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Investigation into values and attitudes as channels through which culture can affect economic outcomes

Lenka Filipova



Norsk Utenrikspolitisk Institutt
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Visiting address: C.J. Hambros plass 2d
Address: P.O. Box 8159 Dep.
NO-0033 Oslo, Norway
Internet: www.nupi.no
E-mail: info@nupi.no
Fax: [+ 47] 22 99 40 50
Tel: [+ 47] 22 99 40 00

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Abstract

This paper investigates the impact of religious denominations on values and attitudes that are thought to be conducive to economic growth and are usually pronounced in favor of Protestants. The model is based on the same strategy as in (Guiso, Sapienza and Zingales 2002). To isolate the effect of religion from other effects, socio-demographic controls such as gender, age, educational and income level and country fixed effects are included in all regressions. The analysis uses the World Values Survey to investigate twelve attitudes in the overall impact of religious denominations followed by the analysis controlling for the dominant religion of the country. The paper contributes to the research by: (1) including more Muslim countries, which leads to different results from that of (Guiso, Sapienza and Zingales 2002) where Muslims represented mostly minority religion in researched countries; (2) evaluating precisely the differences between Protestants and other religious denominations. The results thus are not dependent on such an unspecified group of people who answered that they do not belong to any religious denomination; (3) including new attitudes like determination or confidence in major companies that are emphasized especially in (Kuran 2011). The results show that neither overall analysis nor analysis with the control for dominant religion proved the hypothesis that Protestants have significantly higher values and attitudes considered advantageous for economic development compared to other religious denominations. Is it because of the changes of values and attitudes over time?

Keywords: religion, economic growth, economic attitudes

JEL: Z12; Z13; O15

* VŠB – Technical University of Ostrava, Sokolská třída 33, 701 21 Ostrava, Czech Republic. E-mail: lenka.filipova@vsb.cz. This paper is part of the research that was realized during the author's 9-month research stay at NUPI – Norwegian Institute of International Affairs on the basis of Yggdrasil scholarship 202828/V11 funded by the Research Council of Norway. I am grateful to NUPI for being my host institution and the members of the Department of International Economics for professional support. Many thanks to Jo Thori Lind, Arne Melchior and Jens Christopher Andvig for useful comments on an early draft of this paper.

Introduction

Culture is emphasized as one of the fundamental factors of economic growth (Acemoglu 2008) and, in the search for cultural aspects of economic growth, it has been suggested that religion plays the main role. Since the start of this debate when Weber (Weber 1930) identified the positive effect of Protestant ethics on economic development, the majority of research in this area has concentrated on the impact of religion on economic attitudes and values conducive to economic growth. The research is based on either historical analysis such as (Huntington 1997), (Landes 1998) or (Kuran 2005), (Kuran 2011) or on statistical analysis using the contemporary data from various surveys and countries, e. g. (Leonardi, Nanetti and Putnam 1993), (La Porta, et al. 1997), (Guiso, Sapienza and Zingales 2002) or (Guiso, Sapienza and Zingales 2006). The historical analysis suggests a number of pro-growth attitudes and values that are ascribed mostly to Protestant countries; the statistical analysis tries to prove these assumptions. Among them generalized trust, thrift, the will to work hard, honesty, tolerance and respect for others are usually emphasized as positive for economic development whereas intolerance, conservatism, nepotism and low trust in organizations as negative.

Most of the studies evaluating the impact of religion on economic outcomes use cross-country analysis, nationwide analysis or evaluate one or some of the mentioned values and attitudes. The problem of using cross-country or nationwide analysis, which is also claimed in (Guiso, Sapienza and Zingales 2002), lies in the fact that there can be other historical factors that could keep a country trapped in unhelpful conditions. These factors could disappear over time (usually through reform) but “path dependence” might still influence people’s behavior. Lack of curiosity, low generalized trust, low trust in organizations, as well as weak civil society leading to the “culture of corruption”, are emphasized by (Kuran 2011) as the result of persistent historical influences in Muslim countries. But the same patterns can also be seen in post-communist countries. The problem of distinguishing between the effect of religion and other historical factors can be overcome by using individual data for a large set of countries. This data can be found in the World Values Survey (WVS) including the representative national surveys of 97 countries representing almost 90 percent of the world's population. This survey is suitable for evaluating the impact of religion on values and attitudes, since the questionnaire contains information about religious affiliations. The WVS in collaboration with European Values Study has so far carried out five waves of surveys,

from 1981 to 2007. However, there are some limitations in evaluating values and attitudes - and especially their development - since each wave involves a different set of countries and, for example, most Muslim countries are included in the last two waves only.

This paper investigates the influence of different religious denominations on values and attitudes that are considered to have an impact on economic development. The aim is to find out if Protestants significantly differ in researched values and attitudes from other religious denominations. The model is based on the same strategy as in (Guiso, Sapienza and Zingales 2002). To isolate the effect of religion from other effects, socio-demographic controls such as gender, age, educational and income level and country fixed effects are included in all regressions. The analysis investigates twelve attitudes: generalized trust, tolerance and respect for other people, attitudes towards hard work, thrift, determination, attitudes towards corruption and cheating on taxes, attitudes towards market (confidence in major companies, firms and freedom, private vs state ownership of business, income inequality) and attitudes towards women. The first part of analysis evaluates the overall differences in values and attitudes between Protestants and other religious denominations. The second part of analysis controls for the dominant religion of the country. For that reason the regressions of all attitudes were carried out separately for Protestant, Roman-Catholic, Orthodox and Muslim-dominated countries.

The paper contributes to the research by including, importantly, more Muslim countries - leading to different results from that of (Guiso, Sapienza and Zingales 2002) where Muslims mostly represented a minority religion in the countries in question. The analysis evaluates precisely the differences between Protestants and other religious denominations. The results thus are not dependent on such an unspecified group of people who answered that they do not belong to any religious denomination. This paper includes also some other attitudes like determination or confidence in major companies that are emphasized in (Kuran 2011).

The rest of the paper is organized as follows: Section 1 reviews the results of theoretical and empirical research on the impact of religion on economic development. Data, variables and model are discussed in the second section. Section 3 provides the results of the overall impact of religious denominations and socio-demographic factors on values and attitudes. The results of the impact of the dominant religion of the country in question are discussed in the fourth section. It is followed by conclusions, with suggestions for future research.

1. Theoretical and empirical predictions

Max Weber (Weber 1930) was the first scholar to point out the significant role of religion for economic growth. Weber's argument explains the positive effect of Protestant ethics on economic development. This was the motivation for a lot of research in this topic. For example, (Samuelsson 1993) claims that most of the capitalist institutions described by Weber existed before the Protestant Reformation. The work by (Leonardi, Nanetti and Putnam 1993) attributes the prevailing lack of trust toward others in the South to the strong Catholic tradition. This theory was partially proved by (La Porta, et al. 1997) and (Inglehart 1999). The work by (Landes 1998) emphasizes the influence of the culture of intolerance diffused by the Catholic Church, which forced out many educated and talented people, resulting in failure of Spain to develop in the 16th and 17th century. (Huntington 1997) and (Landes 1998) also emphasize the impact of religion on economic development by affecting personal behavior and values such as honesty, thrift, the will to work hard etc. According to them, Protestantism was supportive in history in developing property rights and written contracts, which led to higher business driving for higher competition and technological progress. Private property - and laws ensuring its existence - positively influenced the later division of power between secular and Church. Secularization is also stressed by the above-mentioned authors as the positive factor of economic development in Europe. The work by (Becker and Woessmann 2009) modified the argument of the positive effect of Protestantism in terms of educational level. The authors claimed that it was not Protestant ethics that led to economic growth, but the translation of the Bible into the languages in use that led to a higher educational level of the population as the base for the economic growth in Protestant countries. The role of religion for education and economic development was studied in Jewish history, too. (Botticini and Eckstein 2005) emphasized the transformation of Jewish religion about the year 70 A.D. towards understanding Tora. Each Jew was responsible for teaching his sons to read and understand Jewish rules. This was supposed to give Jews a competitive advantage in the form of higher human capital.

(Blum and Dudley 2001) tested growth theories in the period of 1500-1750 and did not prove Weber's hypothesis about the positive impact of Protestant ethics on economic growth in Europe either. On the other hand, they supported some of Weber's hypotheses, e.g. positive influ-

ence of information networks, high level of specialization of Protestant cities and the observation of contracts among people who did not know each other.

