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Catholics, Protestants and Muslims: Similar work ethics, different social and political ethics

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ABSTRACT

This paper employs data from the World Values Survey (1995–2020) and the European Values Study (1999–2020) to test three hypotheses on attitudinal differences between Catholics, Protestants and Muslims: (1) the *work ethic hypothesis,* which covers attitudes towards work and some fundamental characteristics of the market economy; (2) the *social ethic hypothesis*, which concerns interpersonal trust, ethical standards and attitudes towards gender equality; (3) the *political ethic hypothesis*, which involves attitudes towards democracy and political violence, institutional trust and preferences for government-organized redistribution. The empirical analysis provides very little support for the *work ethic hypothesis* but solid support for the *social* and *political ethic hypothesis*. Although the results should be ultimately interpreted as partial correlations, they support the following argument. Market forces and the rise of post-materialist values may have dissolved the original role of a work ethic rooted in religion (especially in the Catholic and Protestant world). Yet, the socio-political ethic associated with Catholicism, Protestantism and Islam continues to manifest itself in attitudinal differences concerning interpersonal trust, ethical standards and gender equality, and in political preferences. A complementary analysis of regions with a historically strong influence of Catholicism, Protestantism and Islam supports this argument and suggests that the current attitudinal differences between the three religions are more related to their cultural and historical legacy than to current personal commitment to their specific doctrines.

1. Introduction

Different lines of research have challenged the secularization theory and suggested that religion may still explain the persistence of certain socioeconomic outcomes (e.g., Franck and Iannaccone, 2014; Iyer, 2016; Ruiter and van Tubergen, 2009; Stark, 1999). Barro and McCleary (2003), for example, show that religious beliefs foster individual traits conducive to productivity and growth (e.g., frugality), whereas religious participation leads to growth only to the extent that it promotes these productivity-enhancing beliefs. Otherwise, religious participation consumes resources that could have been used for other productive purposes. Barro and McCleary find a negative effect of Islam on growth too, which in line with Kuran (2004) they link to governmental regulations in Muslim countries (e.g., on contracts or corporate ownership). Campante and Yanagizawa-Drott (2015) also find a negative effect of Ramadan on growth, while Noland (2005) finds no evidence of a detrimental character of Islam with respect to growth. On the contrary, he points to increasing institutional and behavioral convergence in the Muslim world to explain the above-average growth of some

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Muslim countries over the last decades.

While very insightful, these studies are unable to explain how a primarily exogenous but time-invariant factor like religion can account for a dynamic phenomenon like economic growth. Besides the fact that regression analysis with a small sample of countries may confound the effects of religion with other institutional and cultural factors (Durlauf et al., 2012; Young, 2009), a possibly robust link between religion and economic growth at the aggregate level does not explain the mechanisms through which religion may affect this outcome (e.g., political behavior, labor market decisions). At the same time, research on these mechanisms usually refers to specific countries and institutional settings, making a comparison between countries and religions more difficult (e.g., Basten and Betz, 2013; Spenkuch, 2017). Against these challenges, different lines of research, among which the present study is included, prefer to make use of cross-country survey data to study the (persistent) link between religion and attitudes shown to explain socioeconomic outcomes. In this approach, a major assumption is that current religious denomination still provides information on the historical influence of religion because values and preferences with a religious origin remain palpable even when the underpinning religious beliefs and practices are no longer active (Inglehart and Baker, 2000).

Making use of the first three waves of the World Values Survey, Guiso et al. (2003) find higher pro-market attitudes among Protestants than among Catholics, while Islam appears to be the most *anti-market* religion. Hayward and Kemmelmeier (2011) extend this analysis to the societal level and find that historically Protestant societies have higher pro-market attitudes too. They attribute the existence of a Protestant ethic to the prevalence of a Protestant culture rather than to personal adherence to Protestant beliefs. Van Hoorn and Maseland (2013) find that unemployment hurts Protestants and historically Protestant societies more, which they interpret as evidence that work has a higher value in the Protestant world. Meanwhile, Schaltegger and Torgler (2010) find that religious behavior and education increase the commitment to hard work more strongly among Protestants than Catholics. By contrast, further evidence by Guiso et al. (2003) suggests that Protestants have no higher preference for thriftiness than Catholics. Shirokanova (2015) finds no significant difference between the Protestant and Muslim work ethic either. Indeed, Norris and Inglehart (2004) and Bozkurt and Yesilada (2017) find that Protestant societies today exhibit the weakest while Muslim societies the strongest work ethic. In line with Inglehart (1997), they associate this finding to the rise of post-materialist values and argue that the values encompassed in the Protestant ethic are today more common in developing countries with low existential security. In such countries, among which several countries with a Muslim tradition can be found, hard work still acts as a way to escape poverty and improve living conditions. Apart from that, Norris and Inglehart (2004) find that Protestant societies display higher ethical standards than Catholic societies (e.g., voluntary tax compliance). Related to this, Arruñada (2010) argues that the differences between Catholics and Protestants are not due to a different work ethic but due to a Protestant social ethic that encourages trust, cooperation and impersonal trade. Colvin and McCracken (2017) replicate Arruñada (2010) with more recent data and corroborate his argument. For their part, Alesina and Guiliano (2010) suggest that Protestants also have a weaker preference for both government intervention and redistribution, at least than Catholics. Guiso et al. (2003) also find evidence of higher interpersonal trust and legal commitment among Protestants than Catholics, whereas Muslims are less open to strangers and gender equality. This latter finding is consistent with Inglehart et al. (2002) and Inglehart and Norris (2003) who attribute the *cultural clash* between the Western and the Muslim world to lower gender equality rather than to lower support for democracy among Muslims. Rowley and Smith (2009) define this as the *Islam's democracy paradox*: Although Muslim-majority countries are less democratic and Muslims are less likely to take part in different forms of political participation (Omelicheva and Ahmed, 2018), they actually value democracy more than other people do.

The present paper revisits an old debate in the economics and sociology of religion and offers the following contribution to prior work. First, this paper extends the analysis of attitudinal differences in the economic sphere to the social and political field. Although there is research on the link between religion and the latter two fields, a comprehensive overview of the attitudinal differences across the economic, social and political sphere is missing. Partial exceptions to this are Arruñada (2010), Guiso et al. (2003) and Norris and Inglehart (2004). Yet, this research is based on somewhat outdated data and on a more limited battery of survey questions. Second, this paper incorporates Islam into the classic analysis of Catholicism and Protestantism and provides a deep theoretical and empirical understanding of the attitudinal differences that may persist among Catholics, Protestants and Muslims. A thorough comparison between the three religions is important for the following reasons: (1) it permits a deeper understanding of the challenges that the coexistence of the three religions may pose for social cohesion, for the effectiveness of economic integration, for the efficiency of both economic and social policy, or for the future of political integration. Awareness of these challenges may be especially important in Europe, where many Catholics, Protestants and Muslims cohabit (Arruñada and Krapf, 2019; Foret, 2009; Guiso et al., 2016a); (2) the possibility of a stronger work ethic in the Muslim world than in the Christian world today (Bozkurt and Yesilada, 2017) invites to extend this comparison to the social and political field; and (3) in his seminal work, Weber ([1920] 1988) not only compares Protestantism to Catholicism but also to Islam. However, this latter comparison has not received sufficient attention in the literature (Sukidi, 2006; Shirokanova, 2015). Third, this paper includes data from the latest waves of the World Values Survey and the European Values Study and thus studies data not studied in earlier work. The latest survey waves include an increasing number of Muslim countries and novel questions on political preferences (e.g., military involvement in politics), which permits to meet the purpose of this paper in a more robust way. Fourth, and contrary to some previous research, this paper uses a broad battery of survey items over the largest possible number of survey waves for three reasons: (1) to acknowledge the multidimensional nature of theoretical constructs like the work ethic; (2) to increase robustness against the possibility that some findings may be due to the choice of a specific survey item and wave; (3) to increase robustness against the possibility that surveys may elicit circumstance-driven marginal preferences rather than culturally determined traits (Maseland and van Hoorn, 2009, 2011).

The present study puts forward three main hypotheses: (1) the *work ethic hypothesis*, which refers to attitudes towards work and some fundamental characteristics of the market economy; (2) the *social ethic hypothesis*, which concerns interpersonal trust, ethical standards and attitudes towards gender equality; (3) the *political ethic hypothesis*, which covers attitudes towards democracy and political violence, institutional trust and preferences for government-organized redistribution. A focus on this set of attitudes and preferences is due to their proven impact on the following socioeconomic outcomes. First, the culture of work affects individual traits conducive to increasing productivity (e.g., discipline), whereas attitudes towards the market economy may explain regulatory policies or the weight of the state in the economy (Barro and McCleary, 2006; Guiso et al., 2003). Second, interpersonal trust reduces the problems of collective action and the transaction costs of impersonal trade, which is crucial to economic development (Algan and Cahuc, 2013; Knack and Keefer, 1997; Tabellini, 2010; Whiteley, 2000). Ethical standards affect the level of corruption and the quality of governance (Alesina and Angeletos, 2005; Kyriacou, 2016; Mauro, 1995), whereas attitudes towards gender equality are decisive for the labor endowment and political agenda (Guiso et al., 2003). Third, support for democracy and institutional trust generate political stability and social cohesion (Alesina et al., 1996; Algan et al., 2017), while preferences for redistribution affect economic outcomes like income inequality (Alesina and Guiliano, 2010; Alesina and Perotti, 1996). Finally, political violence poses a threat to contractual and property rights, with further implications for the efficient allocation of resources and the magnitude of investment (Knack and Keefer, 1995).

Although the results in this paper should be ultimately interpreted as partial correlations, the empirical analysis confirms some previous research and portrays the following broader picture. First, Protestants have no higher pro-work or pro-market attitudes than Catholics or Muslims. On the contrary, Muslims attach more importance to work than Protestants. Second, Protestants show higher interpersonal trust, ethical standards and support for democracy than Catholics. Protestants also state lower support for some non-democratic elements than Catholics and Muslims (e.g., strong leadership). Third, Muslims manifest lower acceptance of gender equality but greater support for theocratic ideas than Protestants and Catholics. Fourth, Muslims, and to a lesser degree Catholics, state a higher preference for government-organized redistribution than Protestants. A complementary analysis of regions with a historically strong influence of Catholicism, Protestantism and Islam provides additional support to this general picture. Historically Protestant societies show higher interpersonal trust but lower support for non-democratic elements than historically Catholic and Muslim societies. Protestant societies also state higher institutional trust than Catholic ones. Muslim societies, for their part, express lower acceptance of gender equality but higher pro-work attitudes and a higher preference for government-organized redistribution than both Christian societies. Compared to Catholic societies, Muslim societies also state higher ethical standards and institutional trust.

The aforementioned findings highlight two key points. First, the current attitudinal differences between Catholics, Protestants and Muslims lie more in the social and political sphere than in the economic sphere. Thus, consistent with the Weberian idea that a work ethic rooted in religion may have ceased to be palpable after a particular stage of history and development, market forces and the rise of post-materialist values may have played a part in the dissolution of the original role of this type of work ethic (Inglehart, 1997; Weber, [1920] 1988). This holds especially true for the Catholic and Protestant world. Conversely, the socio-political ethic associated with Catholicism, Protestantism and Islam continues to show itself in attitudinal differences concerning interpersonal trust, ethical standards and gender equality, and in political preferences. Second, the size of the *effects* at the societal/cultural level suggests that the current attitudinal differences between the Catholic, Protestant and Muslim world are more related to their cultural and historical legacy than to current personal commitment to their specific doctrines.

The structure of this paper reads as follows. Section 2 develops the *work, social* and *political ethic hypothesis* on the basis of historical factors and religious precepts that may explain the persistence of attitudinal differences between Catholics, Protestants and Muslims. Section 3 describes the data and methodology to approach these hypotheses. Section 4 presents the results of the empirical analysis, whereas Section 5 discusses the limitations of the empirical approach. Section 6 concludes.

2. Theoretical predictions

2.1. The work ethic hypothesis

Although Smith ([1776] 1979) approaches the economics of religion well before Weber ([1920] 1988), his analysis does not discuss the role of religious beliefs but the structure of the religious market. Smith questions the monopolistic supply of faith (often sponsored by the state) and advocates a competitive religious market for an efficient and conflict-preventing provision of moral order in society. Consistent with this, Smith argues that the Catholic Church could not foster the development of modern capitalism. As an institution with extensive power both in the religious and secular landscape before the Protestant Reformation, it instead promoted extractive institutions and barriers to entrepreneurship (Anderson, 1988). Unlike Smith, Weber focuses on the effects of religious beliefs and suggests that the rise of Protestantism could have provided the moral grounds for the expansion of modern capitalism in 16th and 17th century Northern Europe. Beyond a change in the organizational structure of faith, Weber argues that the Reformation triggered a mental change that reshaped the economic incentives and attitudes towards work and wealth accumulation. By abandoning the Catholic idea of salvation by good works and turning to the idea of salvation by divine grace, Protestants (in particular ascetic Protestants believing in predestination) would find the most certain sign of salvation in material success fruit of hard work and frugality. As a consequence of this, (ascetic) Protestants would develop a new work ethic with three crucial implications for the

emergence and consolidation of rational and market-oriented capitalism. First, the promotion of a work culture based on duty, discipline and self-responsibility. Second, the positive perception of risk-taking entrepreneurship. Third, the moral approval, not to say obligation, to accumulate wealth as a symbol of an ascetic and frugal lifestyle. Weber would baptize this new set of economic attitudes as the *spirit of capitalism*. And he would attribute the absence of this particular *spirit* in the Muslim world to the existence of two influential groups that reinforced a *feudal* and *military spirit* instead. First, to the *warrior group*, who interpreted Islam as a national Arabic warrior religion and adapted the Qur'an to a warrior ethic and lifestyle (e.g., by pillage). Second, to the *Sufi brotherhoods*, who developed a religious behavior compatible with serfdom and otherworldly goals for salvation. In absence of a rational legal tradition but in presence of patrimonial interference, Weber would identify three handicaps for the emergence of modern capitalism in the Muslim world. First, the discouragement of capital accumulation in trade and artisan industry. Second, the lack of civil institutions to limit state power. Third, the absence of a bourgeois ethic and lifestyle.[1]

However, the validity of Weber's theory remains ambiguous. On the one hand, some lines of research do find a positive connection between Protestantism and economic performance. Grier (1997), for instance, finds that Protestantism positively correlates with economic growth and development in former colonies, while Catholicism does not. Cavalcanti et al. (2007) incorporate religious beliefs into a dynamic general equilibrium model of growth and find that the differences between Northern and Southern Europe at the start of the industrialization process can actually be traced back to the *spiritual* differences between Protestants and Catholics. Meanwhile, Stulz and Williamson (2003) associate the lower creditor protection in Catholic countries to the position of the Catholic Church towards usury and interest. Against this, they suggest that the moral approval of risk-taking entrepreneurship and interest payments in the course of the Reformation (especially in the Calvinist variant) may have contributed to the development of modern debt markets and to increasing protection of creditors. Nunziata and Rocco (2016, 2018) also find a higher propensity for entrepreneurship among Protestant than Catholic minorities, both in the former Holy Roman Empire regions and in Swiss cantons. On the other hand, Cantoni (2015) finds no significant difference between the long-run economic development of Protestant and Catholic German lands under the Roman Empire. For his part, Samuelsson (1993) holds that many capitalist institutions described by Weber as cause of the Reformation are actually prior to it (Iannaccone, 1998). Yet, part of this criticism seems to ignore that Weber does not advocate the causal primacy of religious beliefs in the origin of modern capitalism. Being aware of other institutional requirements for the expansion of modern capitalism (e.g., capitalist mode of production, rule of law, free markets), Weber ultimately aims to explain the economic role of ideal factors and the origin of the *spirit of capitalism* (Gorski, 2005). Put differently, Weber defends a positive correlation between (ascetic) Protestantism and a strong work ethic but not a direct causal relation between (ascetic) Protestantism and economic prosperity (Van Hoorn and Maseland, 2013).

