name in ISSP 1998</i>	<i>Survey question (US version when there are variations)</i>	<i>Data transformations and meaning of variables</i>
Dependent variables:			
<i>Education</i>	<i>v205reducationiicategories</i>	Education II: Categories (What is the highest degree?)	Standardized
<i>Working Hours</i>	<i>v213rhoursworkedweekly</i>	Hours worked weekly (How many hours did you work last week, how many hours do you usually work a week, at all jobs?)	Hours
<i>Supervisor</i>	<i>v214rsupervisei</i>	In your main job, do you supervise anyone or are you directly responsible for the work of other people?	Binary
<i>Self Employed</i>	<i>v211rselfemployedi</i>	In your (main) job are you an employee or self-employed?	<i>Idem.</i>
<i>Earnings</i>	<i>v215rearningsi</i>	Respondent's earnings (from all jobs in 1997 before taxes or other deductions in \$)	Standardized within each country
<i>Social Class</i>	<i>v219rsubjectivesocialclass</i>	Subjective social class (If you were asked to use one of four names for your social class, which would you say you belong to: the lower, the working, the middle, or the upper class?)	Binary
<i>Happiness</i>	<i>v4howhappywouldyousayyouare?</i>	If you were to consider your life in general these days, how happy or unhappy would you say you are, on the whole?	Recoded for the variable to increase with happiness
<i>Fatalism</i>	Index	Built with the scores of first principal component from variables v45 to v49 (see the Annex 2.1 for details)	Standardized
	<i>v45peoplecandolittletochangelife</i>	Agree or disagree: There is little that people can do to change the course of their lives	Recoded for the variable to increase with fatalism
	<i>v46lifemeaningfulonlybecausegode</i>	Agree or disagree: To me, life is meaningful only because God exists	<i>Idem.</i>
	<i>v47lifedoesnotserveanypurpose</i>	Agree or disagree: In my opinion, life does not serve any purpose	<i>Idem.</i>
	<i>v48lifemeaningfulifprovidgmeanin</i>	Agree or disagree: Life is only meaningful if you provide the meaning yourself	Original scale increases with fatalism
	<i>v49weeachmakeourownfate</i>	Agree or disagree: We each make our own fate	<i>Idem.</i>
<i>Balanced Science</i>	<i>v28toomuchtrustinsciencethanfaith</i>	Please consider the following statements and tell me whether you agree or disagree: We trust too much in science and not enough in religious faith	Original scale measures disagreement with the statement
<i>Science Good</i>	<i>v27modernsciencemoreharmthangood</i>	<i>Idem.</i> Overall, modern science does more harm than good	<i>Idem.</i>
<i>Gov. Respons. Jobs</i>	<i>v5govrespprovidejobfeveryone</i>	On the whole, do you think it should or should not be the government's responsibility to provide a job for everyone who wants one?	Recoded for the variable to increase with responsibility
<i>Gov. Respons. Inequality</i>	<i>v6govrespreduceincomedifrich+poor</i>	<i>Idem.</i> to reduce income differences between the rich and poor?	<i>Idem.</i>

¹³ Additional information and codebook available at <http://www.issp.org/> (accessed July 18, 2003).

