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Charity, and Poverty in  
Comparative Perspective**

By *Pejman Abedifar and Mohammad  
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# Devotion Without Action: Islam, Charity, and Poverty in Comparative Perspective

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## ABSTRACT

This paper examines whether strong religious commitment in Islamic societies translates into lower poverty levels. Despite Islamic teachings that emphasize poverty alleviation through obligations like *zakāt*, our cross-country analysis (2010–2019) finds no significant difference in poverty rates or individual charitable giving between Islamic and non-Islamic countries. Using covariate balancing propensity score matching, we control for observable differences and find that Islamic governments, particularly those with religious regimes, provide significantly less support to the poor. These findings suggest a gap between religious ideals and practical outcomes: while Muslims report high levels of religiosity, this does not lead to greater financial sacrifice or state-led poverty alleviation. Our study contributes to the ongoing debate on whether religion primarily serves a psychological and identity-based function, or whether devout individuals internalize and act upon the broader moral and economic commitments prescribed by their faith.

**Keywords:** Poverty alleviation, Giving index, Social protection, *zakāt*.

**JEL Classification:** Z12, I32, D64, H53.

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## 1. Introduction

There is a long-standing debate about the role of religion in the society – specifically, whether religion primarily serves a psychological function by helping individuals cope with hardship (Freud, 1927; Marx, 1867; Feuerbach, 1957), enhance mental well-being (Miller et al., 2012), and improve life satisfaction (Campante and Yanagizawa-Drott, 2015), or whether devout individuals internalize and uphold the broader moral, social, and economic commitments prescribed by their faith (Karlan et al., 2021; Linardi et al., 2022). This debate can be further explored through the lens of the *club goods* model of religion (Iannaccone, 1992; Berman, 2000; Scotchmer, 2002). According to this model, religious prohibitions and obligations act as membership costs – mechanisms that filter out free riders or less committed individuals. As a result, only genuinely devoted members remain, which enhances internal group cohesion, strengthens commitment, and improves the collective allocation of resources.

This paper contributes to this debate by examining whether poverty levels in Islamic societies are lower than in otherwise similar non-Islamic societies. This question is relevant for two reasons. First, Muslims consistently express strong levels of religiosity. Data from the World Values Survey shows that religion holds significantly more importance for Muslims than for adherents of other faiths. Figure (1) illustrates these findings.

[Insert Figure 1 here]

Second, Islam places a particularly strong emphasis on supporting the poor (Davis and Robinson, 2006; Abedifar, 2019). Indeed, helping those in need is not just encouraged – it is a core tenet of righteousness within Islamic doctrine.<sup>2</sup> Given the strength of Islamic teachings on poverty alleviation, combined with the high reported religiosity among Muslims, a key question arises: to what extent have these religious principles been translated into tangible reductions in poverty across Islamic societies? More specifically, have Islamic communities implemented these obligations in practice, or have they remained primarily aspirational?

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<sup>2</sup> Specifically, *zakāt* appears in 25 verses of the Qur’ān right after the instruction to prayer, highlighting its significance as one of the main pillars of Islam: Chapter 2: verses 43, 83, 110, 177, 277; 4:77, 162; 5:12, 55; 9:5, 11, 18, 71; 19:31, 55; 21:73; 22:41, 78; 24:37, 56; 27:3; 31:4; 33:33; 58:13; 73:20; 98:5. The Qur’ān also uses different terminologies and frameworks to encourage Muslims to give, including *zakāt*, *sadaqah*, *infāq*, and *qard al-hasan*.

This question becomes especially salient in areas involving material sacrifice, such as the obligation to pay *zakāt* (almsgiving). In this context, we ask whether Muslims are willing to bear financial costs in line with religious requirements. Our core hypothesis is that if Islamic doctrines are actively followed – particularly those emphasizing poverty alleviation – then poverty levels in Islamic societies should be lower than in comparable non-Islamic societies.