In terms of Islam, so-called Islamic culture and Islamic law are commonly considered as a burden to economic growth. (Huntington 1997) or (Landes 1998) claim that the conviction that God is unique, almighty, sovereign and eternal, and disposes of lives and properties of his subjects led not only to a lack of freedom and limited property rights suppressing business, competition and economic development, but also to fatalism. Other factors usually stressed in relation to Islam are personalism, laziness, conservatism, traditionalism, lack of curiosity, and mistrust of science. On the other hand, (Kuran 2005) and (Kuran 2011) tries to explain the economic underdevelopment in the Muslim world in inadequate institutions. He claims that all of the previously mentioned characteristics cannot be denied, but that they can be seen in other religions, too. Kuran emphasizes that the characteristics of human behavior mentioned are symptoms of institutional deficiencies that started to come to light in times of the Industrial Revolution in the western civilizations in the 18th and 19th centuries. The Middle East suffered from a lack of adequate organizational capabilities to use new technologies. Islamic law formed a system of institutions that are responsible for the low economic level of the Muslim world. These institutions include law of partnerships, inheritance regulations and waqf. As (Kuran 2011) says “these elements of Islamic law delayed the transition from personal to impersonal exchange, discouraged the use of the technologies of mass production, kept civil society weak, and set the stage for sustained authoritarian rule”.

The impact of past institutions (history) on the efficiency of contemporaneous institutions is supported also by (North 1981), (Acemoglu, Johnson and Robinson 2001) or (Tabellini 2008). Whereas the literature in political economics seeks to explain this persistence with reference to conflicts over the distribution of income and wealth, (Tabellini 2008) emphasizes also the impact of values and behavior of public officials, or of private individuals inside private or public organizations. On the basis of his research from the micro data on second generation US citizens, distant political institutions have left their mark on current attitudes and values, as measured by trust and respect. As (Tabellini 2008) says “Descendants of immigrants from countries that over a century ago were ruled by more democratic political institutions, are more likely today to display generalized trust and respect for others”. It is also confirmed by aggregate data on European regions (Tabellini 2010). (Tabellini 2008) also stresses the contemporaneous link between values such as trust and institutional and economic outcomes.

The impact of religion on economic attitudes and values was studied also by (Guiso, Sapienza and Zingales 2002) with positive findings. They studied the effect of religion on people's attitudes toward cooperation, government, women, legal rules, the market economy, and thriftiness, and found a remarkable number of regularities. They concluded that, on the whole, religion is good for the development of attitudes that are conducive to economic growth.

Although the majority of research on this topic concentrates on the impact of religion on economic attitudes and values conducive to economic growth, work by (Barro and McCleary 2003) uses a cross-country panel to study the interaction between religiosity and economic growth in growth equations. The same approach studying the direct impact of religion to economic growth was used by (Grier 1997) in a cross-country study of former British, French, and Spanish colonies. The results show that Protestantism is correlated positively with growth and development.

2. Methodology and data

All regressions are based on the model using the same strategy as in (Guiso, Sapienza and Zingales 2002), i. e. controlling for individual country effects to eliminate the impact of other institutional variables and the level of economic development of the country. As (Guiso, Sapienza and Zingales 2002) emphasized, there is a risk of underestimating the effect of religion as a part of the national culture. On the other hand, this approach makes it possible to show the effect of religion with more credibility.

So, the analyzed equation looks like this:

$$Y_{ij} = \gamma \text{Religious denomination}_i + \beta X_i + \text{country fixed effects} + \varepsilon_i$$

where Y_{ij} stands for $1 \dots j$ values and attitudes, *Religious denomination*_{*i*} represents different categories of religious denominations and γ is the coefficient of our interest. The matrix X_i contains socio-demographic controls (age, gender, education and income level).

The model is verified using the data from the World Values Survey (WVS) which is a cross-country project including the representative national surveys of 97 countries representing almost 90 percent of the world's population. This survey is suitable for evaluating values and attitudes and their impact on social, economic and political life. The WVS in collaboration with European Values Study carried out five waves of surveys, from 1981 to 2007. But each wave contains a different set of countries and only the last two waves contain the highest number of countries. In particular, the majority of Muslim countries are included in the last two waves only. On the other hand, Denmark and Iceland representing Protestant countries are not included in the fifth wave, which would decline the sample of Protestants significantly. For those reasons, the analysis in this paper is based on the data from the fourth wave of WVS including 71 countries or regions with the total of 102 264 observations of individuals.

Dependent variables are values and attitudes considered important for economic development in theoretical and empirical literature. Some are supposed to have positive economic impact, such as generalized trust, tolerance and respect for others, thrift, hard work, determination, honesty, while the others have negative economic impact. Among them nepotism, justification of corruption and low trust in organizations are stressed in literature most frequently. Attitude towards wom-

en is chosen because of its obvious impact on labor market decisions. The analysis includes also the attitudes towards market because pro-market policies are supposed to be positive for economic growth.

Table 1 reports the summary statistics of the dependent variables. The first two variables represent the attitudes towards others. Variable labeled generalized trust is based on the following question: *“Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”* The variable is equal to 1 if respondents answer that most people can be trusted and zero otherwise. Variable two which is labeled tolerance and respect for other people is based on the question: *“Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.”* Respondents could choose from 17 child qualities and one of them is tolerance and respect for other people. Variables 3, 4 and 5 are based on the same question since they represent other child qualities considered to be important. Variable three represents *“thrift saving money and things”*, variable 4 *“hard work”* and variable 5 *“determination”*.

Variable 6 and 7 can approximate honesty and the attitude towards corruption that are also emphasized as important for economic outcomes. They are both based on the question: *“Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card.”* Answers are in the range 1 – 10, with 1 = never justifiable and 10 = always justifiable. Variable 6 represents *“cheating on taxes if you have a chance”* and variable 7 *“someone accepting a bribe in the course of their duties”*.

Attitudes towards the market include variables 8, 9, 10 and 11. Variable 8 labeled confidence in major companies is based on the following question: *“I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: 1 - is it a great deal of confidence, 2 - quite a lot of confidence, 3 - not very much confidence or 4 - none at all?”* And confidence in major companies represents one of the institutions mentioned. Variables 9 labeled firms and freedom, 10 labeled private vs state ownership of business and 11 labeled income inequality are based on the question: *“Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between.”* Statements on the one side are the opposite of the statements on the other, which is why the statements reported further are only those on the left side. Variable 9

represents the statement “*State should give more freedom to firms*”, variable 10 “*Private ownership of business should be increased*” and variable 11 “*Incomes should be made more equal*”. Last variable number 12 refers to the attitude towards women and is based on the following question: “*Do you agree or disagree with the following statements? When jobs are scarce, men should have more right to a job than women.*” Possible answers are 1 agree, 2 disagree, 3 neither. Fortunately the answer 3 neither is not numerous and to put it together with either answer 1 agree or 2 disagree does not bring significant changes in results compared to the case if the analysis is limited to the observations where respondents answered 1 agree or 2 disagree. In this analysis the answer number 3 “neither” is merged with the first category, i.e. answer 1 “agree” because it is more probable that people who do not follow the mainstream convention in the modern developed world about equality for men and women choose the noncommittal response. Also, the descriptive results in Protestant, Muslim, Catholic and Orthodox countries support this statement. But, as was emphasized before, the third category is not numerous enough to bring significant differences if you merge the third category with either first or second one compared to the case if the analysis is restricted only to the observations where respondents answer either “agree” or “disagree”.

Table 3 reports the distribution of population by religious denominations and country. Religious denomination is based on the question: “*Do you belong to a religious denomination? If yes: which one?*”. Religion denomination is the explanatory variable of the main interest in this research. The shares of religious denominations on the population of the country are used in the second part of the research when taking into account dominant religion of the country. They are based on the mentioned question from WVS rather than on other sources such as U.S. Central Intelligence Agency (CIA) factbook. But the results in the table were checked with the reports of CIA factbook and World Christian Encyclopedia and there are significant differences using different sources of data for some countries such as China, the Czech Republic or Nigeria. But such countries were excluded from the analysis anyway on the basis that they do not fulfill the condition for dominant religion of the country. In this paper, only countries where more than 50 percent of the population belongs to the same religious denomination are considered as countries with a dominant religion. The fourth wave includes 71 countries or regions and this full sample containing 102 264 observations of individuals was used in the first part of the analysis that does not deal with the distribution of population by religious denominations in the country. The second part of the analysis works only with the countries fulfilling the condition for dominant religion of the country. Countries or regions included in the second

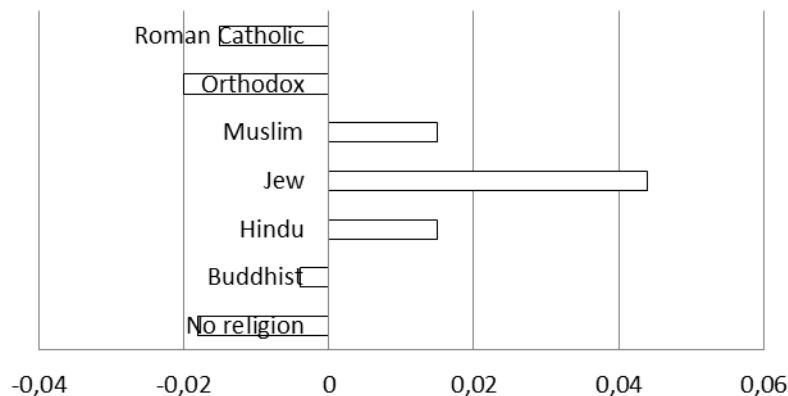
part of analysis are reported in the table 3, the excluded countries are: Algeria, Bosnia and Herzegovina, Belarus, Canada, China, the Czech Republic, Estonia, Germany, Hungary, Japan, Korea, Latvia, Morocco, Netherlands, Nigeria, Russian Federation, Singapore, Vietnam, South Africa, Zimbabwe, Uganda, Ukraine, Tanzania, United States, Northern Ireland.

