**Supplemental Appendix**

to

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“Do Religious Beliefs Matter for Economic Values?”

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# This appendix provides supplemental material related to Davis and Rodriguez (2024), which examines the relationship between religious beliefs and economic values. Section A1 provides supplemental material on the data and methodology. In particular, it includes additional descriptive statistics on the religion variables, definitions and summary statistics for the individual economic values variables that are used to construct the values indices, and additional discussion of the empirical methodology. Section A2 provides empirical results for the full sample on the relationships between religious beliefs, religious attendance and economic values for the individual economic values variables as well as for each of the values indices.

# **Section A1: Data and Methodology**

Our data comes from the World Values Survey (WVS), which consists of in-depth surveys of the values and beliefs for over 600K individuals living in over 100 countries. These surveys were conducted in seven five-year waves beginning in 1981. To provide some grounding for the selection of questions regarding economic values and beliefs, we restrict attention to the 25 dependent variables analyzed in Guiso et al. (2003). Since there is some variation in the questions included in each wave of the WVS, this approach means that our data comes primarily from the early waves of the survey. Our set of individual-level control variables is also based on Guiso et al. (2003), and consists of sex, age, educational attainment, a four-valued measure of subjective health status, and a measure of household income. Our selection of control variables comes from our interest in aligning our results with the previous literature, specifically Guiso et al. (2003). Household income is measured on a ten-point scale but is treated as continuous to facilitate comparisons with our primary religion variables. A full description of these and other variables is presented in the appendix. Our choice of religion variables and controls further restricts our sample, which consists of 87,613 individual surveys conducted in waves 2-4 of the WVS. These waves correspond to the following years: Wave 2: 1989-1993, Wave 3: 1994-1998; and Wave 4, 1999-2004.

### **Religiosity Variables**

We utilize measures of three dimensions of religious life, religious beliefs, attendance at religious services and religious affiliation. Our measure of religious beliefs is based on answers to five questions asking whether respondents believe in God, heaven, hell, an afterlife, and an immortal soul. We chose these beliefs based on their generalizability across all religious traditions. Other measures of belief like belief in the devil are not used in our analysis due both to lack of replicability across traditions and low sample sizes. Given our belief variables, we use answers regarding belief to define five variables, God, heaven, hell, afterlife, and soul, that take a value of one if an individual holds that belief and zero otherwise. The individual belief variables are added together to generate an index of composite religious beliefs, *beliefs*, which varies from zero, if none of the religious beliefs are held, to five, if they hold all religious beliefs. Figure 1 shows the histogram of the beliefs variable. Fully 54% of respondents profess all five beliefs, 14% profess four beliefs, and each of the other outcomes represent less than 10% of the sample.

We also construct a measure of religiosity based on the frequency of attendance at religious services. We construct three dummy variables that reflect whether an individual attends religious services at least weekly, at least monthly and at least yearly. These are added together and then standardized to generate *attend*, our index of attendance, which varies from zero to three. This variable allows us to compare the roles of attendance and belief in the construction of economic values, and to relate our findings to the broader literature on religiosity.

To identify an individual’s religious affiliation, we rely on responses to the question, “Do you belong to a religion or religious denomination? If yes, which one?” Respondents may identify as non-religious or as belonging to any of 99 different religious traditions, including an “other religion” category, 73 of which are represented in our data. We also aggregate this data in two ways. First, we create as set of indicator variables for major religious traditions, including Protestant, Catholic, Orthodox Christian, Muslim, Hindu, Buddhist, other religions, and non-religious.[[1]](#footnote-1)

Table 1A presents summary statistics for the religion variables. Over half of the sample profess each of the five individual beliefs, with percentages range from 62% for belief in hell to 90% for belief in God. Table 1B presents the correlation matrix for our main religion variables. Not surprisingly, the individual religious beliefs are positively correlated with each other, with correlation coefficients ranging from 0.42 (God and hell) and 0.73 (heaven and hell). Individual beliefs are also positively correlated with the beliefs index, with correlation coefficients ranging from 0.69 to 0.87. Note also that while the individual beliefs are positively correlated with the attendance index, the related correlation coefficients are never greater than 0.40 and are in each case strictly smaller than those for the beliefs index. Overall, the belief and attendance indices are also modestly positively correlated, corr = 0.42. Thus, the data presented in Table 1B suggests that beliefs and attendance are significantly independent dimensions of religious life.

As discussed in the introduction, one concern with our measure of beliefs is that the underlying beliefs from which it is constructed primarily reflect orthodox beliefs in Western religious traditions. To get a better sense for how Western our beliefs variables are, Table 1C, presents the mean of each of our beliefs variables for individuals belonging to seven major religious traditions, Protestant, Catholic, Orthodox Christian, Muslim, Hinduism, Buddhism and the non-religious. While the mean value of most of the beliefs variables are higher for the four Western traditions, they also appear relevant to the beliefs systems of other traditions. For example, 95% of Hindu respondents and 62% of Buddhists report believing in God, and over half of each group believe in heaven and hell. Moreover, over half of non-religious individuals believe in both God and an immortal soul, and over a third believe in heaven and an afterlife. In addition, regressing the beliefs variable on the full set of 73 religious affiliation indicators, we find that religious affiliation explains just 26.4% of the variation in our beliefs index. Thus, a significant majority of variation in religious beliefs occurs within, rather than across, religious traditions.