<i>Variable name</i>	<i>Original name in ISSP 1998</i>	<i>Survey question (US version when there are variations)</i>	<i>Data transformations and meaning of variables</i>
<i>Trust Church</i>	<i>v22confidenceinchurches+religorg?</i>	Confidence in: Churches and religious organizations	Recoded for the variable to increase with confidence
<i>Volunteer</i>	Index	Built with the scores of first principal component from variables v32 to v35 (see the Annex 2.2 for details)	Standardized
	<i>v32volunteerworkpoliticalactivit</i>	During the last 12 months did you do volunteer work in any of the following areas: Political activities (helping political parties, political movements, election campaigns, etc.)	Amount of work
	<i>v33volunteerworkcharitableactivi</i>	<i>Idem</i> : Charitable activities (helping the sick, elderly, poor, etc.)	<i>Idem</i> .
	<i>v34volunteerworkreligiousactivit</i>	<i>Idem</i> : Religious and church-related activities (helping churches and religious groups)	<i>Idem</i> .
	<i>v35anyotherkindofvolunteerwork</i>	<i>Idem</i> : Any other kind of voluntary activities	<i>Idem</i> .
<i>Tolerance of Tax Fraud</i>	<i>v16taxpayernotreportincomelesstax</i>	Do you feel it is wrong or not wrong if a taxpayer does not report all of his or her income in order to pay less income taxes?	Recoded for the variable to increase with tolerance
<i>Tolerance of Benefit Fraud</i>	<i>v17incorrectinfogetgovtbenefits</i>	Do you feel it is wrong or not wrong if a person gives the government incorrect information about himself/ herself to get government benefits that he/she is not entitled to?	<i>Idem</i> .
<i>Trust Parliament</i>	<i>v20howmuchconfidenceinparliament?</i>	How much confidence do you have in respondent's country's Parliament? (use national legislature, e.g. U.S. Congress)	Recoded for the variable to increase with confidence
<i>Trust Legal System</i>	<i>v23confidenceincourts&legalsystem?</i>	<i>Idem</i> in courts and the legal system?	<i>Idem</i> .
<i>Trust Businesses</i>	<i>v21confidenceinbusinessandindustry?</i>	<i>Idem</i> in business and industry	<i>Idem</i> .
<i>Trust Education System</i>	<i>v24confidenceinschool+educsystem?</i>	<i>Idem</i> in schools and the educational system?	<i>Idem</i> .
<i>Tolerance of Premarital Sex</i>	<i>v7sexualrelationsbeforemarriage?</i>	Do you think it is wrong or not wrong if a man and a woman have sexual relations before marriage?	Tolerance
<i>Tolerance of Homosexuality</i>	<i>v9sexualrelations2adultssamesex?</i>	Do you think it is wrong or not wrong sexual relations between two adults of the same sex?	<i>Idem</i> .
<i>Tolerance of Concubinage</i>	<i>v14coupletogetherwithoutintendgtomarry</i>	Do you agree or disagree: It is alright for a couple to live together without intending to get married?	Recoded for the variable to increase with tolerance
<i>Tolerance of Adultery</i>	<i>v8sexualrelationswothersthanspouse</i>	Do you think it is wrong or not wrong for a married person having sexual relations with someone other than his or her husband or wife?	Tolerance
<i>Tolerance of Abortion</i>	<i>v10legalabortionifseriousdefectinbaby</i>	Do you personally think it is wrong or not wrong for a woman to have an abortion if there is a strong chance of a serious defect in the baby?	<i>Idem</i> .
<i>Family Size</i>	<i>v252howmanypersonsinhousehold</i>	Size of household: Total number of persons living in household	Number of persons
<i>Cover Up Rights</i>	<i>v62rightsofrsclosefriend</i>	Suppose you were riding in a car driven by a close friend. You know he is going too fast. He hits a pedestrian. He asks you to tell the police that he was obeying the speed limit. (a) Which statement comes closest to your belief about what your friend has a right to expect from you? (Possible answers: My friend has a definite / some / no right as a friend to except me to testify that he was obeying the speed limit)	Recoded for the variable to increase with the perceived right to be covered up
<i>Cover Up Perform</i>	<i>v63rsdecisioninthissituation</i>	<i>Idem</i> , (b) What would you do in this situation? (Possible answers: Definitely / Probably tell the police that your friend was / was not going faster than the speed limit)	Stated cover up
<i>Trust People</i>	<i>v19trustinpeopleorcantbetooocareful</i>	Generally speaking, would you say that people can be trusted or that you can't be too careful in dealing with people? (Possible answers: People can almost always / usually be trusted, You usually / always can't be too careful in dealing with people)	Recoded for the variable to increase with the level of trust
<i>Religious Practice</i>	Index	Built with the scores of first principal component from variables v58, v59, v60 and v218 (see the Annex 2.4 for details)	Standardized
	<i>v58abouthowoftendoyoupray</i>	About how often do you pray?	Frequency