Other control variables include gender, age, educational and income level and country-fixed effects. Table 2 reports the socio-demographic characteristics of the respondents. “Female” is an indicator variable equal to one if the respondent is male and two if it is a female. “Age” is expressed in years. “Education” is a three level index recoded from the highest educational level attained on a country basis. “Income” is a three level index recoded from the question: *“Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come in. Just give the letter of the group your household falls into, before taxes and other deductions.”* (Income categories are coded by deciles for each society, 1 = lowest decile, 10 = highest decile).

3. The impact of different religious denominations and socio-demographic factors

The results (table 4 and 5) show that different religious denominations do not play a role in explaining the differences in generalized trust, tolerance and respect for other people, thrift and attitudes towards freedom of firms and inequality of incomes. The results are surprising, especially in the case of generalized trust because greater trust is emphasized most frequently as the positive factor for better economic outcomes and is mostly ascribed to Protestants. Coefficients of different religions show that there are no statistically significant differences between Protestant and other religious categories in generalized trust and Muslims, Jews and Hindus record even greater trust.

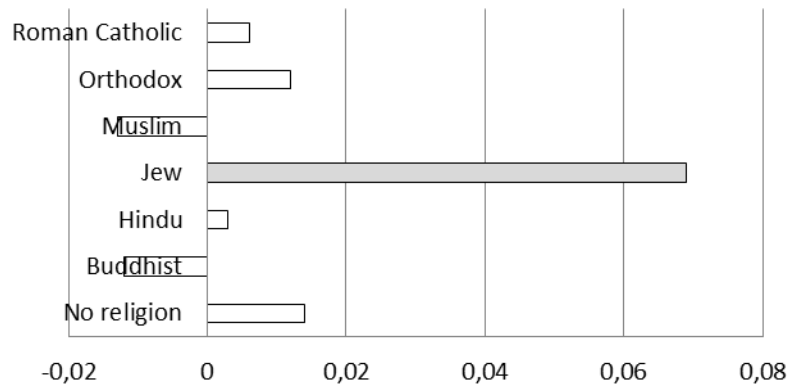
Figure 1 Generalized trust



Note: The results in figures 1 to 12 show regression coefficients for religious categories. Protestants represent the base category to which others are compared. White bars represent statistically insignificant differences between Protestants and certain religions; grey represents significance at the 5 percent level; light grey at the 10 percent level and dark grey at the 1 percent level.

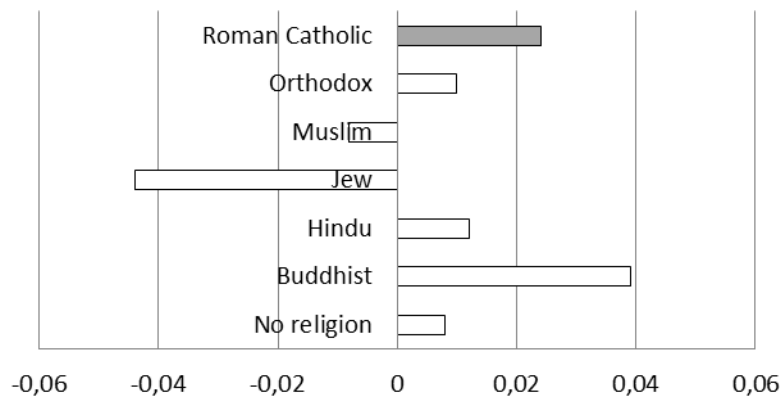
Referring to tolerance and respect for other people, only Jews are significantly more tolerant than Protestants (but only at the 10 percent level). Except Muslims and Buddhists, other religious categories also record greater tolerance although statistically insignificant.

Figure 2 Tolerance and respect for other people

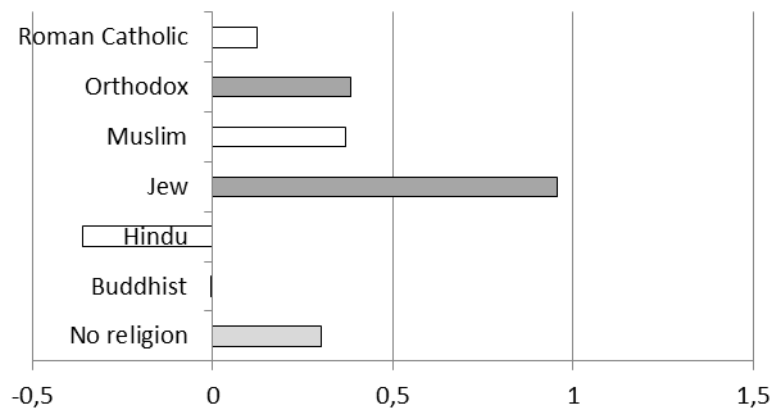


Thrift is significantly greater than Protestants only among Catholics at the 5 percent level. Other religious categories - except Muslims and Jews - tend to be more thrifty, though not significantly.

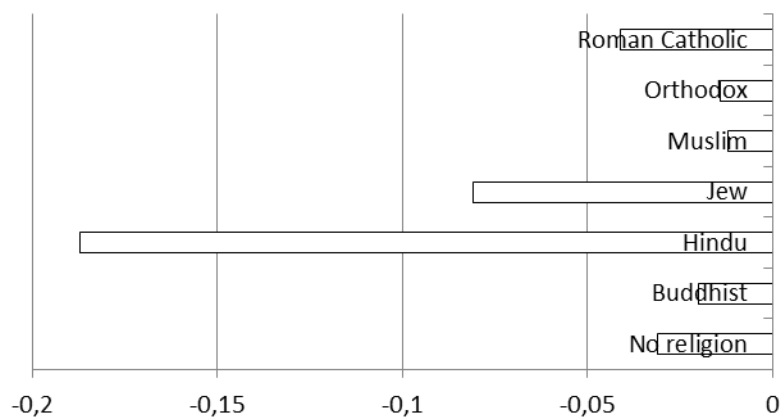
Figure 3 Thrift



Attitudes towards state control of firms are significantly higher among Jews, Orthodox and nonreligious people compared to Protestants. Unfortunately this question was asked only in 33 countries, excluded from which was the majority of Muslim countries. Only results for Hindus and Buddhists show a greater tendency towards freedom of firms (but statistically insignificant).

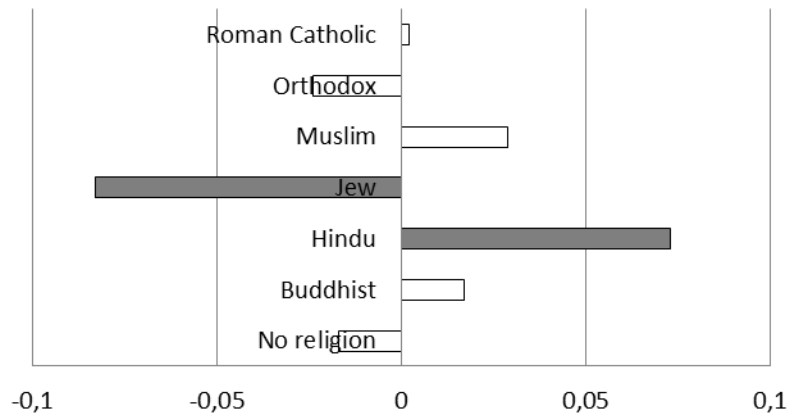
Figure 4 Firms and freedom

All religious categories tend to be more in favor of income equality compared to Protestants but differences are not statistically significant.

Figure 5 Income inequality

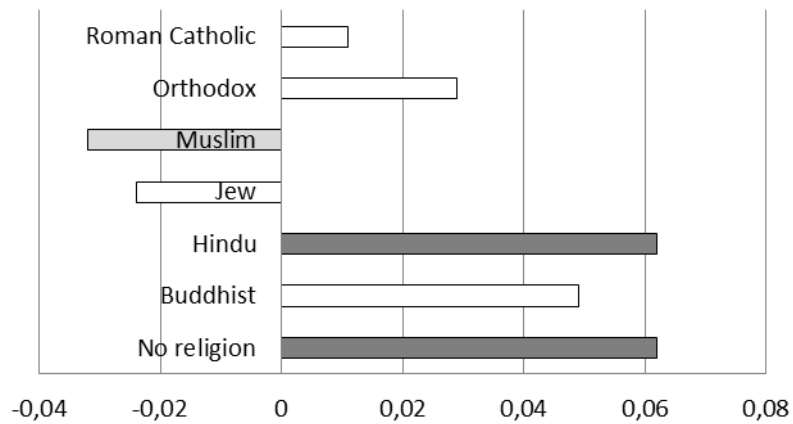
For the rest of researched attitudes (i.e. hard work, determination, attitudes towards women, cheating on taxes, accepting a bribe, confidence in major companies, state ownership of business) religion is an important factor since the test of the overall impact of religion is statistically significant for those attitudes. Attitude towards hard work is significantly lower for Jewish and higher for Hindu compared to Protestant category.