Regarding Islam, Turner (1974) questions Weber's reasoning on the Muslim world and argues that Islam also pursues an ascetic ethic free from mysticism and ritualism. Thus, the Muslim faith per se cannot account for the historical economic backwardness of the Middle East. This aligns with Kuran (2003, 2004) who finds no inherent conflict between Islam and economic development either. Given that the Middle East was one of the most developed regions of the world around the 10th century, Kuran links this historical economic backwardness to institutions that did not adapt to changing circumstances (e.g., the Islamic law of inheritance). Consistent with this, three factors suggest the existence of a Muslim work ethic similar to that of Christians, at least to that of Catholics. First, recent literature finds no incompatibility between Islam, the market economy and entrepreneurial activity (Wilson, 2006). Second, several passages in the Qur'an condemn idleness and indebtedness, while they promote hard work, thriftiness and wealth accumulation. Third, Islam regards work as beneficial for the community, which is very similar to the Catholic doctrine (McCleary, 2007; Shirokanova, 2015).[2]

As a result of this reasoning, this paper proposes the following *work ethic hypothesis*. Assuming the Weberian Protestant work ethic hypothesis holds true, (ascetic) Protestants are expected to have a work ethic with a greater sense of duty and commitment towards work than Catholics. Given their strong focus on wealth accumulation and self-responsibility, Protestants are also expected to show higher support for some fundamental characteristics of the market economy than Catholics (e.g., private ownership of business). Assuming the existence of a Muslim work ethic similar to that of Catholics, Muslims and Catholics are expected to have similar attitudes towards work and the market economy. The same predictions hold at the societal level, i.e., between historically Protestant, Catholic and Muslim societies.

H1a (work as a duty): Protestants (Protestant societies) have a greater sense of duty and commitment towards work than Catholics and Muslims (Catholic and Muslim societies) $[P > C \sim M \mid P_s > C_s \sim M_s]$.
H1b (economic attitudes): Protestants (Protestant societies) support some fundamental characteristics of the market economy more strongly than Catholics and Muslims (Catholic and Muslim societies) $[P > C \sim M \mid P_s > C_s \sim M_s]$.

2.2. The social ethic hypothesis

Extensions of research on work ethic have identified at least three social consequences of the Protestant Reformation that may

[1] Weber's characterization of (Middle-East) Islam is taken from Noland (2005) and Turner (1974, 2010). Compare Arruñada (2010) or Swedberg (2005) for a review of Weber's reasoning and definition of capitalism.

[2] Compare Kuran (2018) for a comprehensive literature survey on the causal links between Islam and economic performance.

account for a differing social ethic among Protestants and Catholics, thereby leading to further attitudinal differences in the social sphere (Becker et al., 2016b): (1) the formation of human capital; (2) the propensity to impersonal exchange; (3) the social conduct resulting from a differing compliance with moral obligations.

First, Becker and Woessmann (2009) offer an alternative hypothesis to the Protestant work ethic and suggest that Protestantism fostered economic prosperity through better education. Motivated by the Lutheran appeal that each town should have a school and each individual should (learn to) read the Bible, they link the historically higher welfare of Protestant economies to literacy and show that literacy rates are significantly higher in Protestant than Catholic 19th century Prussian counties. In a related argument, Rubin (2014) finds robust evidence of the link between the Reformation and the printing press, although he is not able to discern whether this link is driven by supply or demand. That is, whether the link is driven by a cost-effective technology that speeds up the diffusion of Luther's ideas or by the interest of the middle class and the bourgeoisie in gaining exposure against the dominance of the Catholic Church and the land-holding class. Second, the migration and persecution on religious grounds in the course of the Reformation contributed to a redistribution of human capital within Europe, which in turn led to new commercial networks and to a market-closer environment with focus on impersonal exchange (Blum and Dudley, 2001; Gorski, 2005). McCleary (2007) links this higher propensity to interact with anonymous people to the notion of charity in the Protestant tradition. While Catholics promote selective charity (i.e., the idea that there is a hierarchy of beneficiaries of altruistic activity), Protestants foster universal charity. Thus, they do not prioritize moral obligations towards the network of related people but favor the same moral duties towards each member of society. Third, Arruñada (2009, 2010) attributes a different Protestant social ethic to the new role of the Bible and the Church and the resulting consequences for appropriate behavior in society. Bearing in mind that the Bible becomes the only source for making moral judgments and that the Church no longer has the power to forgive, Arruñada identifies three key changes in the enforcement of moral obligations within the Protestant tradition: (1) Protestant believers are called (to learn) to read and interpret the sacred text for themselves. Implicitly, they are encouraged to develop autonomous, self-critical and self-responsible behavior; (2) Protestants develop increasingly homogenous and neutral moral standards as the act of secret and private confession can no longer adjust the moral judgments to the personal circumstances of the penitent; (3) Protestants are encouraged to track the moral conduct of their neighbors to offset the risk of a lax self-examination by the common believer, thereby leading to higher mutual social control. All this is consistent with Weber ([1920] 1988) who sees a crucial particularity of Protestantism in the teaching of broader ethical standards to create the basis for voluntary legal and contractual compliance (Norris and Inglehart, 2004).

Islam, for its part, builds laws on the provisions of religious scriptures, especially the Qur'an and the Hadith. This legalistic tradition has two main social implications. First, it tends to rigid provisions that prevent social change. Second, it promotes a less arbitrary interpretation of legal codes, which in a similar way to the Protestant tradition homogenizes moral standards and reinforces the commitment to rules and values derived from the legal system (Turner, 1974). At the same time, Islam, like Catholicism, promotes selective charity as a way to address the allocation problem inherent to charity. Thus, it prioritizes codes of good conduct for the small network of related people, which in turn could explain a lower propensity to impersonal exchange in the Muslim than in the Protestant tradition (McCleary, 2007).

Finally, two historical considerations suggest a differing attitude towards the role of women in the Catholic, Protestant and Muslim world. First, although the sacred texts of each religion clearly define the role of each gender (i.e., men have to provide for economic security while women play a domestic and subordinate role), some changes in the course of the Reformation may have led Protestants to be more open to women than Catholics. On the one side, the call to study the teachings of the Bible, also aimed at women, may have fostered an increasingly active and emancipative behavior in women. On the other side, the Reformation allowed the female clergy to become priests or bishops, which contributed to a restructuring of the role of women within the community (Calvo-Buezas, 2011). Second, women continue to make less progress towards emancipation and gender equality in the Muslim world compared to the Catholic and Protestant world, partly because of the legalistic tradition of Islam (e.g., Inglehart and Norris, 2003).

As a consequence of this reasoning, this paper proposes the following *social ethic hypothesis*. First, Protestants are expected to show higher interpersonal trust than Catholics and Muslims. This is due to a higher propensity to impersonal exchange and due to the universal notion of charity in the Protestant tradition. Second, Protestants and Muslims are expected to have higher ethical standards than Catholics (e.g., voluntary tax compliance). In the case of Protestants, this is due to the appeal for self-responsible behavior, the increasingly homogenous moral standards and the emphasis on mutual social control; in the case of Muslims, this is due to the legalistic tradition of Islam that strengthens the commitment to rules and values derived from the legal system. Finally, Protestants are expected to approve gender equality more strongly than Catholics, who tend to approve it more strongly than Muslims. The same predictions hold for historically Protestant, Catholic and Muslim societies.

H2a (interpersonal trust): Protestants (Protestant societies) show higher interpersonal trust than Catholics and Muslims (Catholic and Muslim societies) $[P > C \sim M \mid P_s > C_s \sim M_s]$.

H2b (ethical standards): Protestants and Muslims (Protestant and Muslim societies) have higher ethical standards than Catholics (Catholic societies) $[P \sim M > C \mid P_s \sim M_s > C_s]$.

H2c (gender equality): Protestants (Protestant societies) support gender equality more strongly than Catholics (Catholic societies), who support it more strongly than Muslims (Muslim societies) $[P > C > M \mid P_s > C_s > M_s]$.

2.3. The political ethic hypothesis

The political consequences of the Protestant Reformation may also explain differences in political attitudes between Protestants and Catholics. In particular, the Protestant Reformation may have fostered the formation of a democratic spirit and the spread of democratic institutions for the following three reasons (Arruñada, 2010). First, the Protestant emphasis on self-responsibility encouraged participation in the political process at the same time that printing *democratized* access to information and facilitated political deliberation. Second, the Reformation contributed to a greater separation between the religious and political sphere. On the one side, the Protestant Church showed support for secular political institutions and governance in its confrontation with the Catholic Church. On the other side, political rulers embraced the secularization of the political sphere and the increasing interest for democracy to profit from the expropriation of Church privileges and property. Third, the Reformation triggered land redistribution from the Church to private citizens, thereby promoting increasingly predictable forms of political administration (Gorski, 2005). By contrast, the hierarchic, authoritarian and paternalistic structure of the Catholic Church may have been a burden for the voluntary congregation and political participation of its members for centuries. At least two factors support this argument: (1) a consistent pro-democracy attitude in the Catholic Church can only be found since the de-legitimation process of *clerical fascism* in the course of the third wave of democratization (1970–1980) (Lipset, 1994); (2) Catholic missions do not predict democracy while Protestant missions have contributed significantly to the spread of key elements of democracy (e.g., expansion of printing press, education, voluntary organization and rule of law, and reduction of corruption) (Iyer, 2016; Woodberry, 2012).

Regarding Islam, Wright (1992) links the persistent tendency to autocratic regimes in the Muslim world to the support of theocracy — not in the strict sense of a community ruled by an ecclesiastical authority but in the sense of a community ruled by God's will. Wright attributes this to the legalistic tradition of Islam, which not only offers a set of spiritual beliefs but also a collection of rules for the governance of society. Kuran (2013), however, offers an institutional explanation for the sustenance of autocratic regimes in the Muslim world that is not related to the Muslim faith itself. In his view, historical Islamic economic institutions (e.g., the tax system) hindered constraints on executive power and the formation of both stable opposition movements and a strong civil society, thereby preventing political development and consolidation of democracy in the region. This is consistent with Huntington (1993) who blames the absence of representative democracy in the Muslim world to the lack of certain prerequisites for its consolidation (e.g., separation between religious and political sphere, social pluralism, protection of individual liberties and rights against state power) (Inglehart and Norris, 2003).

Furthermore, (ascetic) Protestants may have a lower preference for government-organized redistribution than Catholics. Since hard work and wealth accumulation are seen as expressions of God's grace, (ascetic) Protestants expect individuals to take more responsibility in providing for themselves. Accordingly, they condemn distributive policies because the latter may promote idleness and unwillingness to work (Basten and Betz, 2013). By contrast, Catholics and Muslims do not downplay government-organized redistribution in this manner for two reasons: (1) they lack a work ethic with that strong emphasis on self-provision; (2) they recognize that government-organized redistribution may solve the allocation problem inherent to charity (McCleary, 2007). Finally, not even the increasing research interest in political Islam suggests that *mainstream* Islam agrees with Islamic extremism or has stronger belligerent attitudes than other religions (Omelicheva and Ahmed, 2018). Bearing in mind that the monotheistic nature of Catholicism, Protestantism and Islam has led these religions to repeated identity conflicts throughout history (Wellman and Tokuno, 2004), there is no compelling reason why Catholics, Protestants and Muslims would have differing attitudes towards violence as a means to achieve political goals.

As a result of this reasoning, this paper proposes the following *political ethic hypothesis*. First, Protestants are expected to show greater support for democracy than Catholics, whereas Muslims are expected to show the lowest support for democracy among the three religions. Assuming the validity of Wright's argument (Wright, 1992), Muslims are expected to show greater support for non-democratic elements than both Christian traditions (e.g., an autocratic leadership or a theocratic system). Second, Protestants and Muslims are expected to have higher trust in political and legal institutions than Catholics. In the case of Protestants, this is because of the democratic spirit associated with the Reformation; in the case of Muslims, this is because the origin of their political and legal institutions is to be found in their religious scriptures. Third, Catholics and Muslims are expected to have a higher preference for government-organized redistribution than Protestants. Fourth, Catholics, Protestants and Muslims are expected to have similar attitudes towards political violence. The same predictions apply to historically Protestant, Catholic and Muslim societies.

H3a (democracy): Protestants (Protestant societies) show greater support for democracy than Catholics (Catholic societies), who show greater support for it than Muslims (Muslim societies) $[P > C > M \mid P_s > C_s > M_s]$.

H3b (institutional trust): Protestants and Muslims (Protestant and Muslim societies) have higher trust in political and legal institutions than Catholics (Catholic societies) $[P \sim M > C \mid P_s \sim M_s > C_s]$.

H3c (government-organized redistribution): Catholics and Muslims (Catholic and Muslim societies) have a higher preference for government-organized redistribution than Protestants (Protestant societies) $[C \sim M > P \mid C_s \sim M_s > P_s]$.

H3d (political violence): Catholics, Protestants and Muslims (Catholic, Protestant and Muslim societies) have similar attitudes towards political violence $[C \sim P \sim M \mid C_s \sim P_s \sim M_s]$.

3. Data, empirical operationalization and methodology

3.1. Data sources

This paper tests the theoretical predictions of Section 2 with data from wave 3–7 of the World Values Survey (1999–2020) (Haerpfer et al., 2021) and wave 3–5 of the European Values Study (1999–2020) (European Values Study, 2021). The WVS and EVS provide information on religion, religious behavior and socioeconomic attitudes and preferences of individuals across the world. The last waves of the WVS and EVS include an increasing number of questions on political preferences, without which the *political ethic hypothesis* could not be properly identified. Each wave considers between 1000 and 2000 respondents per country. The EVS only covers European countries, while the scope of the WVS has been increasing to cover around 100 countries and 90% of the world population. By doing so, the gradual inclusion of predominantly Muslim countries, clearly underrepresented in former waves, permits a consistent comparison between the three religions. Together, both data sources build a combined dataset with pooled cross-sectional data at different points in time from 1995 to 2020. The initial plan was to include all available waves to increase robustness against the possibility that surveys may elicit circumstance-driven marginal preferences (Maseland and van Hoorn, 2009, 2011). However, this paper finally excludes waves 1 and 2 of the WVS and the EVS for the following reason. Although these waves contain data on some items considered in the analysis, they also miss information on some crucial control variables present in later waves (e.g., education level classified into lower, middle and upper education). The original combined dataset has around 640,000 observations, of which 342,000 are Catholics, Protestants or Muslims. For the sake of simplicity, members of other religions are dropped from the main analysis and only considered in a robustness check. The analysis does not consider every Catholic, Protestant and Muslim in the dataset for two reasons. First, some observations lack consistent information on socioeconomic controls and religious behavior (e.g., there are individuals who declare belonging to a religious denomination but also report being atheist). Second, the analysis restricts the sample of Catholics, Protestants and Muslims to those coming from countries with a historically strong influence of Catholicism, Protestantism and Islam (76 countries in the final sample) (Norris and Inglehart, 2004; World Values Survey, 2022).[3] Together, the sample used for the analysis contains 193,000 observations. However, some questions/attitudes are not asked in each wave and country, and some respondents do not complete the entire survey. Therefore, the final sample ranges from 50,000 to 185,000 observations, depending on the (sub-) hypothesis being tested.