<i>Variable name</i>	<i>Original name in ISSP 1998</i>	<i>Survey question (US version when there are variations)</i>	<i>Data transformations and meaning of variables</i>
	<i>v59howoftentakepartinchurchactiv</i>	How often do you take part in the activities or organizations of a church or a place of worship, other than attending services?	Frequency
	<i>v60rdescribeselfasreligious</i>	Would you describe yourself as extremely religious / very religious / somewhat religious / neither religious nor non-religious / somewhat non-religious / very non-religious / extremely non-religious?	Recoded for the variable to increase with religiosity
	<i>v218rreligiouserviceshowoften</i>	Church attendance: How often do you attend religious services?	Frequency of attendance
Dependent variables:			
<i>Catholic</i>	<i>v217rreligiousdenomination</i>	Religious denomination: Which religious group do you belong to? (What is your religious preference? Do you regard yourself as belonging to any particular religion?)	Binary variable: = 1, if Catholic, = 0, otherwise. Greek Catholics considered as Catholic
<i>Protestant</i>	<i>Idem.</i>	<i>Idem.</i>	Binary variable: = 1, if Protestant; = 0, otherwise. Combines all Protestant denominations
<i>R-Catholic</i>	<i>v53religionrespondentwasraisedin</i>	What religion, if any, were you raised in? Was it Protestant, Catholic, Jewish, some other religion, or no religion?	Binary variable: = 1, if raised as Catholic; = 0, otherwise. Greek Catholics considered as Catholic
<i>R-Protestant</i>	<i>Idem.</i>	<i>Idem.</i>	Binary variable: = 1, if raised as Protestant; = 0, otherwise. Combines all Protestant denominations
<i>Faith</i>	Index	Built with the scores of first principal component from variables v39 to v42 (see the Annex 2.3 for details)	Standardized
	<i>v39rbelieveinlifeafterdeath</i>	Do you believe in life after death?	Recoded for the variable to increase with the strength of belief. Australian data recoded for homogeneity.
	<i>v40rbelieveinheaven</i>	Do you believe in heaven?	<i>Idem.</i>
	<i>v41rbelieveinhell</i>	Do you believe in hell?	<i>Idem.</i>
	<i>v42rbelieveinreligiousmiracles</i>	Do you believe in religious miracles?	<i>Idem.</i>
<i>Upbringing</i>	<i>v57rage1112yrshowoftenattendchur</i>	How often did you attend religious services when you were around 11 or 12?	Frequency of attendance, standardized
Control variables:			
<i>Women</i>	<i>v200rsex</i>	Sex of respondent	Recoded: 1, if female; 0, male
<i>Age</i>	<i>v201rage</i>	Age of respondent	Years of age, standardized
<i>Age Squared</i>	<i>v201rage</i>	Age of respondent	Years of age, squared and standardized
<i>Widowed</i>	<i>v202rmaritalstatus</i>	Marital status: widowed	Binary variable
<i>Divorced & Separated</i>	<i>v202rmaritalstatus</i>	Marital status: divorced or separated	<i>Idem.</i>
<i>Single</i>	<i>v202rmaritalstatus</i>	Marital status: never married, not married, single ("living as married" computed as married)	<i>Idem.</i>
<i>Education</i>	<i>v205reducationiicategories</i>	Education II: Categories (What is the highest degree?)	Standardized
<i>Earnings</i>	<i>v215rearningsi</i>	Respondent's earnings (from all jobs in 1997 before taxes or other deductions in \$)	Standardized within each country

6.2. Annex: Principal components analyses used to build the indices employed in the models

6.2.1. Fatalism

<i>Component</i>	<i>Eigenvalue</i>	<i>Difference</i>	<i>Proportion</i>	<i>Cumulative</i>	
1	1.56293	0.20096	0.3126	0.3126	
2	1.36197	0.52743	0.2724	0.5850	
3	0.83454	0.13734	0.1669	0.7519	
4	0.69720	0.15385	0.1394	0.8913	
5	0.54335	.	0.1087	1.0000	

<i>Variable</i>	<i>Eigenvalues</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>v45peoplecandolittletochangelife</i>	0.33534	0.58997	-0.12806	-0.58296	0.42806
<i>v46lifemeaningfulonlybecausegode</i>	0.50962	0.25247	-0.61114	0.44827	-0.31954
<i>v47lifedoesnotserveanypurpose</i>	0.08215	0.59814	0.68169	0.37442	-0.17490
<i>v48lifemeaningfulifprovidgmeanin</i>	0.55021	-0.37342	0.23190	0.34378	0.62118
<i>v49weeachmakeourownfate</i>	0.56424	-0.30162	0.30270	-0.44815	-0.54608