In this paper, we conduct a cross-country comparison of Islamic and non-Islamic countries with respect to poverty levels. The premise is that, aside from observable selection factors – which we control for – the primary difference between the two groups is their religious classification. We implement this using the Covariate Balancing Propensity Score method, which estimates propensity scores in a way that ensures balance in observable covariates between the two groups. To reduce the influence of noise or short-term fluctuations, we use the ten-year averages (2010-2019) for all variables, based on data from sources such as the World Bank and the International Labour Organization. Our results indicate no statistically significant difference in poverty levels between Islamic and non-Islamic countries.

To provide a more nuanced analysis, we further distinguish between individuals and governments in Islamic countries. This distinction matters, as individuals and state institutions may differ in how they interpret and act on Islamic principles. Accordingly, we use two sets of dependent variables. At the individual level, we use the Giving Index as a proxy for charitably behavior and the willingness to fulfill financial religious obligations such as *zakāt* and *sadaqah*. At the government level, we examine both the overall coverage of social protection programs and the coverage of vulnerable populations to assess institutional commitment to poverty alleviation.

The results show that individuals in Islamic and non-Islamic countries do not differ significantly in their charitable behavior, as measured by the Giving Index. This suggests that, at the individual level, people in both types of societies exhibit similar tendencies to assist those in need. However, at the government level, we observe a notable disparity: governments in Islamic countries allocate significantly less support to poverty alleviation – both in terms of broad social protection and targeted support for vulnerable populations – indicating weaker institutional commitment.

To explore heterogeneity in these patterns, we conduct subgroup analyses by disaggregating Islamic countries along two key dimensions. First, we distinguish between countries governed by religious versus secular regimes. Second, we classify countries as authoritarian or democratic.

These distinctions are motivated by the idea that governance structure may influence not only state-led poverty relief programs but also individual behavior. For instance, in secular regimes, governments may not implement Islamic obligations, possibly promoting individuals to take on a greater personal role in fulfilling these duties.

The findings for religiously governed Islamic countries align with our main results. These countries do not exhibit significantly different poverty levels or Giving Index scores relative to non-Islamic countries, but their governments provide significantly less support to the poor, especially to vulnerable groups. In contrast, Islamic countries with secular governments show no significant difference in poverty levels compared to non-Islamic countries. However, they exhibit marginally higher Giving Index scores, suggesting slightly greater individual engagement in charitable giving. Their governments do not differ significantly in poverty alleviation efforts compared to non-Islamic governments.

Among authoritarian Islamic countries, we observe a weakly significant increase in poverty levels compared to non-Islamic counterparts. These countries also do not differ significantly in Giving Index scores, while their governments provide relatively less support to the poor. Similarly, non-authoritarian Islamic countries display weakly higher poverty rates, no meaningful difference in charitable behavior, and marginally lower levels of government social protection.

Our findings indicate that, despite Islam's strong emphasis on supporting the poor, this moral imperative has not translated into systematically lower poverty levels or greater charitable behavior in Islamic societies. This challenges the assumption that strong religious belief naturally fosters greater economic or moral commitment (Iannaccone, 1992; Berman and Iannaccone, 2006). Although Muslims report high levels of religiosity and Islam places helping the poor at the core of its ethical framework, we find no consistent evidence that Islamic countries outperform their non-Islamic counterparts in poverty reduction or individual giving. These results suggest that religion may serve more of a psychological or identity-related function than a practical guide for economic behavior, particularly when obligations involve financial sacrifice (Bentzen, 2019; 2021). From the perspective of the club goods model, this implies that religious "membership costs", such as *zakāt* may not effectively filter for committed members in practice, at least in the domain of poverty alleviation.

We contribute to the broader literature exploring the relationship between economic motivations and religious obligations ([Gruber and Hungerman, 2008](#); [Hirschle, 2010](#); [Montero et al., 2025](#)). Prior studies show that when the opportunity cost of religious participation increases, individuals are less likely to engage in religious practices. We extend this literature by showing that Islamic societies tend to underperform in fulfilling financially burdensome religious obligations—suggesting that when such duties entail economic sacrifice, they are less likely to be carried out.