3.2. Dependent variables

Building on previous research on the link between religion and values, this paper uses almost 40 survey questions to proxy the attitudes and preferences discssed in Section 2. However, the selection of multiple questions to test the different (sub-) hypotheses presents the following dilemma. On the one hand, this approach increases robustness against the possibility that some findings may be the result of choosing a specific survey item. It also acknowledges the multidimensional nature of theoretical constructs like the work ethic (Furnham, 1990). On the other hand, this approach also creates complexities in the interpretation of the results (with almost 40 separate regressions), not least because this paper puts forward only three main hypotheses. Therefore, for the sake of simplicity and empirical operationalization, this paper uses factor analysis to construct indexes aimed to measure the theoretical constructs of Section 2 in a reliable and valid manner. Survey items considered for further analysis are chosen according to the following criteria (Taherdoost, 2016; Yong and Pearce, 2013): (1) use by prior research; (2) availability of the survey items in as many waves as possible; (3) Cronbach's alpha larger than 0.7 (Cronbach, 1951); (4) factors with an eigenvalue larger than 1 (Kaiser, 1960); (5) variance explained by the first factor larger than 0.5; (6) unique variance of the variables that make up the indexes below 0.5; (7) Kaiser-Meyer-Olkin measure of sampling adequacy for factor analysis above 0.7 (Kaiser and Rice, 1974); (8) loadings of items above 0.4; and (9) cross-loadings of items below 0.4. When factor analysis is not appropriate (e.g., when there are less than three survey items available to measure a theoretical construct), indexes are built by the simple aggregation of survey items. In some exceptional cases (e.g., when there is only one survey item available to approach one theoretical construct), survey items are also considered separately. Tables 10–17 in appendix B shows the results of the factor analysis and provides evidence of measurement reliability (e.g., Cronbach's alpha). Together, the dependent variables used to proxy the attitudes and preferences discussed in Section 2 can be classified as follows:[4]

3.2.1. The work ethic hypothesis

Following Dülmer (2011) and Norris and Inglehart (2004), this paper restricts the analysis of work values to attitudes towards *work as a duty* because this dimension of work lies at the heart of the Weberian hypothesis on the Protestant work ethic. Consistent with this, *work as a duty* (H1a) is an index based on the following survey items: (i) *people who do not work turn lazy*; (ii) *work is a duty towards*

[3] A previous version of this paper classified the countries into five cultural zones: Catholic Europe, Latin America, Protestant Europe, English-speaking countries, African-Islamic countries (World Values Survey, 2022). The analysis in Section 4.2. is robust to this alternative classification.

[4] Some indexes built by means of factor analysis do not fulfill all the criteria discussed above. Appendix C analyzes each survey item separately to test the robustness of the baseline results.

society (Shirokanova, 2015); and (iii) *work should always come first* (Schaltegger and Torgler, 2010).[5] An *economic index* (H1b) is built by six indicators addressing attitudes towards some fundamental characteristics of the market economy (Guiso et al., 2003; Hayward and Kemmelmeier, 2011; Norris and Inglehart, 2004): (i) *competition is good because it stimulates people to work hard and develop new ideas*; (ii) *we need larger income differences as incentives for individual effort*; (iii) *private ownership of business and industry should be increased*; (iv) *people should take more responsibility to provide for themselves*; (v) *wealth can grow so there is enough for everyone*; (vi) *in the long run hard work usually brings a better life*. Due to a rather low internal consistency between the items, the *economic index* is not constructed by means of factor analysis but by aggregation of the six indicators.[6]

3.2.2. The social ethic hypothesis

This paper approaches interpersonal trust (H2a) through the standard indicator *generally speaking, would you stay that most people can be trusted or that you cannot be too careful in dealing with people?* Given the limitations of this measure (Norris and Inglehart, 2004; Whiteley, 2000), the analysis complements this variable with measures of trust in particular groups. Following Welzel (2013), factor analysis of the survey items (i) *trust your family*, (ii) *trust your neighborhood*, (iii) *trust people you know personally*, (iv) *trust people you meet for the first time*, (v) *trust people of another religion*, and (vi) *trust people of another nation* reveals that these indicators fall into two dimensions: trust in close and remote people. Consistent with this, an *index of trust in close people* and an *index of trust in remote people* are built. An *index of ethical standards* (H2b) is constructed with four questions on the rightfulness of the following morally debatable actions (Guiso et al., 2003; Norris and Inglehart, 2004): (i) *claiming government benefits you are not entitled to*; (ii) *cheating on taxes if you have the chance to* (Torgler, 2006); (iii) *accepting a bribe*; (iv) *avoiding a fare on public transport*. Finally, an *index of gender equality* (H2c) stems from the following questions on the role of women in the labor and political market (Abdelhadi and England, 2019; Guiso et al., 2003; Norris and Inglehart, 2004; Welzel, 2013): (i) *men have more right to a scarce job*; (ii) *university education is more important for a boy than for a girl*; (iii) *men make better business executives than women do*; and (iv) *men make better political leaders than women do*.[7]

3.2.3. The political ethic hypothesis

In line with Norris and Inglehart (2004) and Welzel (2013), this paper builds an *index of democracy* (H3a) on the basis of the following survey items: (i) *goodness of having a democratic system* (Maseland and van Hoorn, 2011); (ii) *importance of living in a democracy*; and (iii) *people choose their leaders in free elections*. Preferences for a strong leadership are constructed by an *index of strong leadership* (Norris and Inglehart, 2004) that aggregates the items (i) *having a strong leader who does not bother with parliament and elections*, and (ii) *having experts, not governments, make decisions*. Further preferences for some non-democratic elements are approached by means of the following survey items: (i) *military takeover*, which is approached through the (dis-) agreement on the statement *the army takes over when the government is incompetent*; and (ii) *theocracy*, which is measured by the question whether *religious authorities ultimately interpret the law*.[8] Apart from that, an *index of institutional trust* (H3b) is built upon self-declared confidence in the major political and legal institutions of a country (Guiso et al., 2003; Norris and Inglehart, 2004): (i) *the government*; (ii) *the parliament*; (iii) *the courts*; and (iv) *the civil service*. Moreover, an *index of government-organized redistribution* (H3c) is constructed by the aggregation of the survey items (i) *the state makes people's incomes equal*, and (ii) *the government tax the rich and subsidize the poor*. Finally, preferences for *political violence* (3d) are measured through a question on its justifiability.

3.3. Independent variables

While the WVS and EVS separately give more detailed information on the religious denomination of the respondents (e.g., the WVS includes around one hundred religious denominations), the integrated dataset does not harmonize this information. It only provides information on the major religion respondents belong to. Accordingly, the analysis classifies the major religions into *Catholicism, Protestantism, Islam, no religion, other religion* and drops the latter two from the baseline specification. Section 5 discusses the limitations of not including theological sub-groups (e.g., Sunni and Shia Muslims).

The dataset also contains several questions on religious behavior (e.g., strength of beliefs, importance of religion, frequency of attendance to religious services). Guiso et al. (2003) add up the *effect* of each question/dimension of religiousness to compute the total *effect* of religion. However, this approach is problematic in the presence of multi-collinearity (e.g., individuals with a religious

[5] The item *it is humiliating to receive money without work* – to be found also in Norris and Inglehart (2004) – has ceased to be asked in the latest waves of the WVS and is therefore not considered in the paper. Using this indicator would imply a considerable loss of recent observations, while the results would not change significantly.

[6] Some items building the *economic index* (H1b) could also be classified as concerning redistribution (H3c) (e.g., *people should take more responsibility to provide for themselves*) (Alesina and Guiliano, 2010). However, this paper classifies them as economic attitudes for two reasons. First, this classification is consistent with previous research (e.g., Guiso et al., 2003; Hayward and Kemmelmeier, 2011). Second, H3c specifically addresses preferences for government-organized redistribution and not preferences for redistribution in general (Scheve and Stasavage, 2006). Indeed, the correlation between the items building the *economic index* (H1b) and the *government-organized redistribution index* (H3c) discussed later in the text is very low (ca. −0.10/−0.15).

[7] The items used to build the *index* of *ethical standards* are part of the Morally Debatable Behaviors Scale (MDBS) by Harding and Philipps (1986). Higher scores on the *index of ethical standards* imply a higher conformity with the rightfulness of the morally debatable actions asked in the survey. Higher scores on the *index of gender equality* imply a lower conformity with gender equality.

[8] Factor analysis combining the items *military takeover* and *theocracy* with the not-reported item *military government* (see appendix C) yields similar results.

education are more likely to be more religious and to attend religious services more frequently). And since these questions capture different dimensions of religiousness (e.g., beliefs, education, participation), they also raise the following problems. First, questions on beliefs may reflect the amount of *spiritual* capital, but questions on participation may also capture the social capital built up through the religious network. Second, religious behavior may vary across religions and countries (e.g., the understanding of religiousness, secularization trends) (Basten and Betz, 2013; Storm, 2017). Therefore, the analysis follows Dülmer (2011) and Shirokanova (2015) and uses self-declared religiousness as a reliable indicator of the religiosity of the respondents. The analysis then tests the robustness of these results to different dimensions of religiousness to make sure that the *effect* of religious denomination does not depend on the way in which the *effect* of religiousness is approached. The different dimensions of religiousness are identified through the following survey items: (1) frequency of attendance to religious services; (2) importance of God and religion in daily life (two variables); and (3) a *religiosity index* built upon factor analysis of the previous variables (see appendix B for more details). The choice of these complementary questions on religiousness is due to two reasons. First, they are relatively robust across religions (Barro and McCleary, 2003). Second, unlike other questions on religiousness (e.g., praying frequency), these questions do appear in every survey wave included in the analysis. Additional control variables at the individual level are common in the research on religion and values: age, education, employment status, gender, income and marital status. In line with Ruiter and Van Tubergen (2009) and Shirokanova (2015), only respondents above 18 years of age are selected and grouped as follows: 18–24; 25–34; 34–44; 45–54; 55–64; >65.[9] Data on self-declared health condition and social class are not consistent across waves and are therefore excluded from the analysis.

By including country-year fixed effects, the analysis accounts for time trends and time-varying economic, social, institutional and cultural heterogeneity across countries. The analysis needs therefore no additional controls at the country level. The advantages of this within-approach are twofold. First, it is less subject to omitted variable bias and to measurement error due to institutional change. Second, it separates the *effect* of individual religious denomination more credibly from other social and historical aspects that could drive differences in values (Alesina and Giuliano, 2010). However, this within-approach has also some limitations. First, it eliminates useful variation between countries (e.g., the religious culture and history of a country). Second, it does not do justice to the hierarchical structure of the data (i.e., individuals nested within countries), even if it clusters the standard errors at the country level (e.g., Dülmer, 2011; Cheah, 2009). Third, it implicitly assumes that the attitudinal *effect* of e.g., an individual's Catholic denomination in a Catholic country is equivalent to the attitudinal *effect* of an individual's Catholic denomination in a non-Catholic country. This implicit assumption may be problematic, especially since individual religious denomination can lead to discrimination and exclusion and thereby shape individual attitudes.

As a solution to this, a complementary analysis applies a multilevel model with random slopes for individual religious denomination that allows the following: (1) to let the *effect* of religious denomination vary across countries, which in turn may render a better estimation of the overall *effect* of religious denomination on attitudes; and (2) to analyze the *effect* of country-level variables like the religious culture and history of a country. In absence of country-year fixed effects, this alternative model incorporates some country-level controls to account for the economic, political, religious and cultural context in which the survey takes place (Barro and McCleary 2003, 2006; Maseland and Van Hoorn, 2011): (1) national GDP per capita, one year before each survey (Feenstra et al., 2015); (2) a measure of the country's level of democracy (*polity 2 index*), also one year before each survey (Marshall and Gurr, 2018); (3) country-level religiosity, which is approached by either the variable *official religion* or *institutional religiosity* from the Religion and State dataset by Fox (2019) (e.g., Fernández et al., 2021);[10] and (4) dummy variables capturing the Catholic, Protestant or Muslim culture and history of the countries in the sample (Norris and Inglehart, 2004; World Values Survey, 2022). The inclusion of this set of dummies permits to test for attitudinal differences between cultural zones. Tables 6–9 in Appendix A provides an overview of all variables, summary statistics as well as the country classification into cultural zones.

3.4. Empirical model

The purpose of the empirical analysis is to test whether Catholics, Protestants and Muslims provide systematically different answers to the attitudes/survey questions discussed in Section 3.2. To this end, the within-analysis applies the following model, which is consistent with e.g., Arruñada (2010):

$$\begin{aligned} Y_{im} = \beta_0 \quad & + \beta_1{*}PROTESTANT_{im} + \beta_2{*}MUSLIM_{im} + \beta_3{*}RELIGIOUSNESS_{im} \\ & + \sum_{j=1}^{J} \delta_j{*}IND.\ CHARACTERISTICS_{imj} + \sum_{m=1}^{M}\sum_{t=1}^{T} \theta_{mt}{*}COUNTRY_{imt} + \varepsilon_{im} \end{aligned} \tag{1}$$

Thereby, Y_{im} stands for each attitude/survey question answered by an individual *i* living in country *m*. Attitudes are estimated via OLS. The only exception is *general trust* and the survey items in appendix C with only two values or a categorical order, which are estimated via maximum likelihood (probit or ordered probit estimation). Standard errors are adjusted for clustering at the country

[9] Results do not change when using linear and quadratic terms of the variable age.

[10] Hayward and Kemmelmeier (2011) construct country-level variables of religiosity by aggregating sample measures of individual-level religiosity (e.g., frequency of attendance to religious services). Although this alternative strategy does not change the results, this paper discards this approach because the calculated distribution of country-level religiosity does not match data provided by e.g., the US CIA factbook. Note that some country-level variables are not available for the most recent years, which is why the most recent observations get the last available value on these country-level variables.

level. *Protestant* and *Muslim* are dummy variables that take value one if the respondent declares himself to be Protestant or Muslim, respectively. Reference group is *Catholic. Religiousness* is a dummy variable that captures whether the respondent declares himself religious or not. *Individual characteristics* allude to the control variables at the individual level, while *country imt* takes value one if individual *i* lives in country *m* in period *t* and zero, otherwise. ε denotes the error term. The coefficients of interest are β_1 and β_2, which measure the average *effect* of being Protestant and Muslim (compared to Catholic, within each country-year cell), when controlling for religiousness and individual characteristics. As mentioned before, these coefficients ignore, however, that the *effect* of individual religious denomination may depend on the prevailing religious culture and majority in a country. For this reason, the paper complements this analysis with a multilevel model that allows the *effect* of individual religious denomination to vary across countries. Consistent with Van Hoorn and Maseland (2013), this paper employs the following multilevel model with random slopes for individual religious denomination:

$$\begin{aligned} Y_{im} = \gamma_{00} \quad & + \gamma_1{}^*PROTESTANT_{im} + \gamma_2{}^*MUSLIM_{im} + \gamma_3{}^*RELIGIOUSNESS_{im} \\ & + \sum\nolimits_{j=1}^{J} \vartheta_j{}^*IND.\ CHARACTERISTICS_{imj} + \sum\nolimits_{k=1}^{K} \varphi_k{}^*\ NAT.\ VARIABLES_{imk} \\ & + \sum\nolimits_{t=1}^{T} \omega_t{}^*SURVEY\ YEAR_{imt} + [u_{0m} + u_{1m}{}^*PROTESTANT_{im} + u_{2m}{}^*MUSLIM_{im} + v_{im}] \end{aligned} \tag{2}$$

In Eq. (2), u_{0m} captures deviations of country *m* from the average intercept in the sample (γ_{00}), while the terms u_{1m} and u_{2m} capture country-specific deviations from the overall *effect* of being Protestant or Muslim (γ_1 and γ_2). *National variables* stands for the country-level controls and for the dummy variables capturing the Catholic, Protestant and Muslim culture and history of a country (reference group is *Catholic country/society*). *Survey year* are dummy variables reflecting the year in which the survey takes place.[11]

Before turning to the results, two important remarks are due. First, an omitted variable may induce individuals to belong to a particular religion (or to live in a particular cultural zone) and to manifest a particular attitude. Therefore, the results may lack causal interpretation and should be ultimately interpreted as partial correlations estimated in a more precise way. For the sake of presentation, though, this paper still refers to the *effect* of religious denomination (in italics, as a way to emphasize this circumstance). Second, the analysis sets the significance level at 5%, instead of 10%, to account for the statistical problems associated with too-large samples (e.g., Torgler, 2006).

4. Results

This section discusses the results of both the within-regression and the multilevel regression analysis. The results are robust to the following not-reported specifications/modifications: (1) including other major religions; (2) replacing the variable on self-declared religiousness with other dimensions of religiousness; (3) clustering the standard errors at the country-year level (and not at the country level); (4) when doing multilevel regression analysis, considering specifications including either no random slopes or additional random slopes for further controls (e.g., religiousness, age); and (5) adjusting the significance level to the number of comparisons made to avoid bias due to multiple hypothesis testing (Bonferroni correction). When doing this last correction, some results exceed the significance level of 5% but are still significant at the 10% level. As a further robustness test, the within-regression analysis in Tables 18–20 in appendix C considers the survey items that make up the indexes separately.