Figure 6 Hard work

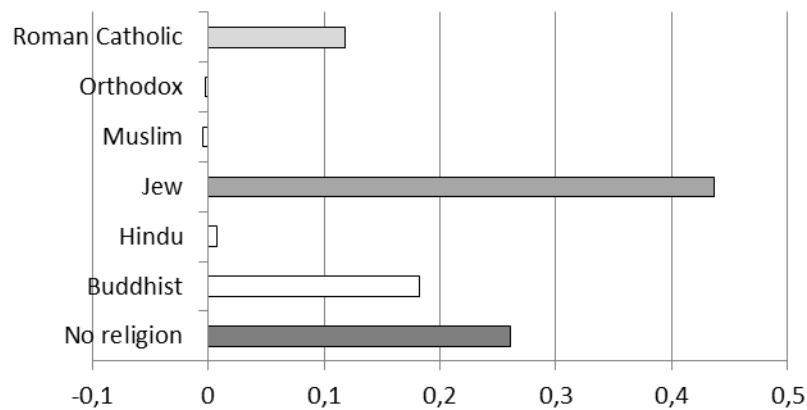


Determination is lower for Muslims (at the 10 percent level) and significantly higher for Hindus and people without religion.

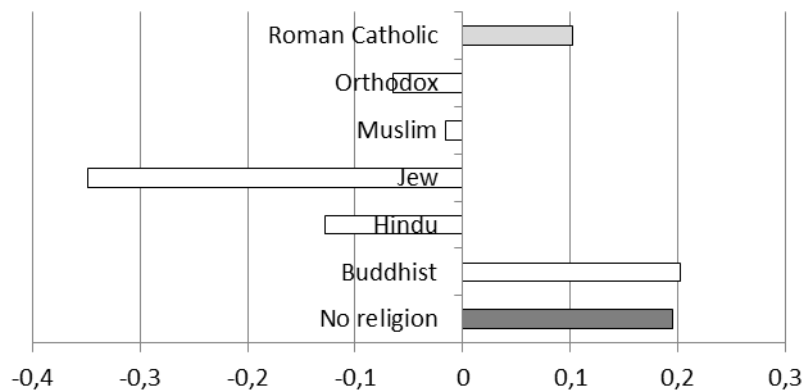
Figure 7 Determination



Cheating on taxes is more justifiable among Jew, Roman Catholics and people without religion than Protestants. Only Orthodox and Muslim categories tend to justify cheating on taxes less than Protestants but the differences are small and not statistically significant.

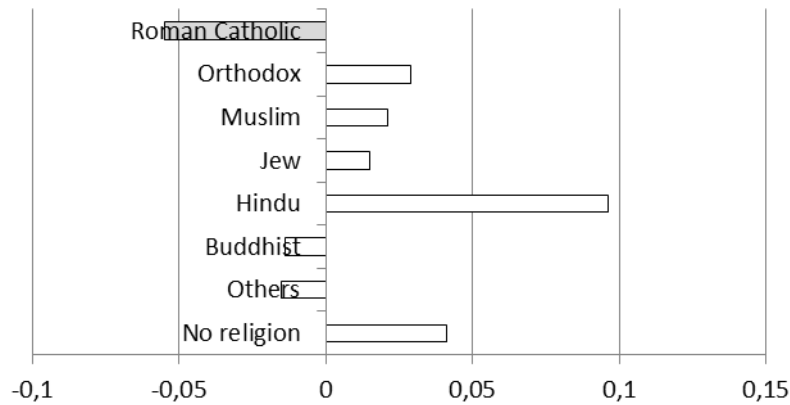
Figure 8 Justifiable cheating on taxes

Accepting a bribe is significantly more justifiable among Catholics (but only at the 10 percent level) and people without religion than Protestants. Orthodox, Jews, Muslims and Hindus tend to justify accepting a bribe less than Protestants but the results are not statistically significant.

Figure 9 Justifiable accepting a bribe

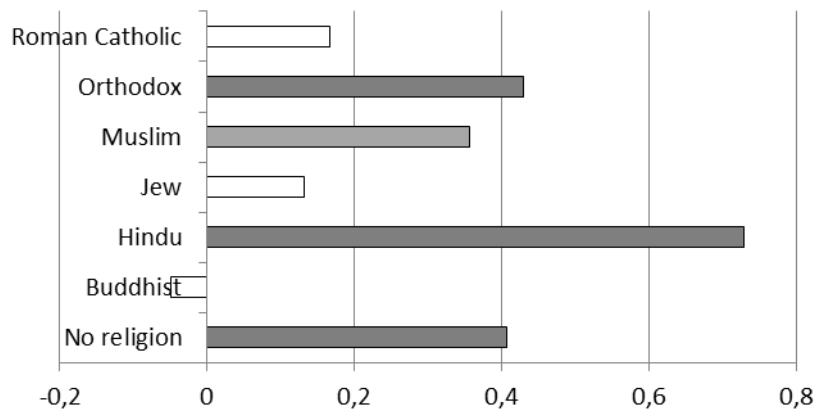
Confidence in major companies can be explained by religion too since the overall impact of religion is significant. However, only Catholics have significantly greater confidence in major companies compared to Protestants although only at the 10 percent level. Muslim category indicates lower confidence (although not statistically significant) as supposed by (Kuran 2011).

Figure 10 Confidence in major companies

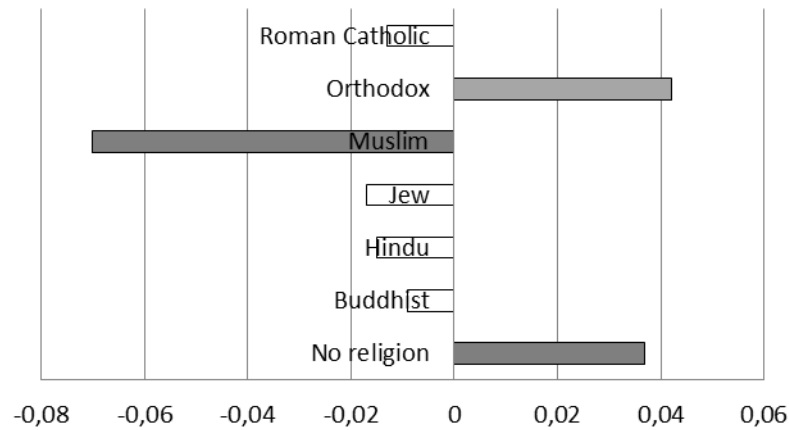


Orthodox, Hindus, Muslims and people without religion would prefer more government ownership of firms compared to Protestants, other religious denominations are not significantly different from Protestants.

Figure 11 State ownership of business



Attitude towards women differs significantly according to religion. Among Muslims there is greater agreement about men having more right to a job than women when jobs are scarce. On the other hand, Orthodox and people without religion are significantly more progressive regarding gender issues than Protestants. All other religious categories tend to be more conservative in the attitudes towards women but the results are not statistically significant.

Figure 12 Men more right to a job

Socio-demographic factors

Gender plays a role in almost all attitudes except thrift and confidence in major companies. Women have lower trust in other people, lower attitudes towards hard work and determination, are more tolerant and respectful, are less willing to justify cheating on taxes, less willing to justify someone accepting a bribe and tend to prefer a more regulated economy (higher state control and ownership of business, income equality). And they are of course more in favor of attitude towards women.

Age is also significant in the majority of evaluated attitudes. Age does not seem to be important in the case of tolerance and respect for other people, confidence in major companies, attitudes towards state ownership of business and income inequality. On the other hand, higher age is connected with higher trust, higher thrift, higher attitudes towards hard work and lower determination. Older people tend to be less willing to justify cheating on taxes, someone accepting a bribe and prefer higher state control of firms. They are also more conservative regarding the attitude towards women. Although the results are in line with assumptions, age is not necessarily only a signal of aging but also the indicator of changing values and attitudes over time that can be caused by changes in religions or country specific factors like institutions and economic development of the countries.

Educational and income level may pose endogeneity problems especially in some attitudes such as attitudes towards hard work or determination. The results thus indicate correlations rather than causal effects. Higher educational level is connected with higher trust, more tolerance and respect for other people, higher determination, but lower thrift and lower attitudes towards hard work. More educated people are also less willing to justify cheating on taxes or someone accepting

a bribe, trust major companies less and are more in favor of liberal markets and same rights regarding gender.

Higher income level is correlated with higher trust, higher tolerance, higher determination, higher confidence in major companies, higher attitudes towards liberal markets and more progressive attitudes towards women. On the other hand, higher income level is connected with lower thrift and lower attitudes towards hard work.