Our study also adds to the literature on the economic consequences of religion ([Barro and McCleary, 2003](#); [Noland, 2005](#); [McCleary and Barro, 2006](#); [Audretsch et al., 2007](#); [McGuire et al., 2012](#); [Durlauf et al., 2012](#); [Cantoni, 2015](#); [Kuran, 2018](#); [Bryan et al., 2021](#); [Benabou et al., 2022](#)) by providing new cross-country evidence from the Muslim world. Specifically, we show that, contrary to normative expectations about the poverty-reducing potential of Islamic values and institutions, Islam — as a dominant national religion — is not statistically associated with lower poverty outcomes. Lastly, our findings challenge the effectiveness of poverty alleviation through religious tools, such as *zakāt*, as advocated by scholars such as [Qardawi \(1969\)](#) and [Siddiqi \(1996\)](#).

The remainder of the paper is organized as follows. Section 2 presents the data and summary statistics, and defines the variables used in this study. Section 3 explains the methodology. Section 4 discuss the main results, including a breakdown of individual and government roles, as well as heterogeneity across Islamic countries. Section 5 concludes.

## **2. Data and Summary Statistics**

The World Bank's Poverty and Inequality Platform (PIP) provides data on poverty indicators for 169 countries. In this study, the primary dependent variable is the poverty rate, measured by the poverty headcount ratio, the percentage of the population living below a specified poverty threshold.

Although other metrics, such as the poverty gap index, may offer more nuanced insights, the poverty rate was chosen for its simplicity and ease of interpretation ([Alkire and Foster, 2011](#)). The analysis is based on the \$3.65 per day poverty line, which represents a midpoint between the commonly used thresholds of \$2.15 and \$6.85 per day.

The second dependent variable is the Giving Index, derived from Gallup World Poll surveys and published in the annual reports of the Charities Aid Foundation. This index calculates the average percentage of a country's population that, in the past month, reported engaging in any of the following three behaviors: (1) donating money to an organization, (2) volunteering time to an organization, and (3) helping a stranger in need.

To evaluate government responses to poverty, we include two additional indicators from the International Labour Organization (ILO): (1) the percentage of vulnerable individuals covered by social assistance programs, and (2) the percentage of the population covered by at least one social protection benefit. These indicators respectively capture the depth of targeted welfare programs and the breadth of national safety nets.<sup>3</sup>

To account for potential selection bias, we incorporate a broad set of covariates that reflect cross-country differences in macroeconomic conditions, social development, and political structures. These covariates are selected based on established findings in the poverty and economic growth literature ([Ahluwalia, 1976](#); [Barro, 1996](#); [Amponsah et al., 2023](#)).

Table A1 in the appendix presents detailed definitions and sources for all variables. Most covariates are sourced from the World Development Indicators (WDI) ([World Bank, 2019a](#)), except for GDP per capita and population, which are drawn from the Poverty and Inequality Platform. The variable Socialist, indicating whether the legal origin is based on socialist law, is based on [Nunn and Puga \(2012\)](#). In total, 21 covariates are considered, though not all are used in every model or with every dependent variable.

The Governance variable is derived from the Worldwide Governance Indicators (WGI) ([Kaufmann et al., 2010](#)), which assesses perceptions of governance quality across six dimensions: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These are combined using Principal Component Analysis (PCA) to construct a composite index ([Nemlioglu and Mallick, 2020](#); [Amponsah et al., 2023](#)).

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<sup>3</sup> A potentially more informative measure – the percentage of poor individuals covered by social protection systems – was excluded due to limited data availability (only for 138 countries with poverty data) and the non-random nature of the missing data, which could bias cross-country comparisons.

The main explanatory variable is a binary indicator that takes the value one if a country is classified as Islamic, and zero otherwise. In this study, a country is classified as Islamic if its Muslim population exceeds 40% of the total population.<sup>4</sup> Due to data limitation, particularly on poverty, the analysis includes only 169 countries, which excludes some Islamic nations such as Saudi Arabia and Kuwait. With this definition, 42 out of the 169 countries in the sample is classified as Islamic. Data on Muslim population shares are sourced from the World Population Review.