4.1. Within-regression analysis

4.1.1. The work ethic hypothesis

Catholics tend to score higher on the *work as a duty index* than Protestants. Yet, this result is not significant at the 5% level (Table 1, column 1). Muslims, for their part, clearly tend to attach higher value to work than Protestants and Catholics. However, the latter comparison between Muslims and Catholics is not always significant at the 5% but at the 10% level. Apart from that, Protestants do score higher on the *economic index* than Catholics, whereas Muslims have economic attitudes that are not significantly different to both Christian traditions (Table 1, column 2).

4.1.2. The social ethic hypothesis

Protestants have higher general trust than Catholics and Muslims (Table 1, column 3). Yet, the comparison between Protestants and Muslims is not always significant at the 5% level. Catholics, Protestants and Muslims report no differing trust in close people, while there is some evidence that Protestants trust remote people more than Catholics do (Table 1, column 4–5). Apart from that, Protestants score lower on the *ethical standards index* than Catholics, which implies that, compared to Catholics, Protestants tend to express less justifiability for the morally debatable actions asked in the survey (Table 1, column 6). Muslims, for their part, show ethical standards that are no different from both Christian traditions, although alternative specifications suggest that Muslims may also find lower justifiability for this type of actions than Catholics. Thus, Muslims may be more similar to Protestants in this regard. Muslims, however, clearly manifest lower conformity with gender equality than Catholics and Protestants (Table 1, column 7).

[11] This model can be specified more broadly with additional random slopes for further controls at the individual level (e.g., religiousness, gender, age). The inclusion of further random slopes does not affect the results in the paper in a significant way.

Table 1
The *work* and *social ethic hypothesis* (within-regression analysis).

Within-regression analysis							
Hypothesis	**H1: The *work ethic hypothesis***		**H2: The *social ethic hypothesis***				
Sub-hypothesis	**H1a: *Work as a duty***	**H1b: *Economic attitudes***	**H2a: *Interpersonal trust***			**H2b: *Ethical standards***	**H2c: *Gender equality***
Column	1	2	3	4	5	6	7
Survey items [response scale]	***Work as a duty index:*** *1) laziness* *2) work duty society* *3) work first* [factor analysis]	***Economic index:*** *1) competition* *2) inequality* *3) private ownership* *4) private responsibility* *5) wealth* *6) hard work* [aggregation of items: 4–60]	***General trust:*** *Most people can be trusted* [0–1]	***Index of trust in remote people:*** *Trust in people:* *1) you meet 1st time* *2) other religion* *3) other nation* [factor analysis]	***Index of trust in close people:*** *Trust in:* *1) family* *2) neighbors* *3) people you know personally* [factor analysis]	***Index of ethical standerdrs:*** *1) benefits* *2) tax evasion* *3) bribe* *4) fare evasion* [factor analysis]	***Index of gender equality:*** *1) men: jobs* *2) men: university educ.* *3) men: business* *4) men: leader* [factor analysis]
Method	OLS	OLS	probit	OLS	OLS	OLS	OLS
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	−0.0269	0.447*	0.0713**	0.0326*	−0.0507	−0.0880***	0.0134
	(0.096)	(0.014)	(0.004)	(0.034)	(0.116)	(0.001)	(0.238)
Muslim (*M*)	0.0928*	0.389	−0.0452	0.0695	0.0804	−0.0491	0.216***
	(0.027)	(0.191)	(0.213)	(0.388)	(0.394)	(0.345)	(0.000)
Religious person	0.115***	0.228	0.0440*	0.0311*	0.0973***	−0.0738***	0.0727***
	(0.000)	(0.273)	(0.012)	(0.029)	(0.000)	(0.000)	(0.000)
Gender (1 = female)	−0.105***	−0.664***	−0.0250*	−0.0252	−0.0532***	−0.0724***	−0.376***
	(0.000)	(0.000)	(0.024)	(0.050)	(0.000)	(0.000)	(0.000)
Lower education	–	–	–	–	–	–	–
Middle education	−0.0491*	1.092***	0.0382	0.0647***	0.0016	−0.0635***	−0.172***
	(0.010)	(0.000)	(0.170)	(0.000)	(0.917)	(0.000)	(0.000)
Upper education	−0.161***	2.015***	0.230***	0.201***>	0.0472	−0.123***	−0.305***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.071)	(0.000)	(0.000)
Observations	120,806	72,221	187,656	102,992	102,992	173,149	104,341
Countries	67	58	76	65	65	74	65
Adj. R^2 [*Pseudo* R^2]	0.2142	0.1647	[0.1647]	0.2661	0.1906	0.1713	0.4185

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and *** 0.1% level. Standard errors clustered at country level. Probit estimations indicate coefficients (not marginal effects). Unreported controls: age dummies, employment status, income, marital status, country-year dummies. Higher scores on the *index of ethical standards* imply higher conformity with the rightfulness of the morally debatable actions asked in the survey. Higher scores on the *index of gender equality* imply lower conformity with gender equality.

4.1.3. The political ethic hypothesis

Protestant tend to score higher on the *democracy index* than Catholics and Muslims. Catholics also score higher on this index than Muslims, although this result is not always significant at the 5% level (Table 2, column 8). Apart from that, Protestants tend to express lower agreement with a strong leadership and a military involvement in politics than Catholics and Muslims (Table 2, column 9–10). Conversely, it is Muslims who tend to favor the theocratic idea that *religious authorities ultimately interpret the laws* more firmly than both Christian traditions. Catholics tend to agree with this idea more strongly than Protestants do too (Table 2, column 11), although this latter comparison is not always significant at the 5% level. Apart from that, Catholics, Protestants and Muslims have similar trust in the major political and legal institutions (Table 2, column 12). If anything, it is Muslims who according to alternative specifications have higher institutional trust than both Christian traditions Apart from that, Muslims and Catholics score higher on the *government-organized redistribution index* than Protestants do (Table 2, column 13). Finally, Catholics, Protestants and Muslims have a similar attitude towards political violence (Table 2, column 14), even though some alternative specifications suggest that Catholics may be more prone to justify political violence, at least than Protestants.

4.2. Multilevel regression analysis

The following sub-sections cover the results of the multilevel regression analysis. Practically all the results discussed in Section 4.1 are confirmed by this alternative approach. But before turning to the results, two things are worth mentioning. First, the intraclass correlation of a multilevel null model (i.e., the proportion of the total variance in the dependent variable that is due to differences

Table 2
The *political ethic hypothesis* (within-regression analysis).

Within-regression analysis							
Hypothesis	**H3: The *political ethic hypothesis***						
Sub-hypothesis	**H3a: *Democracy***				**H3b: *Institutional trust***	**H3c: *Gov't-organized redistribution***	**H3d: *Political violence***
Column	8	9	10	11	12	13	14
Survey items [response scale]	***Democracy index:*** *1) having democracy 2) living in democracy 3) free elections* [factor analysis]	***Index of strong leadership:*** *1) having leaders 2) having experts* [aggregation of items: 1–8]	***Military takeover:*** *Army takes over if government incompetent* [0–10]	***Theocracy:*** *Religious authorities interpret the law* [0–10]	***Institutional trust index:*** *Confidence in 1) government 2) parliament 3) courts 4) civil service* [factor analysis]	***Government-organized redistribution index:*** 1) *stake makes incomes equal 2) government tax rich & subsidize poor* [aggregation of items: 0–20]	***Political violence:*** *Political violence is justifiable* [1–10]
Method	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	0.0620*	−0.106**	−0.182**	−0.112*	−0.0057	−0.368*	−0.0536
	(0.031)	(0.002)	(0.002)	(0.030)	(0.656)	(0.035)	(0.145)
Muslim (*M*)	−0.0408	0.0688	0.165	0.340**	0.0742	0.260	0.0842
	(0.070)	(0.364)	(0.160)	(0.008)	(0.127)	(0.278)	(0.448)
Religious person	0.0122	0.0636**	0.142*	0.454***	0.128***	0.0827	−0.0859*
	(0.544)	(0.002)	(0.014)	(0.000)	(0.000)	(0.399)	(0.030)
Gender (1 = female)	−0.0270*	−0.0290*	0.0084	0.0608*	−0.0192*	0.163*	−0.124>***
	(0.011)	(0.019)	(0.840)	(0.035)	(0.015)	(0.014)	(0.001)
Lower education	–	–	–	–	–	–	–
Middle education	0.132***	−0.0989***	−0.172**	−0.226***	−0.0802**	−0.221**	−0.153***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.002)	(0.010)	(0.000)
Upper education	0.316***	−0.265***	−0.659***	−0.558***	−0.0309	−0.581***	−0.216***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.406)	(0.000)	(0.000)
Observations	100,246	170,877	98,508	102,228	134,537	78,093	49,211
Countries	65	75	65	65	71	62	52
Adj. R^2 [*Pseudo* R^2]	0.1538	0.1633	0.1681	0.2419	0.2622	0.1367	0.0971

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and *** 0.1% level. Standard errors clustered at country level. Unreported controls: age dummies, employment status, income, marital status, country-year dummies.

between countries) ranges from 0.09 to 0.36 depending on the dependent variable. Consistent with Hox (2010), the size of these coefficients is sufficiently large to justify the statistical appropriateness of a multilevel model (Wenzelburger et al., 2014). Second, the *effects* of religion are larger at the societal/cultural level than at the individual level. Consistent with Hayward and Kemmelmeier (2011) and Van Hoorn and Maseland (2013), this suggests that the current attitudinal differences between the three religions are more related to the cultural and historical legacy of Catholicism, Protestantism and Islam than to current personal commitment to their specific doctrines.

4.2.1. The work ethic hypothesis

The multilevel analysis confirms that Muslims not only attach higher value to work than Protestants but also than Catholics. Catholics tend to value work more highly than Protestants too, although this latter result loses statistical significance when random slopes are included. At the societal level, historically Muslim societies also score higher on the *work as a duty index* than historically Catholic and Protestant societies (Table 3, column 15). Apart from that, Protestants score again higher on the *economic index* than Catholics, although this result ceases to be statistically significant when random slopes are considered. At the societal level, it is again Muslim societies who have higher economic attitudes than Catholic and Protestant ones. Yet, the comparison between Muslim and Protestant societies is only significant at the 10% level (Table 3, column 16).

4.2.2. The social ethic hypothesis

Consistent with Section 4.1., Protestants have higher general trust than Catholics but not than Muslims (Table 3, column 17). Catholics, Protestants and Muslims have similar trust in close people, while there is again some evidence that Protestants trust remote

Table 3
The *work* and *social ethic hypothesis* (multilevel regression analysis with random slopes for religious denomination).

Multilevel regression analysis							
Hypothesis	**H1: *The work ethic hypothesis***		**H2: *The social ethic hypothesis***				
Sub-hypothesis	**H1a: *Work as a duty***	**H1b: *Economic attitudes***	**H2a: *Interpersonal trust***			**H2b: *Ethical standards***	**H2c: *Gender equality***
Column	15	16	17	18	19	20	21
Survey items [response scale]	***Work as a duty index:*** *1) laziness* *2) work duty society* *3) work first* [factor analysis]	***Economic index:*** *1) competition* *2) inequality* *3) private responsibility* *4) private ownership* *5) wealth* *6) hard work* [aggregation of items: 6–60]	***General trust:*** *Most people can be trusted* [0–1]	***Index of trust in remote people:*** *Trust in people:* *1) you meet 1st time* *2) other religion* *3) other nation* [factor analysis]	***Index of trust in close people:*** *Trust in:* *1) family* *2) neighbors* *3) people you know personally* [factor analysis]	***Index of ethical standards*** *1) benefits* *2) tax evasion* *3) bribe* *4) fare evasion* [factor analysis]	***Index of gender equality:*** *1) men: jobs* *2) men: university education* *3) men: business* *4) men: leader* [factor analysis]
Method	linear	linear	meoprobit	linear	linear	linear	linear
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	−0.0104	0.192	0.0552*	0.0260	−0.0451	−0.0756***	0.0224
	(0.542)	(0.336)	(0.039)	(0.164)	(0.113)	(0.000)	(0.206)
Muslim (*M*)	0.192***	0.269	0.0055	0.0442	0.0174	−0.0464	0.198***
	(0.000)	(0.399)	(0.905)	(0.281)	(0.620)	(0.174)	(0.000)
Religious person	0.115***	0.172	0.0414*	0.0280*	0.107***	−0.0707***	0.0709***
	(0.000)	(0.431)	(0.016)	(0.036)	(0.000)	(0.001)	(0.000)
Gender (1 = female)	−0.104***	−0.675***	−0.0270*	−0.0245	−0.0530***	−0.0744***	−0.373***
	(0.000)	(0.000)	(0.028)	(0.057)	(0.000)	(0.000)	(0.000)
Lower education	–	–	–	–	–	–	–
Middle education	−0.0443*	1.051***	0.0476	0.0746***	0.0081	−0.0673***	−0.174***
	(0.028)	(0.000)	(0.121)	(0.000)	(0.574)	(0.000)	(0.000)
Upper education	−0.150***	2.005***	0.2487***	0.214***	0.0518*	−0.137***	−0.314***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.042)	(0.000)	(0.000)
Catholic (*C*) society	–	–	–	–	–	–	–
Protestant (*P*) society	−0.0362	0.569	0.2737*	0.558***	0.366*	−0.0874	−0.169
	(0.780)	(0.543)	(0.039)	(0.000)	(0.018)	(0.401)	(0.374)
Muslim (*M*) society	0.530***	2.495**	0.2456	−0.0810	0.252	−0.336**	0.812***
	(0.000)	(0.006)	(0.202)	(0.579)	(0.185)	(0.002)	(0.000)
Observations	120,806	72,221	187,656	102,992	102,992	173,149	104,341
Countries	67	58	76	65	65	74	65
Intraclass correlation	0.1212	0.0813	0.1054	0.1396	0.1143	0.0928	0.1459

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and. *** 0.1% level. Standard errors clustered at country level. Unreported controls: age dummies, employment status, income, marital status, GDP per capita, *polity 2 index*, institutional religiosity, survey-year dummies. Compared to a multilevel null model, the inclusion of control variables at individual and country level significantly reduces the intraclass correlation (i.e., the proportion of unexplained variance attributable to differences between countries). Higher scores on the *index of ethical standards* imply higher conformity with the rightfulness of the morally debatable actions asked in the survey. Higher scores on the *index of gender equality* imply lower conformity with gender equality.

people more than Catholics do. Yet, this finding is not statistically significant when random slopes are included. At the societal level, Protestant societies certainly show higher interpersonal trust than Catholic ones, both in terms of general trust and in terms of trust in close and remote people. Protestant societies also show higher interpersonal trust than Muslim ones, at least towards remote people (Table 3, column 18–19). Apart from that, Protestants still show less justifiability for morally debatable actions than Catholics, whereas Muslims manifest ethical standards that are not significantly different from both Christian traditions. At the societal level, it is not Protestant but Muslim societies who find lower justifiability for these actions than Catholic societies (Table 3, column 20). Finally, attitudes towards gender equality are similar at individual and societal level. As in Section 4.1., Muslims (Muslim societies) clearly manifest lower conformity with gender equality than Catholics and Protestants (Catholic and Protestant societies) (Table 3, column 21).

4.2.3. The political ethic hypothesis

Protestants score again higher on the *democracy index* than Catholics and Muslims. Yet, this result ceases to be statistically significant when random slopes are included (Table 4, column 22). As in Section 4.1., Protestants certainly tend to express lower

Table 4
The *political ethic hypothesis* (multilevel regression analysis with random slopes for religious denomination).