4. The impact of dominant religion on differences among religious denominations

It is interesting to see whether differences between Protestants and people of other religious denominations vary in Protestant-dominant countries and those where Protestants represent a minority religion. Tables 6 - 11 report the differences among religious denominations in dependence on the dominant religion of the country. The regressions were carried out for Protestant, Catholic, Orthodox and Muslim-dominated countries. Other religious denominations were not considered since they are dominant either only in one country or in no country.

The previous analysis showed that Protestants do not report significant differences compared to other religious denominations in 5 of 12 researched attitudes - generalized trust, tolerance and respect for other people, thrift and attitudes towards freedom of firms and inequality of incomes. However, when controlling for dominant religion of the country, results show significant differences among some religious denominations in the observed subgroups of countries. For example, Catholics, Muslims and Buddhists report lower trust in other people compared to Protestants in Muslim countries. Trust is also significantly lower for Jews in Protestant countries. To sum up, when there is a significant difference between Protestants and other religious denominations, it is in favor of higher trust in the Protestant category.

On the other hand, the analysis controlling for the dominant religion of the country did not prove that Protestants would be necessarily stronger in attitudes conducive to economic growth in Protestant-dominant countries. Referring to tolerance and respect for other people Jews are significantly less tolerant than Protestants but Muslims show greater tolerance compared to Protestants in Protestant countries. In the case of thrift, Buddhists and Catholics are less thrifty but Jews more than Protestants. Hard work is less emphasized in upbringing among Buddhists and Jews but other religions do not differ to Protestants. Determination is more stressed among people without religion and Hindus but less among Jews. In the attitude towards cheating on taxes there is no significant difference between religious categories and only Jews justify accepting a bribe significantly more than Protestants in Protestant countries. In the attitudes towards market the

results show the highest differences between religions. In the case of confidence in major companies Hindus are more confident but Jews and people without religion tend to trust major companies less. Buddhists and Orthodox are more in favor of freedom of firms than Protestants but Jews report the opposite attitude. Catholics and Hindus prefer higher state ownership of business but Orthodox would support opposite. Buddhists, Hindus, Jews and people without religion would prefer higher income equality than Protestants. On the other hand, Muslims and Orthodox are more for larger income differences than Protestants in Protestant countries. In the case of attitudes towards women only Jews appear to be more conservative than Protestants and believe that men should have more right to a job when jobs are scarce. The problem of the analysis of the impact of dominant religion lies in the low number of observations in some religious categories in the subgroups of countries. But it is not possible to expect more people of other religions in the countries where more than 50 percent of the population belongs to the same religious denomination. The results are thus the most reliable for Protestants and Catholics in Protestant and Catholic-dominated countries where there is a sufficient number of observations in each religious category. There are no statistically significant differences between Protestants and Catholics in Protestant and Catholic-dominated countries in ten of twelve research attitudes. Catholics are only less thrifty and more for state ownership of business than Protestants in Protestant countries and do not differ in Catholic ones.

To sum up, the data shows that generally there are differences in values and attitudes between Protestants and other religious denominations when taking into account dominant religion of a country. However, the differences in values and attitudes among religious denominations in Protestant, Catholic, Orthodox and Muslim countries are not necessarily only caused by the dominance of some religion but also by the level of economic development, institutions and other aspects of the country. This is because the country's fixed effects are valid only for the subgroup of the countries with the same dominant religion and these countries are significantly correlated with the level of economic development and the range of democratic institutions especially in the case of Protestant and Muslim countries.

Socio-demographic factors in Protestant, Catholic, Orthodox and Muslim countries show differences in the relevancy and also in the trend which, in the case of age, may indicate that age does not need to represent the pattern of aging but changes in values and attitudes over time in the observed subgroups of countries. More research needs to be done to prove this hypothesis.

Conclusions

This paper investigates the impact of different religious denominations on values and attitudes. The aim was to find out if Protestants differ significantly from other religions in values and attitudes considered conducive to economic development. The analysis, based on the model using, apart from religious denominations, other socio-demographic controls and country-fixed effects, was divided into two parts. The first part examined the overall impact of religious denominations on the sample of 71 countries containing 102 264 observations of individuals. The second part controlled also for the dominant religion of the country and the differences in values and attitudes among religious denominations were evaluated separately for the Protestant, Catholic, Orthodox and Muslim-dominated countries.

The first part of the analysis showed that Protestants do not report significant differences compared to other religious denominations in 5 out of the 12 researched attitudes - generalized trust, tolerance and respect for other people, thrift and attitudes towards freedom of firms and inequality of incomes. The results are surprising especially in the case of generalized trust because this attitude is emphasized the most often as the factor influencing different economic outcomes and is more pronounced in favor of Protestants.

The analysis of other values and attitudes does not prove that Protestants have definitely better attitudes relating to economic outcomes. Referring to attitudes towards hard work, only Jews consider hard work less important and Hindus even more than Protestants. Determination is lower for Muslims (at the 10 percent level) and significantly higher for Hindus and people without religion. Some attitudes are more in line with assumptions like cheating on taxes which is more justifiable among Jews and Roman Catholics (at the 10 percent level) and people without religion; accepting a bribe is also more justified among Catholics (at the 10 percent level) and people without religion; Muslims, Orthodox and Hindus prefer more government ownership of firms and Muslims are also more conservative in attitudes towards women. Confidence in major companies did not prove the statement supposed by (Kuran 2011) that Muslims have lower trust in them.

When controlling for dominant religion of the country, results show significant differences among some religious denominations in the observed subgroups of countries. For example, in the case of trust, if

there is a significant difference between Protestants and other religious denominations in the subgroups of countries, it is in favor of higher trust in Protestant category. When it comes to other attitudes, Protestants do not prove to be definitely stronger in attitudes conducive to economic growth even in Protestant-dominant countries.

In summary, neither overall analysis nor analysis with the control for dominant religion proved the hypothesis that Protestants have significantly higher values and attitudes that are considered beneficial for economic development compared to other religious denominations.

Although socio-demographic factors in the first part of the analysis give results mostly in accordance with assumptions, there are some interesting results. Higher education and income level is correlated with lower thrift and lower attitude towards hard work. Socio-demographic factors in Protestant, Catholic, Orthodox and Muslim countries show differences in the relevancy and also in the trend which in the case of age can indicate that age does not need to represent the pattern of aging but the changes of values and attitudes over time in the observed subgroups of countries. This might be a further step in researching the differences in values and attitudes among religions: Have attitudes changed over time in the individual religions or in the countries with specific dominant religion? Were Protestant values and attitudes more in favor of economic outcomes compared to other religions in times when Weber wrote his article?

References

- Acemoglu, Daron. *Introduction to Modern Economic Growth*. Princeton, NJ: Princeton University Press, 2008.
- Acemoglu, Daron, Simon Johnson, a James A. Robinson. „The Colonial Origins of Comparative Development: An Empirical Investigation.“ *American Economic Review* 91 (2001): 1369-1404.
- Barro, Robert J., a Rachel M. McCleary. „Religion and Economic Growth Across Countries.“ *American Sociological Review* 68, n. 5 (2003): 760-781.
- Becker, Sascha O., a Ludger Woessmann. „Was Weber Wrong? A Human Capital Theory of Protestant Economic History.“ *Quarterly Journal of Economics* 124, n. 2 (2009): 531-596.
- Blum, Ulrich, a Leonard Dudley. „Religion and Economic Growth: Was Weber Right?“ *Journal of Evolutionary Economics* 11, n. 2 (2001): 207-230.
- Botticini, Maristella, a Zvi Eckstein. „Jewish Occupational Selection: Education, Restrictions, or Minorities?“ *Journal of Economic History* 65, n. 4 (2005).
- Grier, Robin. „The Effect of Religion on Economic Development: A Cross-National Study of 63 Former Colonies.“ *Kyklos* 50, n. 1 (1997): 47-62.
- Guiso, Luigi, Paola Sapienza, a Luigi Zingales. „Does Culture Affect Economic Outcomes?“ *Journal of Economic Perspectives* 20, n. 2 (2006): 23-48.
- Guiso, Luigi, Paola Sapienza, a Luigi Zingales. „People's Opium? Religion and Economic Attitudes.“ *NBER Working Paper*, 2002: 1-70.
- Huntington, Samuel P. *The Clash of Civilizations and the Remaking of World Order*. New York: Touchstone, 1997.
- Inglehart, Ronald. „Trust, well-being and democracy.“ V *Democracy and Trust*, autor: Mark Warren, 88-120. Cambridge: Cambridge University Press, 1999.
- Kuran, Timur. *The Economic Predicaments of Islamism*. Princeton, NJ: Princeton University Press, 2005.
- . *The Long Divergence: How Islamic Law Held Back the Middle East*. Princeton, NJ: Princeton University Press, 2011.
- La Porta, Rafael, Florencio Lopez-De-Silanes, Andrei Shleifer, a Robert W. Vishny. „Trust in Large Organizations.“ *American Economic Review* 87, n. 2 (1997): 333-338.
- Landes, David S. *The Wealth and Poverty of Nations: Why Some Are So Rich and Others So Poor?* New York: W. W. Norton, 1998.