<i>Variable</i>	<i>Scoring Coefficients</i>
	<i>1</i>
<i>v45peoplecandolittletochangelife</i>	0.33534
<i>v46lifemeaningfulonlybecausegode</i>	0.50962
<i>v47lifedoesnotserveanypurpose</i>	0.08215
<i>v48lifemeaningfulifprovidgmeanin</i>	0.55021
<i>v49weeachmakeourownfate</i>	0.56424

6.2.2. Volunteer work

<i>Component</i>	<i>Eigenvalue</i>	<i>Difference</i>	<i>Proportion</i>	<i>Cumulative</i>	
1	1.80964	0.91120	0.4524	0.4524	
2	0.89844	0.16313	0.2246	0.6770	
3	0.73532	0.17871	0.1838	0.8608	
4	0.55660	.	0.1392	1.0000	

<i>Variable</i>	<i>Eigenvalues</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>v32volunteerworkpoliticalactivit</i>	0.33648	0.93656	-0.09727	0.01346
<i>v33volunteerworkcharitableactivi</i>	0.58131	-0.21394	-0.15552	-0.76949
<i>v34volunteerworkreligiousactivit</i>	0.54240	-0.25926	-0.53828	0.59063
<i>v35anyotherkindofvolunteerwork</i>	0.50464	-0.09936	0.82256	0.24261

<i>Variable</i>	<i>Scoring Coefficients</i>
	<i>1</i>
<i>v32volunteerworkpoliticalactivit</i>	0.33648
<i>v33volunteerworkcharitableactivi</i>	0.58131
<i>v34volunteerworkreligiousactivit</i>	0.54240
<i>v35anyotherkindofvolunteerwork</i>	0.50464

6.2.3. Intensity of beliefs

<i>Component</i>	<i>Eigenvalue</i>	<i>Difference</i>	<i>Proportion</i>	<i>Cumulative</i>
1	2.95831	2.52619	0.7396	0.7396
2	0.43212	0.02720	0.1080	0.8476
3	0.40492	0.20026	0.1012	0.9488
4	0.20466	.	0.0512	1.0000

<i>Eigenvectors</i>				
<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>v39rbelieveintlfeafterdeath</i>	0.48702	-0.28940	0.78425	0.25301
<i>v40rbelieveinheaven</i>	0.53287	-0.20175	-0.14437	-0.80901
<i>v41rbelieveinhell</i>	0.50324	-0.33201	-0.60341	0.52194
<i>v42rbelieveinreligiousmiracles</i>	0.47499	0.87482	-0.00286	0.09521

<i>Scoring Coefficients</i>	
<i>Variable</i>	<i>1</i>
<i>v39rbelieveintlfeafterdeath</i>	0.48702
<i>v40rbelieveinheaven</i>	0.53287
<i>v41rbelieveinhell</i>	0.50324
<i>v42rbelieveinreligiousmiracles</i>	0.47499

6.2.4. Religious practice

<i>Component</i>	<i>Eigenvalue</i>	<i>Difference</i>	<i>Proportion</i>	<i>Cumulative</i>
1	2.53907	1.85931	0.6348	0.6348
2	0.67976	0.24115	0.1699	0.8047
3	0.43861	0.09605	0.1097	0.9144
4	0.34256	.	0.0856	1.0000

<i>Eigenvectors</i>				
<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>v58abouthowoftendoyoupray</i>	0.52743	-0.32059	-0.34995	0.70468
<i>v59howoftentakepartinchurchactiv</i>	0.43554	0.83111	0.28610	0.19420
<i>v60rdescribeselfasreligious</i>	0.49625	-0.45074	0.70693	-0.22542
<i>v218rreligiousserviceshowoften</i>	0.53466	0.05759	-0.54399	-0.64412

<i>Scoring Coefficients</i>	
<i>Variable</i>	<i>1</i>
<i>v58abouthowoftendoyoupray</i>	0.52743
<i>v59howoftentakepartinchurchactiv</i>	0.43554
<i>v60rdescribeselfasreligious</i>	0.49625
<i>v218rreligiousserviceshowoften</i>	0.53466