Multilevel regression analysis							
Hypothesis	**H3: The *political ethic hypothesis***						
Sub-hypothesis	**H3a: *Democracy***				**H3b: *Institutional trust***	**H3c: *Gov't-organized redistribution***	**H3d: *Political violence***
Column	22	23	24	25	26	27	28
Survey items [response scale]	***Democracy index:*** *1) having democracy 2) living in democracy 3) free elections* [factor analysis]	***Index of strong leadership:*** *1) having leaders 2) having experts* [aggregation of items: 1–8]	***Military takeover:*** *Army takes over if government incompetent* [1–10]	***Theocracy:*** *Religious authorities interpret the law* [1–10]	***Institutional trust index:*** *Confidence in 1) government 2) parliament 3) courts 4) civil service* [factor analysis]	***Gov't-organized redistribution index:*** 1) *stake makes incomes equal 2) government tax rich & subsidize poor* [aggregation of items: 2–20]	***Political violence:*** *Political violence is justifiable* [1–10]
Method	linear	linear	linear	linear	linear	linear	linear
Catholic (*C*)	–	–				–	–
Protestant (*P*)	0.0289	−0.116***	−0.235***	−0.110*	−0.0082	−0.360**	−0.0834*
	(0.299)	(0.000)	(0.000)	(0.022)	(0.675)	(0.010)	(0.011)
Muslim (*M*)	−0.0328	0.136*	0.256***	0.311***	0.149**	0.366*	0.178
	(0.210)	(0.015)	(0.001)	(0.000)	(0.003)	(0.041)	(0.067)
Religious person	0.0088	0.0641**	0.142*	0.448***	0.132***	0.0439	−0.0864*
	(0.667)	(0.002)	(0.016)	(0.000)	(0.000)	(0.688)	(0.025)
Gender (1=female)	−0.0258*	−0.0328**	0.0154	0.0634*	−0.0164*	0.159**	−0.124***
	(0.012)	(0.005)	(0.706)	(0.020)	(0.049)	(0.009)	(0.000)
Lower education	–	–	–	–	–	–	–
Middle education	0.135***	−0.106***	−0.183***	−0.233***	−0.0851***	−0.218**	−0.158***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.007)	(0.000)
Upper education	0.310***	−0.297***	−0.640***	−0.558***	−0.0372	−0.605***	−0.218***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.381)	(0.000)	(0.000)
Catholic (*C*) society	–	–	–	–	–	–	–
Protestant (*P*) society	0.286	−0.484**	0.276	−0.328	0.410***	−0.209	−0.328*
	(0.072)	(0.005)	(0.504)	(0.427)	(0.000)	(0.771)	(0.018)
Muslim (*M*) society	0.336*	−0.119	1.382**	0.514	0.542**	2.422***	−0.423*
	(0.030)	(0.534)	(0.003)	(0.192)	(0.003)	(0.000)	(0.040)
Observations	100,246	170,877	98,508	102,228	134,537	78,093	49,211
Countries	65	75	65	65	71	62	52
Intraclass correlation	0.1038	0.0750	0.0747	0.0720	0.1522	0.0979	0.0431

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and *** 0.1% level. Standard errors clustered at country level. Unreported controls: age dummies, employment status, income, marital status, GDP per capita, *polity 2 index*, institutional religiosity, survey-year dummies. Compared to a multilevel null model, the inclusion of control variables at individual and country level significantly reduces the intraclass correlation (i.e., the proportion of unexplained variance attributable to differences between countries).

agreement with a strong leadership and a military involvement in politics than Catholics and Muslims. Catholics also manifest lower agreement with these non-democratic aspects than Muslims, although this is not always significant at the 5% (Table 4, column 23–24). Conversely, Muslims clearly favor the theocratic statement that *religious authorities ultimately interpret the laws* more strongly than both Christian traditions. Catholics now clearly agree with this statement more strongly than Protestants do too (Table 4, column 25). At the societal level, Protestant societies tend to favor democracy more strongly than Catholic ones, although this is not always significant at the 5% but at the 10% level. Muslim societies also score on the *democracy index* higher than Catholic societies (Table 4, column 22).

Consistent with theory, Protestant societies state lower agreement with a strong leadership than Catholic ones, whereas Catholic and Protestant societies agree with an army takeover less strongly than Muslim ones (Table 4, column 23–24). Yet, the latter comparison between Protestant and Muslim societies is only significant at the 10% level. Finally, Muslim societies also tend to support the theocratic statement *religious authorities ultimately interpret the laws* more strongly than Catholic and Protestant societies, even though this result is not always significant at the 5% level (Table 4, column 25).

As in Section 4.1., Catholics, Protestants and Muslims have similar institutional trust, although alternative specifications still suggest that Muslims do trust the major political and legal institutions more than both Christian traditions. At the societal level, both Muslim and Protestant societies show higher institutional trust than Catholic ones (Table 4, column 26). Consistent with theory,

Muslims and Catholics clearly score higher on the *government-organized redistribution index* than Protestants (Table 2, column 13). Muslims score on this index higher than Catholics too, although this is not always significant at the 5% level. At the societal level, Muslim societies clearly state a higher preference for government-organized redistribution than Catholic and Protestant societies (Table 4, column 27). Finally, there is some evidence that not only Catholics but also Muslims are more prone to justify political violence than Protestants. However, this finding is not robust to alternative specifications, which suggests that Catholics, Protestants and Muslims have a similar attitude towards political violence. At the societal level, Catholic societies tend to justify political violence more strongly than Protestant and Muslim ones. Yet, the comparison between Catholic and Muslim societies is not always significant at the 5% (Table 4, column 28).

4.3. Summary of results

The empirical analysis confirms previous research and portrays the following broader picture. Having a similar acceptance of gender equality and level of institutional trust, the differences between individual Catholics and Protestants are the following. First, there is some evidence that Protestants have higher economic attitudes than Catholics, which goes in line with Guiso et al. (2003) and Hayward and Kemmelmeier (2011). Yet, Protestants do not have higher pro-work attitudes than Catholics. Second, Protestants have higher interpersonal trust and ethical standards than Catholics, which corroborates previous research by Arruñada (2010) and Norris and Inglehart (2004). Third, Protestants score higher on the *democracy index* than Catholics, while they certainly show lower support for some non-democratic elements (e.g., strong leadership, military involvement in politics). Fourth, there is some evidence that Protestants have a lower preference for government-organized redistribution than Catholics too, which lines up with Alesina and Guiliano (2010). This set of differences is consistent with the theoretical predictions of Section 2.

Two main differences between Muslims and both Christian traditions stand out. First, Muslims clearly manifest lower conformity with gender equality, as advanced by Guiso et al. (2003) and Inglehart and Norris (2003). Second, Muslims report greater agreement with the theocratic claim *religious authorities should interpret the law.* Muslims are otherwise very similar to Catholics and have only the following significant differences with Protestants. First, Muslims show greater support for non-democratic elements discussed above. Second, Muslims state a higher preference for government-organized redistribution. Third, Muslims attribute higher importance to work than Protestants (Bozkurt and Yesilada, 2017). Contrary to Guiso et al. (2003), there is no evidence that Islam is the most *anti-market* religion.

The analysis of societies with a historically strong influence of Catholicism, Protestantism and Islam provides additional support to the previous results. Consistent with theory, historically Protestant societies show higher interpersonal trust but lower support for some non-democratic elements than historically Catholic and Muslim societies. Protestant societies also show higher trust in institutions than Catholic ones. Muslim societies, for their part, manifest lower acceptance of gender equality but higher pro-work attitudes and a higher preference for government-organized redistribution than both Cristian societies. Compared to Catholic societies, Muslim societies show higher institutional trust and ethical standards too. Table 5 provides an overview of the results. The following sub-sections discuss the extent to which the empirical analysis meets the three main hypotheses of the paper.

4.3.1. The work ethic hypothesis: evidence vs. prediction

Prediction:

- H1a (work as a duty): *Protestants (Protestant societies) have a greater sense of duty and commitment towards work than Catholics and Muslims (Catholic and Muslim societies)*.
- H1b (economic attitudes): *Protestants (Protestant societies) support some fundamental characteristics of the market economy more strongly than Catholics and Muslims (Catholic and Muslim societies)*.

Evidence:

- H1a (work as a duty): Protestants (Protestant societies) do not have a greater sense of duty and commitment towards work than Catholics (Catholic societies) and Muslims (Muslim societies). On the contrary, individual Muslims have higher pro-work attitudes than individual Protestants, while Muslim societies have higher pro-work attitudes than Protestant and Catholic societies.
- H1b (economic attitudes): Individual Protestants do have higher pro-market attitudes than individual Catholics. Yet this finding is neither robust nor confirmed at the societal level. Protestants (Protestant societies) do not have higher pro-market attitudes than Muslims (Muslim societies) either. Individual Muslims and Catholics certainly have similar pro-market attitudes, although Muslim societies have higher pro-market attitudes than Catholic societies.

Conclusion: There is very little evidence of the *work ethic hypothesis*.

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Table 5
Overview of results.

Overview of results

Level of analysis		Individual		Society	Individual		Society	Individual		SSociety
Estimation method		Within-analysis	Multilevel analysis		Within-analysis	Multilevel analysis		Within-analysis	Multilevel analysis	
Attitude	Prediction	C vs. P		C_s vs. P_s	C vs. M		$C_s$vs. M_s	P vs. M		P_s vs. M_s
H1: The *work ethic hypothesis*										
H1a: Work as a duty										
Work as a duty index	$P > C \sim M$	$C > P$ (n. r.)		$C_s \sim P_s$	$M > C$ (n. r.)	$M > C$	$M_s > C_s$	$M > P$		$M_s > P_s$
H1b: Economic attitudes										
Economic index	$P > C \sim M$	$P > C$	$P > C$ (n. r.)	$P_s \sim C_s$	$C \sim M$		$M_s > C_s$	$P \sim M$		$M_s > P_s$ (n. r.)
H2: The *social ethic hypothesis*										
H2a: Interpersonal trust										
General trust	$P > C \sim M$	$P > C$		$P_s > C_s$	$C \sim M$		$C_s \sim M_s$	$P > M$ (n. r.)	$P \sim M$	$P_s \sim M_s$
Index: Trust remote people	$P > C \sim M$	$P > C$ (n. r.)		$P_s > C_s$	$C \sim M$		$C_s \sim M_s$	$P \sim M$		$P_s > M_s$
Index: Trust close people	$P > C \sim M$	$P \sim C$		$P_s > C_s$	$C \sim M$		$C_s \sim M_s$	$P \sim M$		$P_s \sim M_s$
H2b: Ethical standards										
Index ethical standards	$C > P \sim M$	$C > P$		$C_s \sim P_s$	$C > M$ (n. r.)	$C \sim M$	$C_s > M_s$	$P \sim M$		$P_s \sim M_s$
H2c: Gender equality										
Index gender equality	$M > C > P$	$C \sim P$		$C_s \sim P_s$	$M > C$		$M_s > C_s$	$M > P$		$M_s > P_s$
H3: The *political ethic hypothesis*										
H3a: Democracy										
Democracy index	$P > C > M$	$P > C$	$P > C$ (n. r.)	$P_s > C_s$ (n. r.)	$C > M$ (n. r.)	$C \sim M$	$M_s > C_s$	$P > M$	$P > M$ (n. r.)	$P_s \sim M_s$
Strong leadership	$M > C > P$	$C > P$		$C_s > P_s$	$C \sim M$	$M > C$ (n. r.)	$M_s \sim C_s$	$M > P$		$M_s \sim P_s$
Military takeover	$M > C > P$	$C > P$		$C_s \sim P_s$	$C \sim M$	$M > C$ (n. r.)	$M_s > C_s$	$M > P$		$M_s > P_s$ (n. r.)
Theocracy	$M > C > P$	$C > P$ (n. r.)	$C > P$	$C_s \sim P_s$	$M > C$		$M_s > C_s$ (n. r.)	$M > P$		$M_s > P_s$ (n. r.)
H2b: Institutional trust										
Institutional trust index	$P \sim M > C$	$P \sim C$		$P_s > C_s$	$M > C$ (n. r.)		$M_s > C_s$	$M > P$ (n. r.)		$P_s \sim M_s$
H3c: Government-organized redistribution										
Gov't-organized redistribution index	$C \sim M > P$	$C > P$ (n. r.)	$C > P$	$C_s \sim P_s$	$M > C$ (n. r.)		$M_s > C_s$	$M > P$		$M_s > P_s$
H3d: Political violence										
Political violence	$C \sim P \sim M$	$C > P$ (n. r.)	$C > P$ (n. r.)	$C_s > P_s$	$C \sim M$		$C_s > M_s$ (n. r.)	$P \sim M$	$M > P$ (n. r.)	$P_s \sim M_s$

Note: The shaded cells highlight the results that meet the predictions of section 2 [n. r. = not robust]. Higher scores on the *index of ethical standards* imply a higher conformity with the rightfulness of the morally debatable actions asked in the survey. Higher scores on the *index of gender equality* imply a lower conformity with gender equality.

4.3.2. The social ethic hypothesis: evidence vs. prediction

Prediction:

- H2a (interpersonal trust): *Protestants (Protestant societies) show higher interpersonal trust than Catholics and Muslims (Catholic and Muslim societies)*.
- H2b (ethical standards): *Protestants and Muslims (Protestant and Muslim societies) have higher ethical standards than Catholics (Catholic societies)*.
- H2c (gender equality): *Protestants (Protestant societies) support gender equality more strongly than Catholics (Catholic societies), who support it more strongly than Muslim (Muslim societies)*.

Evidence:

- H2a (interpersonal trust): Protestants (Protestant societies) show higher interpersonal trust than Catholics (Catholic societies). There is evidence that Protestant societies show higher interpersonal trust than Muslim societies too, while Catholics (Catholic societies) and Muslims (Muslim societies) certainly show similar interpersonal trust.
- H2b (ethical standards): Individual Catholics certainly express lower ethical standards than individual Protestants, while Catholic societies express lower ethical standards than Muslim societies. Protestants (Protestant societies) and Muslims (Muslim societies) have similar ethical standards.
- H2c (gender equality): Muslims (Muslim societies) certainly manifest lower acceptance of gender equality than Catholics (Catholic societies) and Protestants (Protestant societies). Meanwhile, Catholics and Protestants manifest a similar acceptance of gender equality, both at the individual and societal level.

Conclusion: Leaving aside the fact that both Christian traditions do not have differing attitudes towards gender equality, the *social ethic hypothesis* holds true at the individual or societal level, or both.

4.3.3. The political ethic hypothesis: evidence vs. prediction

Prediction:

- H3a (democracy): *Protestants (Protestant societies) show greater support for democracy than Catholics (Catholic societies), who show greater support for it than Muslims (Muslim societies)*.
- H3b (institutional trust): *Protestants and Muslims (Protestant and Muslim societies) have higher trust in political and legal institutions than Catholics (Catholic societies)*.
- H3c (government-organized redistribution): *Catholics and Muslims (Catholic and Muslim societies) have a higher preference for government-organized redistribution than Protestants (Protestant societies)*.
- H3d (political violence): *Catholics, Protestants and Muslims (Catholic, Protestant and Muslim societies) have similar attitudes towards political violence.*

Evidence:

- H3a (democracy): Individual Protestants certainly attach more importance to democracy but show less support for some non-democratic elements than individual Catholics and Muslims. Although not all results are robust, they are partially confirmed at the societal level. Furthermore, Catholics (Catholic societies) and Muslims (Muslim societies) have no robust differences in their attitudes towards democracy and some non-democratic elements.
- H3b (institutional trust): Although individual Catholics, Protestants and Muslims show no significantly difference in terms of institutional trust, Muslim and Protestant societies certainly have higher institutional trust than Catholic societies.
- H3c (government-organized redistribution): Muslims (Muslim societies) certainly state a higher preference for government-organized redistribution than Protestants (Protestant societies). There is evidence that individual Catholics state a higher preference for government-organized redistribution than individual Protestants too. Muslims (Muslim societies) also state a higher preference for government-organized redistribution than Catholics (Catholic societies), although this is not always statistically significant at the individual level.
- H3d (political violence): Individual Catholics, Protestants and Muslims have a similar attitude towards political violence. Contrary to expectation, only Catholic societies are more prone to justify political violence than Protestant societies.

Conclusion: Leaving aside the fact that (1) Muslims (Muslim societies) and Catholics (Catholic societies) are no different in their attitudes towards democracy, and that (2) Muslims (Muslim societies) certainly state a higher preference for government-organized redistribution than Catholics (Catholic societies), the *political ethic hypothesis* holds true at the individual or societal level, or both.