## **Economic Values Variables**

Our primary dependent variables consist of 25 questions related to economic values that were analyzed in Guiso et al. (2003). These questions measure values and beliefs related to seven different domains of economic life: trust and tolerance, patriarchy, institutional trust, lawful behavior, thrift, market fairness and promarket sentiment. One of these domains, thrift, is captured by a single question. The remaining six domains have between three and five questions each. For multi-question domains, we use the first principal component of the individual domain questions to generate a domain index, e.g. the cooperation index, patriarchy index, etc. To facilitate interpretation and comparison across value domains, these indices are standardized to have a zero mean and standard deviation of one. Below, we describe the variables used in each value domain. Summary statistics for economic values variables are presented in Table 1D.

Note that in the empirical analysis, we utilize all observations for which the outcome and independent variables are available. As a result, the number of observations varies across different outcome variables, reflecting difference across waves in the questions asked and differences in response rates for each question. This is particularly true of our index variables, as these are only defined for observations for which we have all the component variables in that domain. The cost of maximizing sample size is that the sample in question varies to some degree with each index question.

Our index of cooperation is based on three variables, one related to social trust and two that measure tolerance. The first variable, trust, is based on the following question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” The variable takes a value of one if a respondent reports that most people can be trusted. (Q: What’s the range of answers on this?). The other two variables in this category, and, measure tolerance toward people of other races and from other countries. These are based on the following questions: “On this list are various groups of people. Could you please sort out any that you would not like to have as neighbors?” The list of possible groups includes “people of other races” and “the immigrants.” Our variable *toler\_race* takes a value of one if an individual fails to indicate intolerance of other races, and *toler\_imm* takes a value of one if an individual fails to mention “the immigrants.” These variables are zero otherwise. We also consider a composite measure of the propensity for social cooperation, *cooperation\_index*, which equals the first principal component of these variables.[[2]](#footnote-2)

The second group consists of five variables that measure support for patriarchy and traditional gender roles. In this category, we use variables based the following questions: *jobs scarce*, “When jobs are scarce, should men have more right to a job than women?” Answers are coded 1–4; we recoded them so that a higher number represents a higher degree of agreement. The variable *woman needs children* equals one if a respondent answers affirmatively when asked “Do you think that women should have children in order to be fulfilled, or is this not necessary?” The final three measures of patriarchal values are *housewife fulfilling*, *disagree wife contribute*, and *university for boys*. These variables are derived from the answers to the question “For each of the following statements I read out, can you tell me how much you agree with each. Do you agree strongly, agree, disagree, or disagree strongly?” The statements are “Being a housewife is just as fulfilling as working for pay;” “Both the husband and wife should contribute to household income;” and “A university education is more important for a boy than for a girl.” We recoded them so that a higher number represents a higher degree of agreement. Our composite measure of patriarchal values, *patriarchy\_index*, consists of the first principal component of these variables.[[3]](#footnote-3)

The next set of variables reflect an individual’s level of trust in various public institutions. The variables *trust gov*, *trust police*, *trust army*, and *trust courts* are based on responses to the question, “I am going to name a number of organizations. For each one, could you tell me how much confidence you have in it: a great deal of confidence, quite a lot of confidence, not very much confidence, or none at all?” The answers are coded 1–4, by increasing degree of confidence. The organizations we considered are the government, the police, the armed forces, and the legal system. Our composite measure of institutional trust, *inst\_trust\_index*, consists of the first principal component of these variables.[[4]](#footnote-4)

The fourth set of variables reflect the justifiability of various forms of lawful behavior. These variables reflect answers to 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. The behaviors we use are “Claiming government benefits to which you are not entitled,” “Avoiding a fare on public transport,” “Cheating on taxes if you have a chance,” “Buying something you knew was stolen,” and “Accepting a bribe in the course of their duties.” These questions serve as the basis for the variables *just gov benefit*, *just avoid fare*, *just cheat taxes*, *just buy stolen*, and *just accept bribe*. We reverse the scale on each of these variables, so that they measure the taste for lawful, rather than unlawful, behavior. Our composite measure of lawful behavior, lawful\_index, is the first principal component of these variables.[[5]](#footnote-5)

We have a single variable that reflects the preference for thrift. As measure of the taste for thrift, we use the answer to 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?” The interviewed person is presented with a list of 11 alternatives, ranging from imagination to obedience, and can mention at most five as important. We code a 1 if the respondent lists as important “Thrift, saving money and things.”[[6]](#footnote-6)

The next set of values consists of our variables that reflect self-reliance or a greater acceptance of poverty and inequality. The variable ind\_resp is based on responses to a question in which individuals are asked to place themselves on a ten-point scale where one corresponds to the position that “The government should take more responsibility to ensure that everyone is provided for” and ten corresponds to the position that “People should take more responsibility to provide for themselves.” The variables work\_over\_luck and grow\_wealth are based on a similarly structured question that contrast, respectively, the positions that “In the long run, hard work usually brings a better life” vs. “Hard work doesn’t generally bring success—it’s more a matter of luck and connections,” and “People can only get rich at the expense of others” versus “Wealth can grow so there’s enough for everyone.” Finally, the variable poor\_lazy is based on responses to the question: “Why, in your opinion, are there people in this country who live in need?” We code poor lazy as 1 the answer “They are poor because of laziness and lack of will power” and zero the answer “They are poor because society treats them unfairly.” We also construct a composite measure of market fairness, the market fairness index, which equals the first principal component of these variables.[[7]](#footnote-7)