- Leonardi, Roberto, Raffaella Y. Nanetti, a Robert D. Putnam. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press, 1993.
- North, Douglass C. *Structure and Change in Economic History*. New York: W. W. Norton, 1981.
- Samuelsson, Kurt. *Religion and Economic Action: The Protestant Ethic, the Rise of Capitalism, and the Abuses of Scholarship*. Toronto: University Toronto Press, 1993.
- Tabellini, Guido. „Culture and Institutions: Economic Development in the Regions of Europe.“ *Journal of the European Economic Association* 8, n. 4 (2010): 677-716.
- Tabellini, Guido. „Institutions and Culture.“ *Journal of the European Economic Association* 6, n. 2-3 (2008): 255-294.
- Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. London: Unwin Hyman, 1930.

India	0,00	2,95	0,00	0,25	10,84	0,00	1,40	72,23	4,35
Indonesia	0,00	6,47	0,00	0,00	92,53	0,00	0,00	0,00	0,50
Iran	0,00	0,95	0,00	0,00	97,04	0,00	0,00	0,00	0,67
Iraq	0,00	0,22	0,13	0,00	60,99	12,13	0,00	0,00	25,94
Ireland	1,98	88,83	0,20	0,00	0,00	0,00	0,00	0,10	1,78
Israel	0,00	3,25	0,00	85,32	9,51	0,00	0,00	0,00	1,83
Italy	0,30	81,15	0,05	0,00	0,00	0,00	0,00	0,00	0,25
Jordan	0,00	4,34	0,00	0,00	95,58	0,00	0,00	0,00	0,08
Kyrgyzstan	1,34	0,38	7,48	0,77	74,30	0,00	0,19	0,10	0,29
Lithuania	1,28	74,56	2,95	0,00	0,00	0,00	0,10	0,00	1,08
Luxembourg	0,17	63,83	0,41	0,58	0,58	0,00	0,00	0,00	2,64
Malta	0,90	97,70	0,00	0,00	0,00	0,00	0,00	0,00	0,10
Mexico	1,43	72,31	0,00	0,13	0,00	0,00	0,07	0,13	4,89
Moldova	1,19	2,68	87,30	1,19	0,00	0,00	0,00	0,00	0,40
Norway	84,12	1,06	0,71	0,00	0,62	0,00	0,09	0,00	3,73
Pakistan	0,00	0,00	0,00	0,00	0,00	53,35	0,00	0,00	17,50
Peru	0,00	82,35	0,00	0,20	0,00	0,00	0,20	0,00	11,06
Philippines	1,86	72,53	0,00	0,00	3,21	0,00	0,00	0,00	10,74
Poland	0,27	93,97	0,27	0,00	0,09	0,00	0,00	0,00	0,73
Portugal	0,30	85,60	0,00	0,00	0,00	0,00	0,00	0,00	2,40
Puerto Rico	13,19	57,22	0,00	1,39	0,00	0,00	3,47	0,00	12,36
Romania	2,01	7,42	84,73	0,00	0,00	0,00	0,00	0,00	2,44
Saudi Arabia	0,00	0,00	0,00	0,00	97,00	0,00	0,00	0,33	2,26
Slovakia	11,19	64,16	0,83	0,23	0,00	0,00	0,00	0,00	0,53
Slovenia	0,30	66,10	1,59	0,00	1,09	0,00	0,00	0,00	0,60
Spain	0,75	80,82	0,04	0,04	0,17	0,00	0,08	0,04	0,54
Sweden	68,87	1,58	0,49	0,00	0,39	0,00	0,00	0,39	2,96
Turkey	0,00	0,24	0,02	0,07	96,81	0,00	0,00	0,00	0,20
Macedonia	0,38	0,28	59,43	0,09	25,21	0,00	0,00	0,00	0,19
Egypt	0,00	0,00	0,00	0,00	94,33	0,00	0,00	0,00	5,63
Great Britain	56,60	13,60	0,20	0,60	0,90	0,00	0,60	0,50	10,80
Venezuela	6,67	65,58	0,00	0,00	0,00	0,00	0,08	0,00	0,25
Serbia and Montenegro	0,27	5,88	74,38	0,09	12,12	0,00	0,04	0,00	1,33

Table 4 Religious denominations and values and attitudes

	Generalized trust	Tolerance and re- spect for others	Thrift	Hard work	Determination	Men more right to a job
<i>Religion: b Protestant</i>						
No religion	-0.018 (0.011)	0.014 (0.010)	0.008 (0.012)	-0.017 (0.013)	0.062*** (0.010)	0.037*** (0.012)
Others	-0.003 (0.016)	-0.003 (0.014)	0.004 (0.010)	0.020* (0.010)	-0.015 (0.013)	-0.010 (0.015)
Buddhist	-0.004 (0.016)	-0.012 (0.016)	0.039 (0.031)	0.017 (0.033)	0.049 (0.029)	-0.009 (0.030)
Hindu	0.015 (0.023)	0.003 (0.014)	0.012 (0.050)	0.073*** (0.024)	0.062*** (0.019)	-0.015 (0.026)
Jew	0.044 (0.042)	0.069* (0.037)	-0.044 (0.043)	- 0.083*** (0.029)	-0.024 (0.022)	-0.017 (0.034)
Muslim	0.015 (0.017)	-0.013 (0.014)	-0.008 (0.018)	0.029 (0.026)	-0.032* (0.019)	- 0.070*** (0.021)
Orthodox	-0.020 (0.017)	0.012 (0.020)	0.010 (0.015)	-0.024 (0.025)	0.029 (0.025)	0.042** (0.018)
Roman Catholic	-0.015 (0.015)	0.006 (0.011)	0.024** (0.010)	0.002 (0.011)	0.011 (0.013)	-0.013 (0.014)
<i>Female</i>	-0.008** (0.003)	0.035*** (0.004)	-0.0003 (0.005)	- 0.036*** (0.006)	-0.021*** (0.006)	0.111*** (0.009)
<i>Age</i>	0.001*** (0.0002)	-0.0001 (0.0001)	0.002*** (0.0002)	0.002*** (0.0002)	-0.001*** (0.0002)	- 0.003*** (0.0003)
<i>Education</i>	0.042*** (0.010)	0.026*** (0.005)	- 0.054*** (0.006)	- 0.029*** (0.005)	0.055*** (0.005)	0.078*** (0.008)
<i>Income</i>	0.021*** (0.004)	0.011*** (0.003)	- 0.017*** (0.004)	- 0.011*** (0.004)	0.031*** (0.003)	0.034*** (0.004)
Constant	0.159*** (0.025)	0.617*** (0.015)	0.412*** (0.016)	0.579*** (0.018)	0.240*** (0.021)	1.342*** (0.027)
Observations	81,619	83,438	83,440	81,198	81,184	81,780
Number of countries/regions	69	68	68	67	67	68
Adjusted R- squared	0.008	0.004	0.016	0.013	0.020	0.055
Overall impact of religion (Prob > F)	0.3002	0.2152	0.1588	0.0000	0.0000	0.0000

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5 Religious denominations and values and attitudes (cont.)

	Justifiable cheating on taxes	Justifiable accepting a bribe	Confidence in major companies	Firms and free- dom	State ow- nership of business	Inequality of income
<i>Religion: b Pro-</i>						
<i>testant</i>						
No religion	0.261*** (0.065)	0.195*** (0.055)	0.041 (0.030)	0.301* (0.149)	0.407*** (0.107)	-0.031 (0.065)
Others	-0.069 (0.075)	0.020 (0.083)	-0.015 (0.039)	0.113 (0.158)	0.183 (0.194)	0.066 (0.072)
Buddhist	0.182 (0.166)	0.202 (0.130)	-0.014 (0.033)	-0.003 (0.770)	-0.049 (0.219)	-0.020 (0.111)
Hindu	0.008 (0.271)	-0.128 (0.325)	0.096 (0.075)	-0.359 (0.859)	0.729*** (0.218)	-0.187 (0.150)
Jew	0.436** (0.175)	-0.348 (0.312)	0.015 (0.049)	0.956** (0.363)	0.132 (0.182)	-0.081 (0.226)
Muslim	-0.004 (0.116)	-0.016 (0.066)	0.021 (0.040)	0.369 (0.239)	0.356** (0.170)	-0.012 (0.104)
Orthodox	-0.002 (0.120)	-0.065 (0.067)	0.029 (0.046)	0.384** (0.165)	0.429*** (0.138)	-0.014 (0.093)
Roman Catholic	0.118* (0.061)	0.102* (0.060)	-0.055* (0.032)	0.125 (0.110)	0.166 (0.111)	-0.041 (0.068)
<i>Female</i>	-0.249*** (0.025)	-0.132*** (0.015)	0.007 (0.014)	0.297*** (0.035)	0.388*** (0.033)	- (0.129***)
<i>Age</i>	-0.018*** (0.002)	-0.011*** (0.001)	0.001 (0.001)	0.009*** (0.002)	0.002 (0.002)	-0.002 (0.002)
<i>Education</i>	-0.075*** (0.024)	-0.088*** (0.018)	0.028*** (0.009)	- (0.045)	-0.306*** (0.043)	0.306*** (0.041)
<i>Income</i>	0.015 (0.018)	-0.011 (0.020)	-0.040*** (0.009)	- (0.026)	-0.306*** (0.041)	0.258*** (0.030)
Constant	3.104*** (0.089)	2.350*** (0.075)	2.597*** (0.038)	5.880*** (0.169)	5.773*** (0.175)	4.907*** (0.122)
Observations	75,639	80,522	57,479	32,386	65,131	72,197
Number of countries/regions	66	69	51	33	56	60
Adjusted R- squared	0.022	0.016	0.002	0.028	0.026	0.016
Overall impact of religion (Prob > F)	0.0000	0.0000	0.0093	0.1421	0.0000	0.6157