5. Discussion: limitations of the empirical approach

The identification of the causal effect of religion brings together several difficulties, which is why a detailed discussion on the limitations of the empirical approach in this paper is due. First, this paper tests a possible historical influence of religion with modern data, even though the importance of religion may have declined over time and certain religious beliefs and practices may be no longer active (Weber, [1920] 1988). However, religious and cultural values are transmitted across generations and change only very slowly over time. Consistent with the literature on cultural persistence (e.g., Basten and Betz, 2013; Becker et al., 2016a; Guiso et al., 2016b; Inglehart and Baker, 2000; Spolaore and Wacziarg, 2013; Tabellini, 2008, 2010), this has two key implications for the credibility of the empirical approach: (1) current religious denomination may still provide information on the historical influence of religion; (2) values and preferences with a religious origin may remain palpable even when the underpinning religious beliefs and practices are no longer active.

Second, there is no doubt that an analysis of theological sub-groups (e.g., Lutherans, Methodists, Baptists) would be very insightful. Unfortunately, a consistent comparison between theological sub-groups is not possible because the combined WVS-EVS dataset does not distinguish between sub-groups within Catholicism, Protestantism and Islam. But even if it did (as the WVS and the EVS separately do), the very small number of observations for some sub-groups would impede a consistent comparison between them. Not in vain, research on religion and values based on the WVS-EVS does not analyze differences between theological sub-groups either (e.g., Norris and Inglehart, 2004; Shirokanova, 2015; Van Hoorn and Maseland, 2013). A missing sub-group analysis may be a limitation for two reasons. First, the work ethic channel posited by Weber clearly refers to ascetic Protestants. Yet, the present analysis has to conform to general patterns within the Protestant tradition and cannot draw any conclusion on the specific work ethic of ascetic Protestants. Second, the notion of a unified Muslim culture may be incorrect (Adas, 2006). Nevertheless, all this should be a minor issue as long as the variants within Protestantism and Islam are more similar to each other than to Catholicism, which is a reasonable assumption.

Third, surveys may be susceptible to circumstance-driven marginal preferences and may therefore not elicit culturally determined traits (Maseland and van Hoorn, 2009; 2011). This leads to the following question: Do the survey items used in this paper actually capture the theoretical constructs they are meant to measure in a reliable and valid manner (e.g., work ethic)? There are at least six reasons in favor of this: (1) the battery of items in this paper meets standards of psychometric quality such as Cronbach's alpha or factor analysis (only the items used to build the *economic index* represent an exception to this); (2) using a broad battery of survey items makes sure that the results are consistent across definitions and not due to the choice of a specific question; (3) many survey items used in this paper have been applied before by leading research on religion and values; (4) common survey questions in the WVS positively correlate with experimental measures of constructs studied in this paper (e.g., general trust) (Johnson and Mislin, 2012); (5) the inclusion of data over 25 years grants some robustness against changing circumstances; (6) although not discussed in the paper, the *effect* and sign of control variables like gender or education go in line with previous intuitions. This reassures that the survey items actually capture what they are meant to measure (Guiso et al., 2003).

Fourth, data on self-professed attitudes and values often involve measurement error. In particular, some questions may not record the inclinations of the respondents in a precise way (e.g., questions on general trust that only permit a succinct *yes/no* answer and are confusing in the presence of a double negative) (Norris and Inglehart, 2004). In addition, the answer of the respondents may be biased due to social desirability (e.g., when asked about the morality of tax evasion) (Van Hoorn and Maseland, 2013). However, measurement error due to social desirability bias would affect the results in the paper only if it varied systematically across religions, which is a rather unrealistic assumption. In addition, using data on attitudes instead of data on outcomes presents two advantages: (1) attitudes are more robust to the environment than outcomes because the latter may be the result of attitudes but also of the surrounding context (e.g., tax evasion largely depends on the legal enforcement and the probability of getting caught) (Guiso et al., 2003); (2) only data on attitudes can provide direct evidence of e.g., the work ethic channel proposed by Weber (Basten and Betz, 2013).

Fifth, the results in this paper should be ultimately interpreted as partial correlations because an omitted variable may be inducing individuals to belong to a particular religion and to state a particular preference (e.g., Van Hoorn and Maseland, 2013). Altonji et al. (2005) and Oster (2019), who evaluate the possible degree of omitted variable bias under the assumption of proportional selection of observable and unobservable controls, suggest as a point of reference an equal selection on unobservables and observables to consider the results as robust ($\delta = 1$). Such threshold implies that the selection on unobserved characteristics would need to be at least as large as the selection on observed characteristics to drive the *effects* of interest to zero. Unfortunately, the *effects* of individual religious denomination discussed in this paper do not survive the threshold of $\delta = 1$. This suggests that a rather small selection on unobservables could have a substantial effect on the estimated coefficients. Put differently, omitted variable bias could actually affect the results in the paper.[12] However, Cinelli and Hazlett (2020) critically discuss this approach and conclude that the sensitivity parameter δ is not easily interpretable. Besides that, it seems unlikely that the same omitted variable explains all the attitudes and preferences studied in the paper. Two reasons speak in favor of this: (1) one would need several omitted variables – all of them being correlated with each other – to explain each result in the paper (Guiso et al., 2003); (2) individual religious denomination may have an exogenous character as it practically does not vary over the course of an individual's life (Guiso et al., 2006). Even more important, many findings in the paper are consistent with the theoretical framework of Section 2 and with previous research on religion and values, which increases the robustness of the results.

[12] The sensitivity parameter δ is calculated with the Oster's *psacalc* package in STATA. This package only works with linear models, which is why this robustness check is only performed for the linear regressions in the within-regression analysis.

Sixth, the inclusion of country-year fixed effects provides a certain robustness against omitted variable bias. However, it implies measuring the average *effect* of being Protestant and Muslim (compared to Catholic, within each country-year) while ignoring that the *effect* of religious denomination may depend on the prevailing religious culture and majority in a country. Thus, this within-analysis implicitly presupposes that the attitudinal impact of e.g., an individual's Catholic denomination in a Catholic country is equivalent to the attitudinal impact of an individual's Catholic denomination in a non-Catholic country. This implicit assumption may be problematic, not least because individual religious denomination can serve as a basis for discrimination and exclusion and thereby shape individual attitudes. The complementary use of a multilevel model accounts for this problematic assumption and provides further evidence of the robustness of the results in the paper. By getting rid of country-specific variation in the attitudinal *effect* of religious denomination, a multilevel model may provide a more precise estimation of the overall *effect* of individual religious denomination on attitudes. However, this model does not prevent the variation between countries from being related to unobserved confounding factors. Therefore, even if many findings at the societal level are also consistent with the theoretical framework of Section 2, a certain prudence in the interpretation of the results is due.

Seventh, the *effects* of religion when applying a multilevel model are considerably larger at the societal than the individual level. This suggests that current attitudinal differences between the three religions are more related to their cultural and historical legacy than to current personal adherence to their specific doctrines. Yet, the *effect* and variation explained by individual religious denomination on attitudes are consistent with previous research and similar in magnitude to those of individual controls that have also been shown to explain attitudinal differences (e.g., gender) (Croson and Gneezy, 2009; Fernández, 2007; Niederle and Vesterlund, 2007). Even more importantly, the empirical approach in this paper may underestimate the overall *effect* of individual religious denomination for the following reasons: (1) religion has been shown to affect some control variables (e.g., income) (Arruñada, 2010); (2) the historical influence of religion may have been absorbed into the national culture of a country and may no longer be palpable through individual religious denomination. To give an example, citizens of a country with Catholic tradition may declare themselves atheists but still be *cultural Catholics.* This *effect*, however, is not captured by the *effect* of individual religious denomination discussed in this paper; (3) the *effects* of individual religious denomination are observed despite the fact that many religious beliefs and practices are no longer effective. If these religious beliefs and practices were still active, the analysis would probably provide *effects* of larger magnitude (Glaeser and Glendon, 1998); and (4) the within-analysis does not account for the fact that the influence of religion usually goes beyond the borders of a country, which is why the *true effect* of individual religious denomination may be greater than in this paper.

Eighth, the empirical analysis compares the degree of consent with some survey questions among members of different religions. A finding like *Protestants agree with gender equality more strongly than Muslims* does not imply that *Protestants agree with gender equality completely while Muslims do not at all.* A certain prudence in the interpretation of the results is due.

6. Concluding remarks

The empirical analysis finds very little support for the *work ethic hypothesis* but solid support for the *social* and *political ethic hypothesis*. Thus, although the results of this paper should be ultimately interpreted as partial correlations, they support the following argument. Consistent with the Weberian reasoning that the effects of a work ethic rooted in religion may be no longer palpable after a particular stage of history and development, market forces and the rise of post-materialist values may have dissolved the original role of this type of work ethic. This holds especially true for the Catholic and Protestant world. By contrast, the socio-political ethic associated with Catholicism, Protestantism and Islam continues to show itself in attitudinal differences concerning interpersonal and institutional trust, ethical standards, gender equality, democracy and government-organized redistribution. The complementary analysis of cultural zones suggests that the current attitudinal differences between the Catholic, Protestant and Muslim world are more related to their cultural and historical legacy than to current personal commitment to their specific doctrines. Bearing in mind the increasing interaction of the Catholic, Protestant and Muslim world in an increasingly globalized world, extensions of the present study will contribute to a field of research that is not a question of the past but still crucial to understand the economic, social and political challenges around the globe.

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Declaration of Competing Interest

None.

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Appendix A. List of variables, summary statistics and country classification

Table 6
Survey questions considered to test the *work, social* and *political ethic hypothesis*.

Survey questions considered to test the *work*, *social* and *political ethic hypothesis*

Attitude	Survey question	Response scale	WVS/EVS
H1: The *work ethic hypothesis*			
H1a: Work as a duty			
Work as a duty index	*People who do not work turn lazy**	1: strongly disagree — 5: strongly agree	WVS: 4-5 | 7 EVS: 3-5
	*Work is a duty towards society**		
	*Work should always come first even if it means less spare time**		
H1b: Economic attitudes			
Economic index	*Competition is good: it stimulates people to work hard and develop new ideas**	1: completely disagree — 10: completely agree	VWS: 5-6
	We need larger income differences as incentives for individual effort		
	*Private ownership of business and industry should be increased**		
	*People should take more responsibility to provide for themselves**		
	Wealth can grow so there's enough for everyone		
	*In the long run hard work usually brings a better life**		
H2: The *social ethic hypothesis*			
H2a: Interpersonal trust			
General trust	*(…) most people can be trusted or (…) you cannot be too careful in dealing with people?*	0: can't be too careful 1: most people can be trusted	VWS: 3-7 EVS: 3-5
Index of trust in close people	*How much do you trust:* 1) *your family** 2) *your neighborhood** 3) *people you know personally**	1: not at all — 4: completely	WVS: 5-7 EVS: 5
Index of trust in remote people	*How much do you trust:* 1) *people you meet for the first time** 2) *people of another religion** 3) *people of another nation**		
H2b: Ethical standards			
Index of ethical standards	*Claiming government benefits to which you are not entitled*	1: never justifiable — 10: always justifiable	VWS: 3-7 EVS: 3-5
	Cheating on taxes if you have a chance		
	Accepting a bribe in the course of their duties		
	Avoiding a fare of public transport		
H2c: Gender equality			
Index of gender equality	*When jobs are scarce, should men have more right to a job than women?**	1: disagree — 3: agree	VWS: 5-7 EVS: 5
	*A university education is more important for a boy than for a girl**	1: strongly disagree — 4: strongly agree	
	*Men make better business executives than women do**		
	*Men make better political leaders than women do**		
H3: The *political ethic hypothesis*			
H3a: Democracy			
Index of democracy	*Having a democratic political system**	1: very bad — 4: very good	VWS: 3-7 EVS: 5
	How important is it (…) to live in a (democratic) country?	1: not — 10: very important	
	People choose their leaders in free elections		

(*continued on next page*)

Table 6 (*continued*)

Index of strong leadership	*Having a strong leader who does not have to bother with parliament and elections**	1: very bad — 4: very good	VWS: 3-7 EVS: 3-5
	*Having experts, not governments, who make decisions (...)**		
Military takeover	*The army takes over when government is incompetent*	1: not essential — 10: essential	VWS: 5-7 EVS: 5
Military gov't (appendix C)	*Having the army rule**	1: very bad — 4: very good	VWS: 3-7 EVS: 3-5
Theocracy	*Religious authorities ultimately interpret the laws*	1: not essential — 10: essential	VWS: 5-7 EVS: 5
H3b: Institutional trust			
Index of institutional trust	*Confidence in:* 1) *national government** 2) *parliament** 3) *courts** 4) *civil service**	1: none at all — 4: a great deal	WVS: 3 | 5-7 EVS: 4-5
H3c: Government-organized redistribution			
Index of gov't-organized redistribution	*State makes people's incomes equal*	1: not essential — 10: essential	VWS: 6-7 EVS: 5
	Governments tax the rich and subsidize the poor		
H3d: Political violence			
Political violence	*Is political violence justifiable?*	1: never — 10: always justifiable	VWS: 7 EVS: 5

Note: Some questions (*) have been rearranged so that higher values correspond to higher conformity with the content of the question. The table reports the waves in which every survey item used to build the corresponding index is actually included and can thus be used for the purpose of analysis.

Table 7
Variables on religion and control variables.

Variables on religion and control variables

Variable	Survey question	Response scale/remarks
Religion and religiousness		
Religion	*Do you belong to a religion or religious denomination?*	No religion, Catholic, Protestant, Muslim, etc.
Religious person	*(…) would you say you are a religious person?**	0: not a religious person 1: a religious person
Importance of God/religion	*How important is God in your life?*	0: not — 10: very important
	*How important is religion in your life?**	1: not at all — 4: very important
Attendance to religious services	*Apart from weddings, funerals and christenings, about how often do you attend religious services these days?"*	1: never, practically never — 8: more than once a week
Individual characteristics		
Age	---------	Groups: 18-24 | 25-34 | 34-44 | 45-54 | 55-64 | >65
Education	*Highest education level you have attained*	1: lower education — 3: upper education
Employment	---------	1: unemployed 2: part time — 8: other
Gender	---------	0: male — 1: female
Income	*In what income group is your household? (…) specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in*	1: lowest income groups — 10: highest income group (*EVS category 11 is merged with WVS category 10*)
Marital status	---------	1: married — 4: single / never married
National variables		
Country	---------	
Survey year	---------	
GDP per capita	Source: Feenstra et al. (2015)	Output-side real GDP at chained PPPs (in mil. 2017 US$) by population (one year before each survey)
Democracy / *Polity index 2*	Source: Marshall and Gurr (2018)	*Polity score*: subtraction of *autocratic* from *democratic score* (one year before each survey) - 10: strongly autocratic) — +10: strongly democratic
Official religion	Source: Fox (2019)	0: state no official religion 1: state multiple est. religions 2: state one est. religion
Institutional religiosity		0-52: legislation and support of rel. institutions and precepts
Religious culture/history	Source: Norris and Inglehart (2004), World Values Survey (2022)	0: historically Catholic country 1: historically Prot. country 2: historically Muslim country

Note: Some questions (*) have been rearranged so that higher values correspond to higher conformity with the content of the question. All the variables in this table are included in WVS 3–7 | EVS 3–5.

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Table 8
Summary statistics.