The final set of values reflects an individual’s attitude toward markets and market outcomes. The variable comp\_good reflects an individual’s taste for competition and is based on an individual’s position on a ten-point scale where one corresponds to “Competition is good. It stimulates people to work hard” and a ten corresponds to the position, “Competition is harmful. It brings out the worst in people.” Responses are reordered so that higher values are associated with a greater taste for competition. The variable priv\_own reflects an individual’s taste for private over government ownership and is based on an individual’s position on a ten-point scale where one corresponds to “Private ownership of business and industry should be increased,” and ten corresponds to the position “Government ownership of business and industry should be increased.” Responses are reordered so that higher values are associated with a greater taste for private ownership. The variable need\_inequality reflects an individual’s beliefs about the social impact of inequality. It is based on an individual’s position on a ten-point scale where one corresponds to “Incomes should be made more equal” and ten corresponds to “We need larger income differences as incentives for individual effort.” As before, we construct a composite measure of market attitudes, the promarket index, which equals the first principal component of these three variables.[[8]](#footnote-8)

**Additional Notes on Empirical Strategy**

Because an individual’s religious tradition is likely to influence the structure of their beliefs, we include a full set of denominational fixed effects in each regression. For waves 2-4 of the WVS, the question on an individual’s religious denomination allows a respondent to indicate their affiliation with any of 80 different religious traditions. The inclusion of denominational fixed effects controls for the influence of denomination-level omitted variables that may influence an individual’s economic values or the interpretation of values survey questions, removing an important potential source of omitted variable bias.

The inclusion of denominational fixed effects is also intended in part to address the potential Western bias in the set of religious beliefs included in the World Values Survey. For example, “God” is not an orthodox religious concept in many polytheistic and atheistic religious traditions, such as Hinduism, Buddhism, and Shintoism.

Note that our methodology does not identify causal effects. It is possible that holding particular economic values influences an individual’s religious life, including their beliefs. Perhaps more importantly, we cannot rule out that unobserved shocks may influence both religious beliefs and economic values. In light of these considerations, the coefficients in the analysis below should be interpreted as highly refined conditional correlations. Nonetheless, given the paucity of existing research on the role of religious beliefs in economic values and lives, we believe these correlations are themselves of significant interest.

**Section A2: Results for Beliefs, Attendance and Economic Values**

We present empirical results showing the strength of the relationships between beliefs, attendance, and economic values. As dependent variables we use each of the individual economic values discussed above as well as the index reflecting each value area. For the sake of clarity, we organize most of our results into separate tables for each value area. The exception to this is thrift, which consists of a single variable. Results for thrift are present in the table addressing promarket attitudes. For rhetorical convenience, we will refer to beliefs and attendance collectively as measures of religiosity. We consider results for the sample as a whole, though sample size varies depending on the availability of the dependent variable. In the following section, we consider empirical results for subsamples defined my major religious traditions.

Table 2A presents results for values related to economic cooperation and for the cooperation index. The coefficient on beliefs is not significant in any of the four regressions, and the coefficient on attendance is only significant for the level of social trust. As a result, we do not find that religiosity plays a significant role in determining levels social cooperation. Our results differ from Guiso et al. (2003), who find positive relationships between cooperation and those who are *actively* or *currently* religious, but only a weakly positive relationship for those who are raised religious. Several studies in the experimental literature use public goods experiments to estimate the effect of religion on cooperation, however many studies find no relationship between the variables (Anderson and Mellor, 2009; Benjamin, Choi, and Fisher, 2016) or that it increases within-religious group cooperation (Chuah, Swee-Hoon, et al., 2014). The literature is unclear about the link between religion and cooperation, as the effect appears to be related more to your place in a social network or church, rather than private religious belief.

Table 3A presents results for patriarchal values, which reflect support for gender inequality and traditional gender roles, as well as the patriarchal values index. Our results indicate that religiosity plays an important role in determining an individual’s support for patriarchal values. The coefficient on beliefs is negative and significant at the 1% level in five of six regressions, while that on attendance is negative and significant at the 1% level in all six regressions

Consistent with the tenets of modernization theory, we find that income is negatively associated with patriarchal values in the majority of the regressions we consider. Moreover, as seen in the penultimate row of table 3A, the association between beliefs and patriarch values appears to be roughly as strong or stronger as that between income and values. Results in the final row show that association between beliefs at patriarchal values is stronger than that for attendance for three of the individual values measures and the patriarchal values index. These results provide important support for the argument that beliefs matter for economic values and that the tendency to equate religiosity with attendance at religious services may understate the role of religion in economic values.

Table 4A provides evidence on the relationship between religiosity and trust in secular institutions, including the government, police, army, and courts. Each variable is negatively related to the measures of institutional trust. We find a significant negative relationship between beliefs and institutional trust for three of the four individual measures of institutional trust as well as the institutional trust index, and a significant negative relationship between attendance and levels of institutional trust in all five regressions. Though other interpretations are possible, our results are consistent with the presence of fundamental conflict or competition between secular and religious institutions.

As seen in the last two rows of Table 4A, the association between beliefs and institutional trust is roughly half the size of the association between income and institutional trust and only a fifth of the size of the association between attendance and institutional trust. These results are consistent with the idea that attendance, rather than belief, is associated with greater attachment to religious institutions that, potentially, compete with secular institutions for allegiance and authority. An exception to this pattern is that beliefs appear to play a great role than either income or attendance in determining trust of the army, a finding that might reflect the impact of religious beliefs related to pacificism or the sanctity of life.