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: justifiable cheating on taxes, justifiable accepting a bribe: the scale of responses - 1 = never justifiable, 10 = always justifiable

confidence in major companies: the scale of responses - 1 = a great deal, 4 = none at all

firms and freedom - 1 = state should give more freedom to firms, 10 = state should control firms more effectively

state ownership of business - 1 = private ownership of business should be increased, 10 = government ownership of business should be increased

income inequality - 1 = incomes should be made more equal, 10 = we need larger income differences as incentives

Table 6 The role of dominant religion – generalized trust and tolerance and respect for others

	Generalized trust				Tolerance and respect for other people			
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox	Muslim
<i>Religion: b Protestant</i>								
No religion	-0.001 (0.025)	0.012 (0.023)	-0.119 (0.151)	-0.180 (0.102)	0.022 (0.018)	-0.015 (0.018)	-0.030 (0.089)	0.036 (0.043)
Others	0.014 (0.025)	0.024 (0.024)	-0.084 (0.195)	-0.311** (0.107)	0.023 (0.031)	-0.017 (0.035)	-0.184* (0.078)	-0.053 (0.058)
Buddhist	0.024 (0.026)	0.011 (0.050)		- (0.082)	0.027 (0.188)	-0.055 (0.046)		0.048 (0.045)
Hindu	0.100 (0.308)	0.151 (0.167)		-0.184 (0.103)	0.016 (0.141)	0.184*** (0.025)		-0.078* (0.040)
Jew	- 0.336*** (0.017)	0.076 (0.047)	-0.165 (0.149)	-0.098 (0.123)	- 0.075*** (0.013)	0.014 (0.034)	0.011 (0.078)	0.127* (0.066)
Muslim	-0.269 (0.188)	-0.003 (0.047)	-0.020 (0.158)	-0.220* (0.103)	0.174*** (0.020)	0.102*** (0.023)	-0.058 (0.081)	-0.036 (0.050)
Orthodox	-0.015 (0.173)	-0.053 (0.046)	-0.128 (0.159)	-0.204 (0.124)	-0.018 (0.020)	-0.033 (0.042)	-0.078 (0.085)	0.061 (0.037)
Roman Catholic	-0.034 (0.069)	0.017 (0.021)	-0.039 (0.139)	-0.235* (0.125)	0.025 (0.038)	-0.003 (0.014)	-0.142* (0.065)	-0.010 (0.056)
<i>Female</i>	0.006 (0.016)	-0.017** (0.007)	- (0.005)	-0.010* (0.005)	0.078*** (0.010)	0.036*** (0.006)	0.031*** (0.006)	0.022*** (0.006)
<i>Age</i>	-0.0002 (0.001)	0.001*** (0.0002)	0.001* (0.0004)	0.001** (0.0003)	-0.0001 (0.0004)	-0.0004* (0.0003)	0.0003 (0.001)	0.0003 (0.0002)
<i>Education</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.253*** (0.039)	-0.021 (0.041)	0.154 (0.179)	0.558*** (0.129)	0.640*** (0.049)	0.629*** (0.022)	0.651*** (0.074)	0.691*** (0.062)
Observations	5,109	22,076	4,509	17,146	5,254	21,677	4,726	18,041
Number of countries/regions	6	21	5	10	6	20	5	10
Adjusted R-squared	0.058	0.023	0.012	0.004	0.026	0.008	0.002	0.001

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7 The role of dominant religion – thrift and attitude towards women

	Thrift				Men more right to a job			
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox	Muslim
<i>Religion: b Protestant</i>								
No religion	-0.026 (0.022)	0.001 (0.032)	-0.088** (0.031)	0.014 (0.022)	-0.010 (0.015)	0.083*** (0.016)	-0.016 (0.051)	0.095 (0.079)
Others	-0.026 (0.033)	0.030 (0.034)	- 0.205*** (0.034)	0.000 (0.044)	-0.032 (0.043)	0.023 (0.016)	-0.219 (0.145)	-0.055 (0.075)
Buddhist	- 0.241*** (0.035)	-0.012 (0.050)		-0.091** (0.037)	0.077 (0.248)	0.018 (0.054)		0.224 (0.140)
Hindu	-0.063 (0.198)	-0.074 (0.204)		-0.034 (0.031)	-0.059 (0.112)	-0.082 (0.263)		-0.075 (0.043)
Jew	0.171*** (0.008)	-0.017 (0.047)	-0.037 (0.098)	-0.056 (0.262)	- 0.196*** (0.015)	-0.014 (0.065)	-0.147 (0.138)	-0.107 (0.061)
Muslim	-0.053 (0.068)	0.015 (0.041)	-0.169 (0.097)	-0.001 (0.021)	-0.207 (0.201)	-0.071 (0.120)	-0.099* (0.042)	-0.099* (0.048)
Orthodox	-0.035 (0.098)	0.077* (0.038)	-0.095 (0.079)	0.046 (0.047)	-0.084 (0.097)	0.044 (0.065)	-0.045 (0.050)	0.070 (0.068)
Roman Catholic	- 0.083*** (0.020)	0.034 (0.028)	-0.048 (0.100)	-0.001 (0.041)	0.011 (0.037)	0.015 (0.021)	-0.026 (0.053)	-0.089 (0.072)
<i>Female</i>	-0.021** (0.008)	-0.001 (0.007)	0.001 (0.019)	0.007 (0.018)	0.054** (0.016)	0.098*** (0.013)	0.124*** (0.012)	0.107*** (0.022)
<i>Age</i>	0.005*** (0.0005)	0.002*** (0.0003)	0.001 (0.001)	0.001* (0.001)	-0.003** (0.001)	- 0.004*** (0.0005)	-0.002** (0.0005)	-0.001* (0.0003)
<i>Education</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.150*** (0.020)	0.441*** (0.036)	0.559*** (0.081)	0.316*** (0.025)	1.851*** (0.020)	1.402*** (0.035)	1.206*** (0.062)	1.091*** (0.109)
Observations	5,254	21,676	4,726	18,041	5,202	22,320	4,612	17,774
Number of countries/regions	6	20	5	10	6	21	5	10
Adjusted R-squared	0.058	0.026	0.011	0.002	0.051	0.075	0.067	0.050

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8 The role of dominant religion – hard work and determination

	Hard work				Determination			
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox	Muslim
<i>Religion: b Protestant</i>								
No religion	0.031 (0.035)	-0.026 (0.025)	0.003 (0.110)	-0.260** (0.086)	0.045** (0.013)	0.019 (0.032)	0.092 (0.080)	0.061 (0.127)
Others	-0.064* (0.030)	0.019 (0.025)	-0.006 (0.104)	-0.150** (0.056)	-0.115** (0.039)	-0.064* (0.037)	0.127 (0.096)	-0.030 (0.125)
Buddhist	- 0.336*** (0.076)	0.114** (0.049)		0.064*** (0.005)	-0.113 (0.057)	-0.048 (0.060)		-0.069 (0.144)
Hindu		0.150 (0.152)		-0.089** (0.036)	0.317** (0.108)	0.185 (0.249)		0.065 (0.130)
Jew	- 0.154*** (0.006)	0.014 (0.099)	-0.038 (0.107)	- 0.548*** (0.149)	- 0.203*** (0.014)	-0.047 (0.059)	0.124 (0.171)	0.100* (0.052)
Muslim		0.216 (0.121)	0.183*** (0.027)	0.367* (0.158)	- (0.041)	-0.010 (0.140)	-0.090 (0.057)	-0.144 (0.082)
Orthodox		0.021 (0.026)	-0.028 (0.048)	-0.010 (0.103)	-0.188** (0.061)	-0.073 (0.073)	-0.003 (0.036)	0.121 (0.080)
Roman Catholic		0.036 (0.042)	0.006 (0.020)	-0.040 (0.119)	- (0.051)	-0.041 (0.035)	-0.032 (0.029)	0.098 (0.092)
Female	-0.061** (0.018)	- 0.037*** (0.007)	-0.002 (0.013)	-0.046** (0.015)	-0.013 (0.015)	- 0.031*** (0.007)	-0.030* (0.012)	0.013 (0.013)
Age	0.001 (0.001)	0.002*** (0.0003)	0.003*** (0.001)	0.001** (0.0004)	-0.0004 (0.001)	-0.0005* (0.0002)	-0.002** (0.001)	0.0000 (0.0005)
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.155*** (0.019)	0.513*** (0.023)	0.537*** (0.096)	0.858*** (0.065)	0.217*** (0.049)	0.200*** (0.029)	0.233* (0.085)	0.170 (0.149)
Observations	5,254	21,678	4,726	15,794	5,254	21,675	4,726	15,794
Number of countries/regions	6	20	5	9	6	20	5	9
Adjusted R-squared	0.016	0.022	0.058	0.009	0.017	0.026	0.038	0.009