These 42 Islamic countries are further classified along two dimensions: (1) religious versus secular governments, and (2) authoritarian versus non-authoritarian governments. The classification of countries by religious governance relies on a typology developed by the Pew Research Center, which categorizes countries into four groups: (1) states with an official religion, (2) states with a preferred or favored religion, (3) states with no official or preferred religion, and (4) states with a hostile relationship toward religion. In this study, Islamic countries with Islam as their official state religion are classified as religious Islamic states, while the rest are considered secular. Out of the 42 Islamic countries in the sample, 18 have Islam designated as their official religion.

Political regime type is determined using the Economist Intelligence Unit's Democracy Index for 2015. This index averages five key dimensions: electoral process and pluralism, functioning of government, political participation, political culture, and civil liberties. Scores range from 0 to 10: countries scoring 8-10 are labeled Full Democracies, 6-8 as Flawed Democracies, 4-6 as Hybrid Regimes, and below 4 as Authoritarian Regimes. Since most Islamic countries in the sample fall into the Authoritarian category, and that none of them qualify as Full Democracies, we simplify the categorization into two groups: Authoritarian and Non-Authoritarian. Table A2 in the appendix lists the Islamic countries and their classifications by both governance and regime type.

### *2.1. Summary Statistics*

Table 1 presents summary statistics for the dependent variables and key covariates, comparing Islamic and non-Islamic countries. To reduce short-term fluctuations or noise over time, all variables are averaged over the ten-year period from 2010-2019. This period is chosen to exclude the impacts of significant events such as the COVID-19 pandemic or the 2008 global financial

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<sup>4</sup> This threshold – lower than the typical 50% used for majority classifications – is selected to ensure a larger sample of Muslim countries in our analysis.

crisis. The table indicates the differences between Islamic and non-Islamic countries in the following aspects:

*Poverty:* Islamic countries exhibit a higher average poverty rate (29.4%) compared to non-Islamic countries (22.5%).

*Income and Economic Indicators:* Islamic countries have lower GDP per capita (~\$5,680 vs. ~\$13,780), lower trade openness (74.3% vs. 89.7%), and lower foreign direct investment (3.1% of GDP vs. 6.8%). Capital formation is similar across both groups.

*Governance and Institutions:* Governance scores are slightly negative in Islamic countries (-0.03) compared to positive in non-Islamic countries (0.15).

*Inequality and Demographics:* Income inequality (Gini index) is slightly lower in Islamic countries (36.6 vs. 39.5). Islamic countries have marginally smaller populations and a lower urbanization rate.

*Infrastructure and Services:* Electricity access is lower in Islamic countries (76.4% vs. 81.6%).

*Health and Education:* Life expectancy is lower (68.3 vs. 71.8 years), secondary school enrollment is significantly lower (64.3% vs. 82.5%), and public spending on education and health is less (5.5% vs. 8.7% of GDP).

*Legal Systems and Social Protection:* The share of countries with socialist legal traditions is similar across both groups. However, Islamic countries offer considerably lower social assistance coverage (18.0% vs. 38.1%) and general social protection (27.7% vs. 52.2%).

*Other Indicators:* Islamic countries report slightly higher inflation (6.3% vs. 5.4%) and slightly higher GDP growth (3.9% vs. 3.4%). The Giving Index is also marginally lower (30.6% vs. 33.4%).

[Insert Table 1 here]

### **3. Methodology**

This study aims to estimate the relationship between being an Islamic country and poverty outcomes. To achieve this, we need to construct appropriate counterfactuals, that is we seek to

estimate how poverty outcomes in Islamic countries would differ if those countries were not Islamic (Höfler, 2005). This requires comparing Islamic countries with non-Islamic counterparts that are similar in terms of observed characteristics. A common approach for this is propensity score-based matching (Austin, 2011), which assumes that selection into treatment (i.e. being an Islamic country) is determined by observable variables. Under this assumption, conditional on observed features of the units, treatment assignment is unconfounded or as good as random (Rosenbaum and Rubin, 1983; Athey et al., 2016).