Table 5A presents results on beliefs, attendance, and support for lawful behavior. The coefficients on beliefs and attendance are significant at the 5% level or better in five of the six regressions. These results provide strong support for the idea that religiosity is associated with lower levels of support for illegal behavior. Results for income are less consistent. The coefficient on income is positive in two regressions, negative and significant in one, and insignificant in the other three, including the lawfulness index. As seen in the final two rows of Table 5, the relationship between beliefs and support for lawful behavior is generally stronger than that for income and roughly 40% as large as the association between attendance and support for lawfulness.

Table 6A presents results on religiosity and promarket attitudes. With three positive and significant coefficients, beliefs are strongly associated with promarket attitudes. In contrast, the coefficient on attendance is insignificant in all four regressions. Higher income levels are also associated with greater support for the market. As seen in the penultimate row of Table 6A, the association between beliefs and promarket attitudes is roughly one-half as large as that between income and promarket attitudes.

Table 7A provides results on both thrift and market fairness. The results for thrift, which unlike our other values areas is captured by a single variable, are shown in column 1. Our results indicate that both beliefs and attendance are negatively associated with thrift. As seen in the final row, this association is somewhat stronger for attendance than belief, an outcome that may reflect the insurance aspects of membership in a religious group.

The remaining columns of Table 7A provide results for values related to market fairness. Both beliefs and attendance are positively associated with greater acceptance of market outcomes, though this relationship is more consistent for attendance, which is significant in four of five regressions, relative to three regressions for beliefs. Considering the final column, we see that the strength of this association between religiosity and market fairness is somewhat greater for attendance that beliefs.

Taken as a whole, the results presented in this section provide strong support for the contention that it is important to consider beliefs when trying to understand the role of religion in economic attitudes. In general, beliefs appear roughly as important to explaining economic attitudes as do attendance. Overall, the coefficient on beliefs is significant in 22 of the regressions we examine, while that on attendance is significant 21 regressions. The relative importance of beliefs and attendance also varies significantly across the various values domains. Based on the relative size of the associations between beliefs, attendance and values domains, beliefs are more important than attendance when considering promarket attitudes and patriarchal values, while attendance is more important than beliefs for understanding institutional trust, lawfulness, market fairness and thrift. One implication of these findings is that the importance of accounting for religious beliefs varies with the value domain under consideration.

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| --- | --- | --- | --- | --- | --- |
| **Table 1A: Summary Stats for Religion Variables** | | | | | |
| **Variable** | **Obs** | **Mean** | **Std. dev.** | **Min** | **Max** |
| god | 83,644 | 0.8959 | 0.3053 | 0 | 1 |
| afterlife | 83,644 | 0.6811 | 0.4660 | 0 | 1 |
| soul | 83,644 | 0.8257 | 0.3793 | 0 | 1 |
| hell | 83,644 | 0.6239 | 0.4844 | 0 | 1 |
| heaven | 83,644 | 0.7317 | 0.4431 | 0 | 1 |
| beliefs | 83,644 | 3.7584 | 1.6667 | 0 | 5 |
| attend | 83,644 | 1.5961 | 1.2369 | 0 | 3 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 1B: Correlation Matrix for Religion Variables** | | | | | | | |
|  | **god** | **afterlife** | **soul** | **hell** | **heaven** | **beliefs** | **attend** |
| god | 1 |  |  |  |  |  |  |
| afterlife | 0.4165 | 1 |  |  |  |  |  |
| soul | 0.4684 | 0.5696 | 1 |  |  |  |  |
| hell | 0.4094 | 0.5617 | 0.4972 | 1 |  |  |  |
| heaven | 0.5215 | 0.6106 | 0.5715 | 0.7483 | 1 |  |  |
| beliefs | 0.6639 | 0.8111 | 0.7691 | 0.8348 | 0.8797 | 1 |  |
| attend | 0.3522 | 0.2995 | 0.3019 | 0.3357 | 0.3894 | 0.4181 | 1 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 1C: Mean Values of Religious Belief Variables for Selected Religious Traditions** | | | | | | | | |
| **Variable** | **Protestant** | **Catholic** | **Orthodox Christian** | **Muslim** | **Buddhist** | **Hindu** | **Other Religions** | **Non-Religious** |
| god | 0.92 | 0.97 | 0.90 | 0.99 | 0.62 | 0.95 | 0.88 | 0.54 |
| afterlife | 0.76 | 0.74 | 0.50 | 0.85 | 0.57 | 0.53 | 0.70 | 0.37 |
| soul | 0.89 | 0.89 | 0.70 | 0.93 | 0.70 | 0.78 | 0.82 | 0.57 |
| hell | 0.66 | 0.58 | 0.48 | 0.91 | 0.51 | 0.52 | 0.64 | 0.28 |
| heaven | 0.82 | 0.82 | 0.52 | 0.93 | 0.52 | 0.56 | 0.78 | 0.36 |
| beliefs | 4.05 | 4.00 | 3.11 | 4.61 | 2.91 | 3.33 | 3.82 | 2.12 |
| Observations | 12,317 | 20,656 | 9,791 | 21,779 | 621 | 4,182 | 2,916 | 11,382 |