Attitude	Observations	Median	Mean	S.D.	Min	Max
H1a: Work as a duty						
Laziness	120,806	4	3.83	1.11	1	5
Work duty towards society	120,806	4	3.95	0.97	1	5
Work always first	120,806	4	3.60	1.16	1	5
H1b: Economic attitudes						
Competition	72,221	8	7.30	2.56	1	10
Income inequality	72,221	6	5.77	2.94	1	10
Private ownership	72,221	6	5.64	2.82	1	10
Private responsibility	72,221	5	4.87	2.97	1	10
Wealth accumulation	72,221	7	6.42	2.76	1	10
Hard work	72,221	7	6.79	2.90	1	10
H2a: Interpersonal trust						
Generalized trust	187,656	0	0.26	0.44	0	1
Trust family	102,992	4	3.78	0.51	1	4
Trust neighborhood	102,992	3	2.90	0.82	1	4
Trust people you know personally	102,992	3	2.98	0.82	1	4
Trust people you meet 1st time	102,992	2	2.00	0.82	1	4
Trust people another religion	102,992	2	2.35	0.87	1	4
Trust people another nation	102,992	2	2.23	0.88	1	4
H2b: Ethical standards						
Government benefits	173,149	1	2.47	2.38	1	10
Tax evasion	173,149	1	2.19	2.12	1	10
Bribe	173,149	1	1.78	1.76	1	10
Fare evasion	173,149	1	2.51	2.36	1	10
H2c: Gender equality						
Men: scarce jobs	104,341	2	1.93	0.92	1	3
Men: university education	104,341	2	2.00	0.93	1	4
Men: business	104,341	2	2.33	0.98	1	4
Men: leader	104,341	2	2.43	1.00	1	4
H3a: Democracy						
Democracy	102,246	4	3.40	0.75	1	4
Importance of democracy	102,246	10	8.57	2.00	1	10
Elections	102,246	9	8.21	2.44	0	10
Autocracy	170,877	2	2.18	1.03	1	4
Technocracy	170,877	3	2.64	0.94	1	4
Military takeover	98,508	5	4.63	3.22	0	10
Military gov't (appendix C)	174,056	2	1.84	0.95	1	4
Theocracy	102,228	4	4.44	3.08	0	10

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Table 8 (*continued*)

Attitude	Observations	Median	Mean	S.D.	Min	Max
H3b: Institutional trust						
Government	134,537	2	2.39	0.94	1	4
Parliament	134,537	3	2.29	0.91	1	4
Courts	134,537	3	2.56	0.92	1	4
Civil service	134,537	2	2.43	0.86	1	4
H3c: Government-organized redistribution						
State redistribution	78,093	7	6.39	3.01	0	10
Tax rich and subsidize poor	78,093	6	6.04	3.03	0	10
H3d: Political violence						
Political violence	49,211	1	1.79	1.72	1	10
Religiousness						
Religious person	193,658	1	0.82	0.38	0	1
Importance of God	193,658	10	8.31	2.50	1	10
Importance of religion	193,658	4	3.27	0.91	1	4
Attendance to religious services	193,658	6	5.06	2.45	1	8
Individual characteristics						
Age	193,658	41	43.07	16.8	18	108
Education (3 categories)	193,658	2	1.94	0.76	1	3
Employment	193,658	–	–	–	1	8
Gender (Female = 1)	193,658	1	0.54	0.50	0	1
Income (10 categories)	193,658	5	4.69	2.35	1	10
Marital status	193,658	–	–	–	1	4
National variables						
GDP per capita	193,658	14,284	21,208	17,753	534	82,926
Democracy/*Polity 2 index*	193,658	8	5.99	5.31	−10	10
Official religion	193,658	0	0.40	0.79	0	2
Institutional religiosity	193,658	10	11.95	8.76	0	46

Note: 193,658 is the number of Catholics, Protestants and Muslims including all the relevant socioeconomic characteristics and coming from countries with a historically strong influence of Catholicism, Protestantism and Islam (76 countries). Some questions are not asked in each survey wave and country, and some respondents do not complete the entire survey. Therefore, the final sample ranges from 50,000 to 185,000 observations, depending on the (sub-) hypothesis being tested. Means are not reported for countries, employment and marital status because they are not meaningful.

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Table 9
List of countries and survey waves.

	Country	WVS3 (1995–1998)	WVS4 (1999–2004)	WVS5 (2005–2009)	WVS6 (2010–2014)	WVS7 (2017–2019)	EVS3 (1999–2001)	EVS4 (2008–2010)	EVS5 (2017–2020)
Catholic (33 countries)	[32] Argentina	X	X			X			
	[40] Austria								
	[56] Belgium								
	[68] Bolivia					X			
	[76] Brazil	X		X	X	X			
	[124] Canada		X	X		X			
	[152] Chile	X	X	X	X	X			
	[170] Colombia	X			X	X			
	[191] Croatia								
	[203] Czech Republic	X					X	X	X
	[214] Dominican Rep.	X							
	[218] Ecuador				X	X			
	[222] El Salvador	X							
	[250] France			X			X	X	X
	[320] Guatemala			X		X			
	[332] Haiti				X				
	[348] Hungary			X			X	X	X
	[372] Ireland						X	X	
	[380] Italy			X			X	X	X
	[440] Lithuania	X					X	X	X
	[442] Luxembourg								
	[484] Mexico	X	X	X	X	X			
	[558] Nicaragua					X			
	[604] Peru	X	X	X	X	X			
	[608] Philippines		X		X	X			
	[616] Poland			X	X		X	X	X
	[620] Portugal								
	[703] Slovakia	X					X	X	X
	[705] Slovenia			X	X		X	X	X
	[724] Spain	X	X	X	X		X	X	X
	[780] Trinidad & Tobago			X	X				
	[858] Uruguay	X		X	X				
	[862] Venezuela	X	X						
	Country	WVS3 (1995–1998)	WVS4 (1999–2004)	WVS5 (2005–2009)	WVS6 (2010–2014)	WVS7 (2017–2019)	EVS3 (1999–2001)	EVS4 (2008–2010)	EVS5 (2017–2020)
Protestant (18 countries)	[36] Australia	X		X	X	X			
	[208] Denmark								
	[233] Estonia	X			X		X	X	X
	[246] Finland	X		X			X	X	X
	[276] Germany	X		X	X	X	X	X	X
	[428] Latvia	X					X	X	
	[528] Netherlands			X	X		X	X	X
	[554] New Zealand	X		X	X	X			
	[578] Norway	X		X				X	X
	[646] Rwanda			X	X				

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Table 9 (*continued*)

	Country	WVS3 (1995–1998)	WVS4 (1999–2004)	WVS5 (2005–2009)	WVS6 (2010–2014)	WVS7 (2017–2019)	EVS3 (1999–2001)	EVS4 (2008–2010)	EVS5 (2017–2020)
	[710] South Africa	X	X	X	X				
	[716] Zimbabwe		X		X	X			
	[752] Sweden	X		X	X		X	X	X
	[756] Switzerland	X		X				X	X
	[800] Uganda		X						
	[826] UK			X			X	X	X
	[834] Tanzania		X						
	[840] USA	X		X	X	X			
	Country	WVS3 (1995–1998)	WVS4 (1999–2004)	WVS5 (2005–2009)	WVS6 (2010–2014)	WVS7 (2017–2019)	EVS3 (1999–2001)	EVS4 (2008–2010)	EVS5 (2017–2020)
Muslim (25 countries)	[8] Albania	X	X					X	X
	[12] Algeria		X		X				
	[31] Azerbaijan	X			X				X
	[50] Bangladesh	X	X			X			
	[360] Indonesia		X	X		X			
	[364] Iran		X			X			
	[368] Iraq				X				
	[398] Kazakhstan				X	X			
	[400] Jordan		X		X	X			
	[417] Kyrgyzstan		X		X	X			
	[422] Lebanon				X	X			
	[458] Malaysia			X	X	X			
	[466] Mali			X					
	[504] Morocco			X					
	[566] Nigeria	X	X		X	X			
	[586] Pakistan				X	X			
	[682] Saudi Arabia		X						
	[702] Singapore				X	X			
	[762] Taijiskistan					X			
	[788] Tunisia				X	X			
	[792] Turkey	X	X	X	X	X	X	X	
	[818] Egypt		X	X		X			
	[854] Burkina Faso			X					
	[860] Uzbekistan				X				
	[887] Yemen				X				

Note: Countries are classified into cultural zones in accordance with Norris and Inglehart (2004) and the *Inglehart-Welzel World Cultural Map* (World Values Survey, 2022).

Appendix B. Factor analysis

Table 10
Work as a duty index.

Observations: 120,806					
Correlation matrix					
	Work duty society	*Work always first*	*Laziness*		
Work duty society	1.0000	–	–		
Work always first	0.3865	1.0000	–		
Laziness	0.3600	0.3132	1.0000		
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**
Work duty society	+	0.7442	0.4610	0.4045	0.4767
Work always first	+	0.7702	0.4208	0.3894	0.5259
Laziness	+	0.7461	0.4011	0.4362	0.5513
Test scale	**–**	**–**	**–**	**0.4100**	**0.6160**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	3
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	1.7074	1.0180	0.5691	0.5691	
Factor 2	0.6894	0.0861	0.2298	0.7989	
Factor 3	0.6033		0.2011	1.0000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
	Work duty society	0.7817	0.3889		
	Work always first	0.7504	0.4368		
	Laziness	0.7301	0.4669		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Work duty society	0.4579			*Work duty society*	0.6215
Work always first	0.4395			*Work always first*	0.6447
Laziness	0.4277			*Laziness*	0.6638
				Overall	**0.6414**

Table 11
Economic index.

Observations: 72,221

Correlation matrix						
	Competition	*Income inequality*	*Priv. ownership*	*Priv. responsibility*	*Wealth accumulation*	*Hard work*
Competition	1.0000	–	–	–	–	–
Income inequality	0.0404	1.0000	–	–	–	–
Priv. ownership	0.1522	−0.0958	1.0000	–	–	–
Priv. responsibility	−0.0905	0.1783	0.0493	1.0000	–	–
Wealth accumulation	0.0834	0.1130	0.0953	−0.0456	1.0000	
Hard work	0.3511	0.0176	0.0778	−0.0866	0.1295	1.0000
Cronbach's alpha						
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**	
Competition	+	0.6090	0.3242	−0.0414	0.1862	
Income inequality	+	0.3429	−0.0467	0.5859	0.2868	
Priv. ownership	+	0.3324	−0.0616	0.6192	0.3002	
Priv. responsibility	+	0.3769	0.0088	0.4703	0.2378	
Wealth accumulation	+	0.6167	0.2859	−0.0300	0.1989	
Hard work	+	0.4297	0.0741	0.3473	0.1834	
Test scale				**0.3252**	**0.2027**	
Factor analysis						
Method	*principal-component factors*			**Retained factors**	3	
Rotation	*unrotated*			**Number of parameters**	6	
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**		
Factor 1	1.4630	0.1900	0.2438	0.2438		
Factor 2	1.2729	0.2324	0.2122	0.4560		
Factor 3	1.0405	0.1653	0.1734	0.6294		
Factor 4	0.8752	0.1575	0.1459	0.7753		
Factor 5	0.7178	0.0874	0.1196	0.8949		
Factor 6	0.6304		0.1051	1.000		
Loadings	**Variable**	**Factor 1**	**Factor 2**	**Factor 3**	**Uniqueness**	
	Competition	0.7910	−0.0142	0.0172	0.3738	
	Income inequality	0.0259	0.7191	−0.0557	0.4792	
	Priv. ownership	−0.1936	0.6185	0.5610	0.2652	
	Priv. responsibility	0.3355	−0.2331	0.8122	0.1735	
	Wealth accumulation	0.7752	0.0329	−0.1518	0.3749	
	Hard work	0.2927	0.5637	−0.1994	0.5568	
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**		
Variable	**Factor 1**	**Factor 2**	**Factor 3**	**Variable**	**KMO**	
Competition	0.5407	−0.0112	0.0166	*Competition*	0.5327	
Income inequality	0.0177	−0.5649	−0.0535	*Income inequality*	0.4965	
Priv. ownership	−0.1324	0.4859	0.5392	*Priv. ownership*	0.4787	
Priv. responsibility	0.2293	−0.1831	0.7805	*Priv. responsibility*	0.4734	
Wealth accumulation	0.5299	0.0259	−0.1459	*Wealth accumulation*	0.5466	
Hard work	0.2001	0.4428	−0.1916	*Hard work*	0.5672	
				Overall	**0.5234**	

Note: Table 11 shows that the six survey items used to measure attitudes towards some fundamental characteristics of the market economy do not meet the criteria for factor analysis discussed in Section 3.2. The *economic index* is therefore not constructed by means of factor analysis but by simple aggregation of the six indicators. The choice of this set of items is consistent with Guiso et al. (2003) and Hayward and Kemmelmeier (2011).

Table 12
Index of trust in close people | Index of trust in remote people.

Observations: 102,992						
Correlation matrix						
Trust in groups of people	*Family*	*Neighbors*	*People you know personally*	*People you meet 1st time*	*People other nation*	*People other religion*
Family	1.000	–	–	–	–	–
Neighbors	0.3144	1.000	–	–	–	–
People you know personally	0.2451	0.4844	1.000	–	–	–
People you meet 1st time	0.0943	0.3752	0.4081	1.000	–	–
Other nation	0.1004	0.2879	0.3652	0.5289	1.000	–
Other religion	0.0903	0.2713	0.3505	0.4932	0.7083	1.000
Cronbach's alpha						
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**	
Family	+	0.3719	0.2264	0.3047	0.7897	–
Neighbors	+	0.6672	0.4876	0.2295	0.7421	
People you know personally	+	0.7073	0.5412	0.2185	0.7279	
People you meet 1st time	+	0.7384	0.5851	0.2103	0.7160	
Other nation	+	0.7729	0.6204	0.1960	0.7049	
Other religion	+	0.7531	0.5948	0.2028	0.7126	
Test scale				**0.2270**	**0.7694**	
Factor analysis						
Method	*principal-component factors*			**Retained factors**		2
Rotation	*unrotated*			**Number of parameters**		6
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**		
Factor 1	2.7977	1.6238	0.4663	0.4663		
Factor 2	1.1740	0.4460	0.1957	0.6620		
Factor 3	0.7280	0.2048	0.1213	0.7833		
Factor 4	0.5231	0.0357	0.0872	0.8705		
Factor 5	0.4875	0.1977	0.0812	0.9517		
Factor 6	0.2897		0.0486	1.000		
Loadings	**Variable**	**Factor 1 (*Trust in remote people*)**	**Factor 2 (*Trust in close people*)**	**Uniqueness**		
	Family	−0.2715	**0.8555**	0.3591		
	Neighbors	0.1648	**0.7251**	0.3624		
	People you know personally	0.3372	**0.5700**	0.4251		
	People you meet 1st time	**0.7293**	0.1152	0.3954		
	Other nation	**0.8953**	−0.0597	0.2328		
	Other religion	**0.8897**	−0.0821	0.2535		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**		
Variable	**Factor 1**	**Factor 2**	**–**	**Variable**	**KMO**	
Family	−0.1245	0.5333		*Family*	0.7139	
Neighbors	0.0633	0.4500		*Neighbors*	0.7563	
People you know personally	0.1386	0.3517		*People you know personally*	0.8105	
People you meet 1st time	0.3107	0.0646		*People you meet 1st time*	0.8456	
Other nation	0.3834	−0.0456		*Other nation*	0.7070	
Other religion	0.3812	- 0.0566		*Other religion*	0.7133	
				Overall	**0.7560**	

Table 13
Index of ethical standards.

Observations: 173,149					
Correlation matrix					
	Gov't benefits	*Fare evasion*	*Tax evasion*	*Bribe*	
Gov't benefits	1.000	–	–	–	
Fare evasion	0.4336	1.000	–	–	
Tax evasion	0.3888	0.4499	1.0000	–	
Bribe	0.3767	0.3970	0.5235	1.000	
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**
Gov't benefits	+	0.7504	0.5034	1.9487	0.7061
Fare evasion	+	0.7740	0.5452	1.8289	0.6794
Tax evasion	+	0.7715	0.5742	1.8851	0.6621
Bribe	+	0.7215	0.5464	2.2143	0.6871
Test scale				**1.9692**	**0.7424**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	4
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	2.2868	1.6072	0.5717	0.5717	
Factor 2	0.6797	0.1139	0.1699	0.7416	
Factor 3	0.5658	0.0980	0.1414	0.8831	
Factor 4	0.4677		0.1169	1.000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
–	*Gov't benefits*	0.7160	0.4874		
	Fare evasion	0.7530	0.4330		
	Tax evasion	0.7902	0.3756		
	Bribe	0.7634	0.4172		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Gov't benefits	0.3131			*Gov't benefits*	0.7867
Fare evasion	0.3293			*Fare evasion*	0.7686
Tax evasion	0.3455			*Tax evasion*	0.7283
Bribe	0.3338			*Bribe*	0.7426
				Overall	**0.7538**

Note: Higher scores on the *index of ethical standards* imply a higher conformity with the rightfulness of the morally debatable actions asked in the survey.