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9 The role of dominant religion – justifiable cheating on taxes and accepting a bribe

	Justifiable cheating on taxes				Justifiable accepting a bribe			
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox	Muslim
<i>Religion: b Protestant</i>								
No religion	0.055	0.412***	0.319	-	0.085*	0.177**	0.082	-
	(0.174)	(0.115)	(0.371)	1.594***	(0.042)	(0.073)	(0.351)	0.464***
Others	-0.501**	-0.079	0.293	-	-0.268**	-0.149	0.111	-0.521**
	(0.177)	(0.142)	(0.508)	1.747***	(0.097)	(0.099)	(0.385)	(0.200)
Buddhist	0.252	-0.248		-0.804	1.355*	0.363		0.215
	(0.558)	(0.446)		(1.029)	(0.535)	(0.409)		(0.815)
Hindu	0.392	0.751		-	0.008	1.457		-
	(0.463)	(1.618)		1.926***	(0.331)	(1.615)		0.585***
Jew	0.038	0.151	0.575	-	0.664***	0.186	-0.299	-
	(0.075)	(0.388)	(0.393)	1.579***	(0.268)	(0.346)	(0.628)	0.560***
Muslim	-0.596	-0.284	1.638**	-	-0.284	-0.089	0.580**	-
	(0.683)	(0.574)	(0.510)	1.940***	(0.163)	(0.570)	(0.173)	0.560***
Orthodox	-0.300	0.226	0.394	-	0.045	-0.393**	0.021	-
	(0.181)	(0.346)	(0.403)	1.714***	(0.146)	(0.165)	(0.291)	0.956***
Roman Catholic	-0.051	0.195	0.568	-	0.063	0.068	0.260	-0.202
	(0.094)	(0.115)	(0.668)	1.764***	(0.074)	(0.080)	(0.440)	(0.186)
<i>Female</i>	-	-	-0.174**	-0.130**	-	-	-0.144**	-0.024
	0.591***	0.263***			0.179***	0.157***		
	(0.106)	(0.040)	(0.046)	(0.046)	(0.026)	(0.028)	(0.045)	(0.022)
<i>Age</i>	-	-	-	-	-	-	-	-
	0.021***	0.018***	0.018***	0.006***	0.009***	0.012***	0.013***	0.005***
	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
<i>Education</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.868***	3.314***	3.138***	3.720***	2.072***	2.651***	2.364***	2.103***
	(0.247)	(0.139)	(0.277)	(0.372)	(0.148)	(0.139)	(0.368)	(0.134)
Observations	5,240	22,329	4,582	11,355	5,245	22,371	4,590	14,974
Number of countries/regions	6	21	5	8	6	21	5	10
Adjusted R-squared	0.045	0.022	0.032	0.009	0.023	0.016	0.026	0.006

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 10 The role of dominant religion – confidence in major companies and firms and freedom

	Confidence in major companies				Firms and freedom		
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox
<i>Religion: b Protestant</i>							
No religion	0.120** (0.027)	0.147*** (0.037)	-0.130 (0.292)	0.530*** (0.100)	0.421** (0.145)	0.069 (0.213)	1.352** (0.158)
Others	-0.030 (0.086)	0.131** (0.049)	-0.890 (0.548)	0.197* (0.105)	0.297 (0.259)	-0.089 (0.376)	1.589** (0.336)
Buddhist	0.469 (0.366)	0.173 (0.206)		0.409*** (0.024)	- (0.053)	- (0.217)	
Hindu	-0.131** (0.024)	-0.009 (0.477)		0.377*** (0.062)	-0.979 (1.331)	-0.727** (0.301)	
Jew	0.109** (0.025)	-0.032 (0.143)	0.015 (0.383)	0.298* (0.154)	0.263*** (0.052)	0.792* (0.388)	-0.143 (0.220)
Muslim	0.128 (0.113)	0.168* (0.083)	0.026 (0.205)	0.492*** (0.072)	-0.101 (0.352)	-0.044 (0.307)	1.760** (0.286)
Orthodox	-0.117 (0.083)	0.054 (0.056)	-0.099 (0.180)	0.654*** (0.088)	- (0.078)	0.241 (0.375)	1.213** (0.232)
Roman Catholic	0.068 (0.076)	0.039 (0.037)	-0.161 (0.161)	0.385*** (0.076)	0.289 (0.146)	-0.070 (0.157)	-0.023 (0.537)
<i>Female</i>	0.052*** (0.008)	0.046* (0.025)	-0.046** (0.009)	-0.066** (0.029)	0.325*** (0.058)	0.276*** (0.064)	0.509* (0.121)
<i>Age</i>	0.003*** (0.001)	-0.001 (0.001)	0.002 (0.001)	-0.0001 (0.001)	0.002 (0.002)	0.005* (0.003)	0.005* (0.002)
<i>Education</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.511*** (0.042)	2.615*** (0.064)	3.168*** (0.293)	2.163*** (0.121)	4.555*** (0.135)	6.257*** (0.216)	5.975*** (0.596)
Observations	3,288	15,489	2,564	12,582	4,016	13,187	2,724
Number of countries/regions	4	15	3	9	5	14	3
Adjusted R-squared	0.010	0.005	0.008	0.005	0.020	0.024	0.051

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Muslim countries not included referring to firms and freedom – question asked only in one country and with no observations in Protestant and other religious categories except Muslim and Others.

Table 11 The role of dominant religion – private vs state ownership of business and inequality of income

	Private vs state ownership of business				Inequality of income			
	Protestant	Catholic	Orthodox	Muslim	Protestant	Catholic	Orthodox	Muslim
<i>Religion: b Protestant</i>								
No religion	0.387 (0.344)	0.301 (0.194)	-0.101 (0.689)	0.459 (0.337)	-0.314** (0.095)	-0.244 (0.160)	0.676 (0.939)	1.555*** (0.425)
Others	0.079 (0.221)	-0.010 (0.229)	-0.133 (0.728)	-0.312* (0.168)	0.324 (0.377)	-0.236 (0.208)	0.919 (0.625)	2.177*** (0.172)
Buddhist	0.065 (0.108)	-0.402 (0.398)		-1.520* (0.782)	- (0.087)	0.305 (0.361)		0.042 (1.164)
Hindu	1.657*** (0.074)	0.423 (0.248)		0.143 (0.112)	- (0.116)	2.395*** (0.360)		1.942*** (0.168)
Jew	0.148* (0.060)	0.704 (0.538)	0.705 (0.680)	-1.049* (0.533)	- (0.052)	-0.622 (0.374)	-1.069 (0.845)	1.057** (0.359)
Muslim	0.084 (0.393)	0.079 (0.199)	0.831 (0.581)	-0.109 (0.108)	1.427** (0.292)	-0.928 (0.615)	0.138 (0.805)	2.021*** (0.091)
Orthodox	-0.441** (0.136)	0.565 (0.773)	0.122 (0.623)	0.033 (0.044)	0.740** (0.190)	0.382 (0.424)	0.626 (0.713)	1.816*** (0.326)
Roman Catholic	0.315** (0.086)	-0.032 (0.185)	-0.309 (0.421)	-0.314 (0.194)	-0.240 (0.124)	-0.256 (0.191)	0.452 (0.481)	2.050*** (0.128)
<i>Female</i>	0.485** (0.141)	0.348*** (0.057)	0.534* (0.161)	0.382*** (0.066)	- (0.032)	- (0.055)	0.034 (0.148)	0.040 (0.052)
<i>Age</i>	-0.002 (0.005)	-0.004 (0.003)	0.011** (0.002)	-0.0005 (0.004)	-0.006 (0.006)	-0.001 (0.002)	-0.011 (0.007)	0.002 (0.003)
<i>Education</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	4.560*** (0.080)	6.177*** (0.285)	5.601** (0.820)	6.808*** (0.417)	4.467*** (0.482)	4.583*** (0.203)	3.831*** (0.637)	3.314*** (0.307)
Observations	3,292	15,924	2,730	17,110	3,409	18,874	3,612	17,323
Number of countries/regions	4	16	3	10	4	18	4	10
Adjusted R-squared	0.022	0.022	0.057	0.023	0.032	0.023	0.044	0.007

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1