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| --- | --- | --- | --- | --- | --- |
| **Table 1D: Summary Statistics for Economic Values** | | | | | |
| **Variable** | **Obs** | **Mean** | **Std. Dev.** | **Min** | **Max** |
| trust | 80,972 | 0.2554 | 0.4361 | 0 | 1 |
| toler\_imm | 77,591 | 0.7930 | 0.4052 | 0 | 1 |
| toler\_race | 80,380 | 0.8278 | 0.3776 | 0 | 1 |
| trust\_index | 75,024 | 0.0006 | 0.9982 | -2.4264 | 0.6961 |
| trust\_gov | 75,740 | 2.5805 | 0.9582 | 1 | 4 |
| trust\_police | 79,080 | 2.4867 | 0.9731 | 1 | 4 |
| trust\_army | 78,726 | 2.2043 | 0.9475 | 1 | 4 |
| trust\_courts | 45,865 | 2.5173 | 0.9053 | 1 | 4 |
| inst\_trust\_index | 40,314 | 0.1004 | 0.9294 | -1.9549 | 2.1601 |
| jobs\_scarce | 82,429 | 0.4372 | 0.4960 | 0 | 1 |
| woman\_needs\_children | 80,666 | 0.6656 | 0.4718 | 0 | 1 |
| housewife\_fulfilling | 79,630 | 2.8200 | 0.8995 | 1 | 4 |
| disagree\_wife\_contribute | 81,540 | 1.7634 | 0.7514 | 1 | 4 |
| university\_for\_boys | 76,713 | 2.0688 | 0.9456 | 1 | 4 |
| patriarchy\_index | 70,286 | 0.0116 | 0.9967 | -2.0050 | 2.4606 |
| just\_gov\_benefits | 76,128 | 2.3712 | 2.3631 | 1 | 10 |
| just\_avoid\_fare | 76,225 | 2.4332 | 2.4081 | 1 | 10 |
| just\_cheat\_taxes | 75,561 | 2.2394 | 2.2570 | 1 | 10 |
| just\_buy\_stolen | 45,109 | 1.7654 | 1.7205 | 1 | 10 |
| just\_accept\_bribe | 78,976 | 1.6723 | 1.6850 | 1 | 10 |
| lawful\_index | 42,658 | 0.0102 | 0.9854 | -5.2267 | 0.7638 |
| need\_inequality | 81,174 | 5.9493 | 3.0700 | 1 | 10 |
| priv\_own | 78,185 | 5.7463 | 3.0071 | 1 | 10 |
| comp\_good | 63,665 | 7.6058 | 2.5682 | 1 | 10 |
| promarket\_index | 61,231 | 0.1547 | 1.0253 | -2.6397 | 1.6941 |
| ind\_resp | 81,802 | 4.8064 | 3.0993 | 1 | 10 |
| work\_over\_luck | 43,260 | 6.7175 | 2.9798 | 1 | 10 |
| grow\_wealth | 41,264 | 6.4963 | 2.8555 | 1 | 10 |
| poor\_lazy | 38,222 | 0.2877 | 0.4527 | 0 | 1 |
| market\_fairness\_index | 32,870 | 0.0240 | 0.9970 | -2.3489 | 2.5515 |
| thrift | 83,644 | 0.3352 | 0.4721 | 0 | 1 |

**Table 2A: Beliefs, Attendance and Cooperation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Trust | Toler Race | Toler Imm | Cooperation Index |
| Beliefs | -0.000242 | 0.000271 | 0.00178 | 0.00342 |
|  | (0.00117) | (0.00102) | (0.00111) | (0.00275) |
| Attend | 0.00573\*\*\* | -0.000742 | 0.000284 | -6.48e-05 |
|  | (0.00147) | (0.00130) | (0.00142) | (0.00352) |
| Age | 0.000688\*\*\* | -0.000111 | 2.43e-05 | 6.26e-05 |
|  | (0.000109) | (9.56e-05) | (0.000103) | (0.000256) |
| Female | -0.00344 | 0.00590\*\* | 0.00914\*\*\* | 0.0206\*\*\* |
|  | (0.00295) | (0.00259) | (0.00282) | (0.00698) |
| Income | 0.00451\*\*\* | 0.00376\*\*\* | 0.00560\*\*\* | 0.0149\*\*\* |
|  | (0.000700) | (0.000611) | (0.000663) | (0.00164) |
| Constant | 0.165\*\*\* | 0.741\*\*\* | 0.749\*\*\* | -0.238\*\*\* |
|  | (0.0239) | (0.0205) | (0.0221) | (0.0552) |
| Health and Education | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes |
| Observations | 80,972 | 80,380 | 77,591 | 75,024 |
| R-squared | 0.110 | 0.096 | 0.102 | 0.121 |
| Beliefs vs. Income | 0.00 | — | — | — |
| Beliefs vs. Attend | 0.00 | — | — | — |

**Table 2A notes**: All regs control for educational attainment, health status, and religious denomination, country, and wave fixed effects. Asterisks reflect statistical significance: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. The variable *beliefs* varies from zero to five and reflects an individual’s belief in God, an immortal soul, heaven, hell and an afterlife. The variable attend equals zero if an individual attends religious services less than once per year, one if they attend annually but not monthly, two if they attend monthly but not weekly, and three if they attend at least once per week. The penultimate row presents the ratio of a one-standard deviation increase in beliefs to a one-standard deviation increase in income. The final row presents the same ratio for beliefs and attendance. In computing these ratios, insignificant coefficients are treated as zeros, UND indicates the ratio is undefined, and no value is recorded if both coefficients are insignificant.