Table 14
Index of gender equality.

Observations: 104,341					
Correlation matrix					
Men should have priority/are better…	*Scarce jobs*	*University education*	*Political leaders*	*Business executives*	
Scarce jobs	1.000	–	–	–	
University education	0.3664	1.000	–	–	
Political leaders	0.4792	0.4622	1.0000	–	
Business executives	0.4727	0.5394	0.6606	1.000	
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**Alpha**
Scarce jobs	+	0.7282	0.5255	0.5208	0.7893
University education	+	0.7454	0.5496	0.5039	0.7785
Political leaders	+	0.8313	0.6700	0.4100	0.7194
Business executives	+	0.8509	0.7085	0.3941	0.6994
Test scale				**0.4572**	**0.7995**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	4
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	2.5018	1.8613	0.6254	0.6265	
Factor 2	0.6405	0.1119	0.1601	0.7856	
Factor 3	0.5286	0.1994	0.1321	0.9177	
Factor 4	0.3292		0.0823	1.0000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
	Scarce jobs	0.7180	0.4844		
	University education	0.7411	0.4508		
	Political leaders	0.8354	0.3021		
	Business executives	0.8597	0.2609		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Scarce jobs	0.2870			*Scarce jobs*	0.8522
University education	0.2962			*University education*	0.8257
Political leaders	0.3339			*Political leaders*	0.7421
Business executives	0.3436			*Business executives*	0.7190
				Overall	**0.7698**

Note: Higher scores on the *index of gender equality* imply a lower conformity with gender equality.

Table 15
Index of democracy.

Observations: 100,246					
Correlation matrix					
	Democracy	*Importance democracy*	*Elections*		
Democracy	1.000	–	–		
Importance democracy	0.3310	1.000	–		
Elections	0.2653	0.3229	1.0000		
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**
Democracy	+	0.5211	0.3617	1.5776	0.4809
Importance democracy	+	0.7678	0.3787	0.4873	0.2598
Elections	+	0.8308	0.3584	0.4980	0.3580
Test scale				**0.8543**	**0.4910**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	3
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	1.6137	0.8788	0.5379	0.5379	
Factor 2	0.7349	0.0835	0.2450	0.7829	
Factor 3	0.6514		0.2171	1.0000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
	Democracy	0.7209	0.4803		
	Importance democracy	0.7644	0.4157		
	Elections	0.7139	0.4904		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Democracy	0.4468			*Democracy*	0.6343
Importance democracy	0.4737			*Importance democracy*	0.6060
Elections	0.4424			*Elections*	0.6400
				Overall	**0.6250**

Table 16
Index of institutional trust.

Observations: 134,537					
Correlation matrix					
Confidence in…	*Gov't*	*Parliament*	*Courts*	*Civil service*	
Gov't	1.000	–	–	–	
Parliament	0.6434	1.000	–	–	
Courts	0.5132	0.5030	1.000	–	
Civil service	0.5037	0.5892	0.4905	1.000	
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**
Gov't	+	0.8271	0.6697	0.4200	0.7691
Parliament	+	0.8450	0.7077	0.4102	0.7513
Courts	+	0.7764	0.5922	0.4692	0.8047
Civil service	+	0.7894	0.6293	0.4685	0.7879
Test scale				**0.4420**	**0.8245**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	4
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	2.6249	2.0879	0.6562	0.6562	
Factor 2	0.5370	0.0351	0.1343	0.7905	
Factor 3	0.5019	0.1658	0.1255	0.9160	
Factor 4	0.3361		0.0840	1.0000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
	Gov't	0.8255	0.3186		
	Parliament	0.8520	0.2741		
	Courts	0.7646	0.4151		
	Civil service	0.7956	0.3670		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Gov't	0.3145			*Gov't*	0.7764
Parliament	0.3246			*Parliament*	0.7508
Courts	0.2913			*Courts*	0.8438
Civil service	0.3031			*Civil service*	0.8130
				Overall	**0.7906**

Table 17
Religiosity index.

Observations: 193,658					
Correlation matrix					
	Religious person	*Church attendance*	*Importance God*	*Importance religion*	
Religious person	1.0000	–	–	–	
Church attendance	0.3040	1.0000	–	–	
Importance God	0.3784	0.3785	1.0000	–	
Importance religion	0.3391	0.4313	0.6239	1.0000	
Cronbach's alpha					
Item	**Sign**	**Item-test correlation**	**Item-rest correlation**	**Average interitem covariance**	**alpha**
Religious person	+	0.4839	0.4217	1.5670	0.6265
Church attendance	+	0.7946	0.4380	0.6306	0.5150
Importance God	+	0.8425	0.5258	0.4525	0.4201
Importance religion	+	0.7436	0.6414	0.9880	0.4844
Test scale				**0.9095**	**0.6022**
Factor analysis					
Method	*principal-component factors*			**Retained factors**	1
Rotation	*unrotated*			**Number of parameters**	4
Factor	**Eigenvalue**	**Difference**	**Proportion**	**Cumulative**	
Factor 1	2.2450	1.5228	0.5612	0.5612	
Factor 2	0.7222	0.0588	0.1806	0.7418	
Factor 3	0.6635	0.2941	0.1659	0.9077	
Factor 4	0.3694		0.0923	1.0000	
Loadings	**Variable**	**Factor 1**	**Uniqueness**		
	Religious person	0.6429	0.5867		
	Church attendance	0.6920	0.5211		
	Importance God	0.8194	0.3286		
	Importance religion	0.8255	0.3186		
Scoring coefficients				**Kaiser-Meyer-Olkin measure of sampling adequacy**	
Variable	**Factor 1**	**–**	**–**	**Variable**	**KMO**
Religious person	0.6429			*Religious person*	0.8227
Church attendance	0.6920			*Church attendance*	0.8068
Importance God	0.8194			*Importance God*	0.6762
Importance religion	0.8255			*Importance religion*	0.6701
				Overall	**0.7180**

Note: The main analysis uses the self-declared religiousness of respondents to measure religiosity. The analysis tests the robustness of the results to different dimensions of religiousness. One dimension is the *religiosity index* built upon factor analysis of the variables shown above.

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Appendix C. Within-regression analysis on the survey items that make up the indexes (when considered separately)

Table 18
The *work* and *social ethic hypothesis* (within-regression analysis).

Within-regression analysis							
Hypothesis	**H1: The *work ethic hypothesis***						
Sub-hypothesis	**H1a: *Work as a duty***			**H1b: *Economic attitudes***			
Column	1	2	3	4	5	6	7
Attitude	Work as a duty			Competition	Income inequality	Private ownership	Private responsibility
Survey question	*People who do not work turn lazy**	*Work is a duty towards society**	*Work should always come first even if it means less spare time**	*Competition is good: it stimulates people to work hard (…)**	*Larger income differences as incentives for individual effort*	*Private ownership of business (…) should be increased**	*People: more responsibility to provide for themselves**
Response scale	1–5	1–5	1–5	1–10	1–10	1–10	1–10
Method	Oprobit	Oprobit	Oprobit	OLS	OLS	OLS	OLS
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	−0.0313	−0.00843	−0.0322*	0.0429	0.0981*	0.0684	0.136*
	(0.0189)	(0.0232)	(0.0151)	(0.0405)	(0.0481)	(0.0666)	(0.0556)
Muslim (*M*)	0.0853*	0.0443	0.116*	−0.0137	0.172*	−0.0355	0.134
	(0.0432)	(0.0551)	(0.0508)	(0.0725)	(0.0783)	(0.110)	(0.0964)
Observations	120,806	120,806	120,806	72,221	72,221	72,221	72,221
Countries	67	67	67	58	58	58	58
Adj. R^2	[0.0509]	[0.0571]	[0.0875]	0.0763	0.1081	0.1148	0.1259
[*Pseudo* R^2]							

Hypothesis	**H1: The *work ethic hypothesis***		**H2: The *social ethic hypothesis***				
Sub-hypothesis	**H1b: *Economic attitudes***		**H2a: *Interpersonal trust***				
Column	8	9	10	11	12	13	14
Attitude	Wealth	Hard work	General trust (as in core analysis)	Trust to particular groups			
Survey question	*Wealth can grow so there is enough for everyone*	*In the long run hard work usually brings a better life**	*Most people can be trusted*	*Family**	*Neighbors**	*People you know personally**	*People you meet for the first time**
Response scale	1–10	1–10	0–1	1–4	1–4	1–4	1–4
Method	OLS	OLS	Probit	Oprobit	Oprobit	Oprobit	Oprobit
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	0.0392	0.0630	0.0713**	−0.0680*	−0.0205	−0.0308	0.0353
	(0.0342)	(0.0599)	(0.004)	(0.0319)	(0.0282)	(0.0250)	(0.0250)
Muslim (*M*)	0.0618	0.0697	−0.0452	0.104	0.0769	0.0498	0.0374
	(0.0664)	(0.104)	(0.213)	(0.0986)	(0.100)	(0.0862)	(0.0526)
Observations	72,221	72,221	187,656	102,992	102,992	102,992	102,992
Countries	58	58	76	65	65	65	65
Adj. R^2	0.1044	0.1424	[0.1647]	[0.0862]	[0.0755]	[0.0859]	[0.0834]
[*Pseudo* R^2]							

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and ***0.1% level. Standard errors clustered at country level. Probit and ordered probit estimations indicate coefficients (not marginal effects). Unreported controls: religiosity, gender, education level, age dummies, employment status, income, marital status, country-year dummies. Some questions (*) have been rearranged so that higher values correspond to higher conformity with the content of the question.

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Table 19
The *social ethic hypothesis* (continued) and the *political ethic hypothesis* (within-regression analysis).

Within-regression analysis							
Hypothesis	**H2: The *social ethic hypothesis***						
Sub-hypothesis	**H2a: *Interpersonal trust***		**H2b: *Ethical standards***				**H2c: *Gender equality***
Column	15	16	17	18	19	20	21
Attitude	Trust to particular groups		Gov't benefits	Tax evasion	Bribe	Fare evasion	Scarce jobs
Survey question	*People of another religion**	*People of another nation**	*Claiming gov't benefits not entitled to*	*Cheating on taxes if you have a chance*	*Accepting a bribe*	*Avoiding a fare on public transport*	*Men: more right to a scarce job**
Response scale	1–4	1–4	1–10	1–10	1–10	1–10	1–3
Method	Oprobit	Oprobit	OLS	OLS	OLS	OLS	Oprobit
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	0.0496*	0.0112	−0.123**	−0.160***	−0.138**	−0.140**	0.0283
	(0.0240)	(0.0152)	(0.0462)	(0.0384)	(0.0441)	(0.0488)	(0.0182)
Muslim (*M*)	0.0962	0.0925	0.00701	−0.139	−0.0895	−0.0743	0.263***
	(0.121)	(0.0754)	(0.0930)	(0.0801)	(0.0876)	(0.0903)	(0.0384)
Observations	102,992	102,992	173,149	173,149	173,149	173,149	104,341
Countries	65	65	74	74	74	74	65
Adj. R^2	[0.0864]	[0.1034]	0.1486	0.0999	0.1258	0.1272	[0.1950]
[*Pseudo* R^2]							

Hypothesis	**H2: The *social ethic hypothesis***			**H3: The *political ethic hypothesis***			
Sub-hypothesis	**H2c: *Gender equality***			**H3a: *Democracy***			
Column	22	23	24	25	26	27	28
Attitude	University education	Men: business executives | political leaders		Democracy	Living in a democracy	Free elections	Autocracy
Survey question	*University education more important for boy than girl**	*Men: better business executives**	*Men: better political leaders**	*Having a democratic system**	*Living in a democratic country*	*People choose their leader in free elections*	*Having strong leader who doesn't bother with parl. & election**
Response scale	1–4	1–4	1–4	1–4	1–10	0–10	1–4
Method	Oprobit	Oprobit	Oprobit	Oprobit	OLS	OLS	Oprobit
Catholic (*C*)	–	–	–	–	–	–	–
Protestant (*P*)	−0.00440	0.0264	0.0167	0.0377	0.123**	0.120*	−0.0703**
	(0.0175)	(0.0163)	(0.0150)	(0.0306)	(0.0425)	(0.0548)	(0.002)
Muslim (*M*)	0.187*	0.183***	0.250***	−0.0294	−0.0437	−0.0915	0.0135
	(0.0795)	(0.0537)	(0.0493)	(0.0260)	(0.0500)	(0.0603)	(0.810)
Observations	104,341	104,341	104,341	100,246	100,246	100,246	170,877
Countries	65	65	65	65	65	65	75
Adj. R^2	[0.0879]	[0.1306]	[0.1444]	[0.0620]	0.0921	0.1131	[0.0515]
[*Pseudo* R^2]							

Note: P-values in parentheses. Coefficients statistically different from 0 at the * 5%, ** 1% and *** 0.1% evel. Standard errors clustered at country level. Probit and ordered probit estimations indicate coefficients (not marginal effects). Unreported controls: religiosity, gender, education level, age dummies, employment status, income, marital status, country-year dummies. Some questions (*) have been rearranged so that higher values correspond to higher conformity with the content of the question.

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Table 20
The *political ethic hypothesis* (continued) (within-regression analysis).

Within-regression analysis						
Hypothesis	**H3: The *political ethic hypothesis***					
Sub-hypothesis	**H3a: *Democracy***				**H3b: *Institutional trust***	
Column	29	30	31	32	33	34
Attitude	Technocracy	Military involvement in politics		Theocracy (as in core analysis)	Confidence	
Survey question	*Having experts, not gov'ts, make decisions**	*Army takes over when gov't incompetent* (as in core analysis)	*Having the army rule**	*Religious authorities ultimately interpret law*	*Government**	*Parliament**
Response scale	1–4	0–10	1–4	0–10	1–4	1–4
Method	Oprobit	OLS	Oprobit	OLS	Oprobit	Oprobit
Catholic (*C*)	–	–	–	–	–	–
Protestant (*P*)	−0.0567**	−0.182**	−0.0727*	−0.112*	−0.0112	−0.00717
	(0.010)	(0.002)	(0.013)	(0.030)	(0.0149)	(0.0155)
Muslim (*M*)	0.0706	0.165	0.0641	0.340**	0.0600	0.0580
	(0.090)	(0.160)	(0.151)	(0.008)	(0.0490)	(0.0532)
Observations	170,877	98,508	162,633	102,228	134,537	134,537
Countries	75	65	75	65	71	71
Adj. R^2 [*Pseudo* R^2]	[0.0515]	0.1681	[0.1297]	0.2419	[0.0916]	[0.0993]

Hypothesis	**H3: The *political ethic hypothesis***				
Sub-hypothesis	**H3b: *Institutional trust***		**H3c: *Government-organized redistribution***		***H3d: Political violence***
Column	35	36	37	38	39
Attitude	Confidence		Redistribution		Political violence (as in core analysis)
Survey question	*Courts**	*Civil service**	*The state makes people's incomes equal*	*Governments tax rich and subsidize poor*	*Political violence is justifiable*
Response scale	1–4	1–4	0–10	0–10	1–10
Method	Oprobit	Oprobit	OLS	OLS	OLS
Catholic (*C*)	–	–	–	–	–
Protestant (*P*)	−0.0038	0.000393	−0.275*	−0.0937	−0.0536
	(0.0141)	(0.0154)	(0.111)	(0.0785)	(0.145)
Muslim (*M*)	0.0449	0.124*	0.0787	0.181	0.0842
	(0.0441)	(0.0523)	(0.175)	(0.115)	(0.448)
Observations	134,537	134,537	78,093	78,093	49,211
Countries	71	71	62	62	76
Adj. R^2 [*Pseudo* R^2]	[0.0801]	[0.0852]	0.1381	0.1007	0.0971

Note: P-values in parentheses. Coefficients statistically different from 0 at the, * 5%, ** 1% and ***0.1% level. Standard errors clustered at country level. Probit and ordered probit estimations indicate coefficients (not marginal effects). Unreported controls: religiosity, gender, education level, age dummies, employment status, income, marital status, country-year dummies. Some questions (*) have been rearranged so that higher values correspond to higher conformity with the content of the question.

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