**Table 3A: Beliefs, Attendance, and Patriarchal Values**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Jobs Scarce | Woman Needs Children | Housewife Fulfilling | Disagree Wife Contribute | University For Boys | Patriarchy Index |
| Beliefs | 0.0115\*\*\* | 0.0130\*\*\* | 0.0286\*\*\* | 0.00227 | 0.0116\*\*\* | 0.0358\*\*\* |
|  | (0.00126) | (0.00117) | (0.00245) | (0.00203) | (0.00261) | (0.00260) |
| Attend | 0.0119\*\*\* | 0.00917\*\*\* | 0.0139\*\*\* | 0.0209\*\*\* | 0.0268\*\*\* | 0.0406\*\*\* |
|  | (0.00158) | (0.00146) | (0.00306) | (0.00253) | (0.00325) | (0.00322) |
| Age | 0.00139\*\*\* | 0.00221\*\*\* | 0.00358\*\*\* | 0.000283 | 0.00227\*\*\* | 0.00505\*\*\* |
|  | (0.000117) | (0.000109) | (0.000228) | (0.000189) | (0.000240) | (0.000239) |
| Female | -0.121\*\*\* | -0.00823\*\*\* | -0.0537\*\*\* | -0.115\*\*\* | -0.239\*\*\* | -0.287\*\*\* |
|  | (0.00318) | (0.00294) | (0.00616) | (0.00509) | (0.00652) | (0.00646) |
| Income | -0.00881\*\*\* | -0.00619\*\*\* | -0.00125 | 0.00456\*\*\* | -0.0128\*\*\* | -0.0208\*\*\* |
|  | (0.000753) | (0.000700) | (0.00146) | (0.00121) | (0.00155) | (0.00154) |
| Constant | 0.585\*\*\* | 0.910\*\*\* | 1.966\*\*\* | 1.276\*\*\* | 2.060\*\*\* | 0.0972\*\* |
|  | (0.0256) | (0.0236) | (0.0498) | (0.0408) | (0.0483) | (0.0488) |
| Health and Education | Yes | Yes | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 82,429 | 80,666 | 79,630 | 81,540 | 76,713 | 70,286 |
| R-squared | 0.190 | 0.249 | 0.107 | 0.103 | 0.128 | 0.294 |
| Beliefs vs. Income | -0.95 | -1.49 | UND | 0.00 | -0.63 | -1.20 |
| Beliefs vs. Attend | 1.25 | 1.92 | 2.71 | — | 0.55 | 1.16 |

**Table 4A: Beliefs, Attendance and Institutional Trust**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) |
| Trust Gov | Trust Police | Trust Army | Trust Courts | Inst Trust Index |
| Beliefs | -0.00773\*\*\* | -0.00939\*\*\* | -0.0260\*\*\* | -0.00403 | -0.00834\*\*\* |
|  | (0.00255) | (0.00252) | (0.00244) | (0.00298) | (0.00313) |
| Attend | -0.0264\*\*\* | -0.0398\*\*\* | -0.0210\*\*\* | -0.0445\*\*\* | -0.0585\*\*\* |
|  | (0.00328) | (0.00325) | (0.00311) | (0.00437) | (0.00477) |
| Age | -0.00209\*\*\* | -0.00212\*\*\* | -0.00407\*\*\* | -0.00148\*\*\* | -0.00329\*\*\* |
|  | (0.000238) | (0.000237) | (0.000230) | (0.000302) | (0.000316) |
| Female | 0.00636 | -0.00251 | 0.0713\*\*\* | 0.0130 | 0.0373\*\*\* |
|  | (0.00651) | (0.00645) | (0.00624) | (0.00830) | (0.00882) |
| Income | 0.0149\*\*\* | 0.0127\*\*\* | 0.00912\*\*\* | 0.000991 | 0.0115\*\*\* |
|  | (0.00154) | (0.00153) | (0.00148) | (0.00193) | (0.00202) |
| Constant | 2.625\*\*\* | 2.173\*\*\* | 2.394\*\*\* | 2.478\*\*\* | -0.137\*\* |
|  | (0.0524) | (0.0511) | (0.0496) | (0.0628) | (0.0666) |
| Health and Education | Yes | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes | Yes |
| Observations | 75,740 | 79,080 | 78,726 | 45,865 | 40,314 |
| R-squared | 0.163 | 0.169 | 0.182 | 0.083 | 0.139 |
| Beliefs vs. Income | -0.36 | -0.51 | -1.97 | — | -0.50 |
| Beliefs vs. Attend | 0.40 | 0.32 | 1.67 | 0.00 | 0.19 |

**Table 5A: Beliefs, Attendance, and Lawful Behavior**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| VARIABLES | just\_gov\_benefits | just\_avoid\_fare | just\_cheat\_taxes | just\_buy\_stolen | just\_accept\_bribe | lawful\_index |
|  |  |  |  |  |  |  |
| beliefs | 0.0386\*\*\* | 0.00733 | 0.0347\*\*\* | 0.0122\*\* | 0.0269\*\*\* | 0.00957\*\*\* |
|  | (0.00654) | (0.00647) | (0.00614) | (0.00568) | (0.00460) | (0.00324) |
| attend | 6.25e-05 | 0.0200\*\* | 0.0670\*\*\* | 0.0597\*\*\* | 0.0144\*\* | 0.0308\*\*\* |
|  | (0.00858) | (0.00852) | (0.00814) | (0.00849) | (0.00591) | (0.00485) |
| age | 0.0157\*\*\* | 0.0209\*\*\* | 0.0174\*\*\* | 0.0181\*\*\* | 0.0115\*\*\* | 0.0120\*\*\* |
|  | (0.000618) | (0.000613) | (0.000582) | (0.000581) | (0.000432) | (0.000331) |
| female | 0.0626\*\*\* | 0.0868\*\*\* | 0.226\*\*\* | 0.160\*\*\* | 0.105\*\*\* | 0.0911\*\*\* |
|  | (0.0168) | (0.0167) | (0.0159) | (0.0160) | (0.0117) | (0.00911) |
| income | 0.0158\*\*\* | 0.0201\*\*\* | -0.0164\*\*\* | 0.00299 | 0.00474\* | 0.000289 |
|  | (0.00394) | (0.00390) | (0.00374) | (0.00371) | (0.00276) | (0.00209) |
| Constant | 6.394\*\*\* | 7.343\*\*\* | 7.932\*\*\* | 7.211\*\*\* | 8.273\*\*\* | -1.211\*\*\* |
|  | (0.134) | (0.132) | (0.126) | (0.120) | (0.0938) | (0.0689) |
| Health and Education | Yes | Yes | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
|  |  |  |  |  |  |  |
| Observations | 76,128 | 76,225 | 75,561 | 45,109 | 78,976 | 42,658 |
| R-squared | 0.081 | 0.128 | 0.108 | 0.077 | 0.087 | 0.136 |
| Beliefs vs. Income | 1.68 | 0.00 | -1.49 | UND | 3.91 | UND |
| Beliefs vs. Attend | UND | 0.00 | 0.70 | 0.28 | 2.52 | 0.42 |

**Table 6A: Beliefs, Attendance, and Promarket Attitudes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| Need Inequality | Priv Own | Comp Good | Promarket Index |
| Beliefs | 0.0160\* | 0.0812\*\*\* | 0.0335\*\*\* | 0.0263\*\*\* |
|  | (0.00819) | (0.00815) | (0.00740) | (0.00294) |
| Attend | -0.00395 | 0.00175 | 0.00344 | 0.00363 |
|  | (0.0103) | (0.0102) | (0.0106) | (0.00420) |
| Age | -0.000269 | 0.00126\* | 0.00562\*\*\* | 0.00170\*\*\* |
|  | (0.000764) | (0.000763) | (0.000727) | (0.000289) |
| Female | -0.0857\*\*\* | -0.384\*\*\* | -0.245\*\*\* | -0.152\*\*\* |
|  | (0.0207) | (0.0207) | (0.0203) | (0.00805) |
| Income | 0.0974\*\*\* | 0.0946\*\*\* | 0.0512\*\*\* | 0.0352\*\*\* |
|  | (0.00488) | (0.00490) | (0.00469) | (0.00186) |
| Constant | 5.841\*\*\* | 5.700\*\*\* | 6.850\*\*\* | -0.0773 |
|  | (0.166) | (0.166) | (0.152) | (0.0605) |
| Health and Education | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes |
| Observations | 81,174 | 78,185 | 63,665 | 61,231 |
| R-squared | 0.120 | 0.110 | 0.055 | 0.102 |
| Beliefs vs. Income | 0.11 | 0.59 | 0.45 | 0.51 |
| Beliefs vs. Attend | UND | UND | UND | UND |

**Table 7A: Beliefs, Attendance, Thrift, and Market Fairness**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Thrift | Ind Resp | Work Over Luck | Grow Wealth | Poor Lazy | Market Fairness Index |
| Beliefs | -0.00261\*\* | -0.00729 | 0.0464\*\*\* | 0.0358\*\*\* | 0.000878 | 0.0104\*\*\* |
|  | (0.00126) | (0.00826) | (0.00980) | (0.00990) | (0.00161) | (0.00369) |
| Attend | -0.00540\*\*\* | 0.00410 | 0.0600\*\*\* | 0.0614\*\*\* | 0.00855\*\*\* | 0.0205\*\*\* |
|  | (0.00157) | (0.0104) | (0.0146) | (0.0149) | (0.00239) | (0.00570) |
| Age | 0.00167\*\*\* | 3.94e-05 | 0.0136\*\*\* | 0.00845\*\*\* | 5.11e-05 | 0.00238\*\*\* |
|  | (0.000117) | (0.000771) | (0.000991) | (0.00101) | (0.000163) | (0.000375) |
| Female | -0.00212 | -0.116\*\*\* | -0.194\*\*\* | 0.0324 | -0.0261\*\*\* | -0.0720\*\*\* |
|  | (0.00317) | (0.0209) | (0.0275) | (0.0279) | (0.00448) | (0.0104) |
| Income | -0.00475\*\*\* | 0.0715\*\*\* | 0.0150\*\* | 0.0192\*\*\* | 0.0146\*\*\* | 0.0325\*\*\* |
|  | (0.000751) | (0.00494) | (0.00632) | (0.00635) | (0.00105) | (0.00238) |
| Constant | 0.451\*\*\* | 4.231\*\*\* | 6.921\*\*\* | 5.319\*\*\* | 0.138\*\*\* | -0.523\*\*\* |
|  | (0.0254) | (0.168) | (0.203) | (0.206) | (0.0308) | (0.0696) |
| Health and Education | Yes | Yes | Yes | Yes | Yes | Yes |
| Denomination Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Wave Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 83,644 | 81,802 | 43,260 | 41,264 | 38,222 | 32,870 |
| R-squared | 0.099 | 0.111 | 0.124 | 0.063 | 0.112 | 0.146 |
| Beliefs vs. Income | 0.45 | 0.00 | 2.13 | 1.28 | 0.00 | 0.22 |
| Beliefs vs. Attend | 0.70 | — | 1.04 | 0.79 | 0.00 | 0.68 |

1. The variable Protestant equals one if an individual reports belong to the following religious denominations: Anglican, Assembly of God, AU: Uniting Church, Baptist, Born again, Christian, Christian Fellowship, Christian Reform, Dutch Reformed (Nederlands Hervormd), DZ: Christian (Quakers, Jehovah's Witnesses, Evangelical, Protestant), Evangelical, Free church/Non denominational church, Jehovah witnesses, Lutheran, Mennonite, Methodists, New Testament Christ/Biblist, Pentecostal, Presbyterian, Protestant, Reformed Churches in the Netherlands (Gereformeerd), Salvation Army, Seven Day Adventist, The Church of Sweden, Unitarian, United, United Church of Christ in the Philippines (UCCP), ZA: Evangelical/Apostolic Faith Mission. The Catholic variable equals one if an individual reports belonging to the following denominations: Catholic, Greek Catholic, Gregorian, Roman Catholic. The Orthodox variable takes a value of one if an individual reports belonging to the following denominations: Armenian Apostolic Church, Orthodox. The Muslim variable takes a value of one if an individual reports belonging to the following denominations: Bahia, Muslim, Shia, Sunni. The Hindu variable takes a value of one if an individual reports belonging to the following denominations: Hindu, Jain, Sikh. The *other religions* variable takes a value of one if an individual reports being religious and belonging to any denomination not listed above. [↑](#footnote-ref-1)
2. The cooperation index is available for individuals in 57 countries: Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Canada, Chile, Czech Rep., Dominican Rep., Egypt, Estonia, Finland, Georgia, Germany, India, Indonesia, Iran, Jordan, Kyrgyzstan, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Pakistan, Peru, Philippines, Puerto Rico, Romania, Russia, Saudi Arabia, Serbia, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan ROC, Tanzania, Turkey, Uganda, Ukraine, United States, Uruguay, Venezuela, Vietnam, and Zimbabwe. [↑](#footnote-ref-2)
3. The patriarchy index is available for individuals in 60 countries: Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Canada, Chile, Colombia, Czech Rep., Dominican Rep., Egypt, El Salvador, Estonia, Finland, Georgia, Germany, India, Indonesia, Iran, Iraq, Japan, Jordan, Kyrgyzstan, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Pakistan, Peru, Philippines, Puerto Rico, Romania, Russia, Saudi Arabia, Serbia, Slovakia, South Africa, Spain, Sweden, Taiwan ROC, Tanzania, Turkey, Uganda, Ukraine, United States, Uruguay, Venezuela, Vietnam, and Zimbabwe. [↑](#footnote-ref-3)
4. The institutional trust index is available for individuals in 44 countries: Albania, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Chile, Czech Rep., Dominican Rep., El Salvador, Estonia, Finland, Georgia, Germany, India, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Peru, Puerto Rico, Romania, Russia, Serbia, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan ROC, Turkey, Ukraine, United States, Uruguay, and Venezuela. [↑](#footnote-ref-4)
5. The lawfulness index is available for individuals in 43 countries: Albania, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Chile, Colombia, Czech Rep., Dominican Rep., Estonia, Finland, Georgia, Germany, India, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Peru, Puerto Rico, Romania, Russia, Serbia, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan ROC, Ukraine, United States, Uruguay, and Venezuela. [↑](#footnote-ref-5)
6. The measure of thrift is available for individuals from 61 countries: Albania, Algeria, Azerbaijan, Argentina, Australia, Bangladesh, Armenia, Bosnia Herzegovina, Brazil, Bulgaria, Belarus, Canada, Chile, Taiwan ROC, Colombia, Czech Rep., Dominican Rep., El Salvador, Estonia, Finland, Georgia, Germany, India, Indonesia, Iran, Iraq, Japan, Jordan, Kyrgyzstan, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Puerto Rico, Romania, Russia, Saudi Arabia, Serbia, Slovakia, Vietnam, South Africa, Zimbabwe, Spain, Sweden, Switzerland, Turkey, Uganda, Ukraine, North Macedonia, Egypt, Tanzania, United States, Uruguay, and Venezuela. [↑](#footnote-ref-6)
7. The market fairness index is available for individuals in 42 countries: Albania, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Chile, Czech Rep., Dominican Rep., Estonia, Finland, Georgia, Germany, India, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Peru, Puerto Rico, Romania, Russia, Serbia, Slovakia, South Africa, Spain, Sweden, Taiwan ROC, Turkey, Ukraine, United States, Uruguay, and Venezuela. [↑](#footnote-ref-7)
8. The promarket index is available for individuals from 52 countries: Albania, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bosnia Herzegovina, Brazil, Bulgaria, Canada, Chile, Czech Rep., Dominican Rep., El Salvador, Estonia, Finland, Georgia, Germany, India, Japan, Kyrgyzstan, Latvia, Lithuania, Mexico, Moldova, Montenegro, New Zealand, Nigeria, North Macedonia, Norway, Peru, Philippines, Puerto Rico, Romania, Russia, Serbia, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan ROC, Tanzania, Turkey, Uganda, Ukraine, United States, Uruguay, Venezuela, Vietnam, and Zimbabwe. [↑](#footnote-ref-8)