The propensity scores are widely used to reduce bias from observed covariates through various methods including matching (Rosenbaum and Rubin, 1985; Dehejia and Wahba, 2002; Abadie and Imbens, 2006; Wu et al., 2024), weighting (Robins et al., 2000; Hirano et al., 2003; Austin and Stuart, 2015), subclassification (Cochran, 1968; Rosenbaum and Rubin, 1984; Lunceford and Davidian, 2004), and covariate balancing (McCaffrey et al., 2004; Hainmueller, 2012; Imai and Ratkovic, 2014; Chan et al., 2016; Li et al., 2018)<sup>5</sup>.

We employ the Covariate Balancing Propensity Score (CBPS) method (Imai and Ratkovic, 2014; Fong et al., 2018). The first step in our analysis is to determine the propensity score model. To do this, we need to select a set of covariates that help determine the likelihood of a country being Islamic. These covariates include log GDP per capita, Gini index, trade openness, electricity access, foreign direct investment, capital formation, government expenditure, education levels, governance indicators, financial development, inflation, natural resource rents, life expectancy, working-age population share (ages 15-64), and population size.

CBPS uses these covariates to estimate propensity scores and compute weights for each country, which are then used in the outcome model to estimate the average causal effect of being an Islamic country on poverty outcomes. In particular, we compute the weights to estimate the Average Treatment Effect on the Treated (ATT), which reflects how poverty outcomes in Islamic countries would differ from what they would have been if those same countries were not Islamic.

To ensure valid inference, we assess covariate balance using standardized mean differences (SMDs), which quantify the difference in covariate means between Islamic and non-Islamic

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<sup>5</sup> Covariate balancing can also be viewed as a form of weighting. Under this interpretation, weighting methods can be broadly categorized into two groups: modeling approach and balancing approach (Chattopadhyay et al., 2020).

groups. The SMD for a covariate is calculated as:  $SMD = (\bar{X}_I - \bar{X}_{nI}) / \sqrt{(S_I^2 + S_{nI}^2) / 2}$ , where  $\bar{X}_I$  and  $\bar{X}_{nI}$  denote the covariate means for Islamic and non-Islamic countries, respectively, and  $S_I$  and  $S_{nI}$  are the corresponding standard deviations. A commonly used threshold for acceptable balance is an SMD below 0.1 (Austin, 2009).

Once covariate balance is confirmed, we estimate the ATT using a weighted regression model, where each observation is weighted by its CBPS-derived weight. This helps mitigate confounding from observed covariates. Our initial outcome model includes only the Islamic dummy variable to estimate its direct association with poverty outcomes. However, following Imbens (2015), we augment the model by adding covariates in a second specification to improve precision and account for any remaining imbalances. In the third specification, we further include regional fixed effects to account for unobserved regional characteristics that may influence both the likelihood of being an Islamic country and poverty levels. This helps control for time-invariant regional heterogeneity and improves the credibility of our estimates.

For robustness, we employ an alternative matching method based on the Synthetic Control method (Abadie and Gardeazabal, 2003; Abadie et al., 2010; Abadie et al., 2015). Although this method is originally designed for panel data with a well-defined intervention date, meaning it requires a known point in time at which the treatment occurs, allowing the researcher to use pre-treatment trends to predict post-treatment outcomes, in our context, the timing of the intervention, namely the Islamization of countries, occurred in the distant past. As a result, we do not observe a well-defined treatment date. Therefore, we adapt this method to a purely cross-sectional setting, constructing a synthetic version of each Islamic country using a weighted average of non-Islamic countries that closely match on observed covariates. We then compare each Islamic country's actual poverty rate to that of its synthetic counterpart.

## 4. Empirical Results

The first step in our analysis is to assess whether covariates are balanced between Islamic and non-Islamic countries after applying the CBPS method. Figure 2 shows the absolute standardized mean differences for each covariate, with the red line representing the values before weighting and the blue line showing the value after weighting. As shown, prior to weighting, most covariates are

imbalanced, based on the conventional threshold that defines imbalance as an absolute standardized mean difference greater than 0.1. After applying the weighting procedure, however, all covariates fall below this threshold, indicating that covariate balance has been successfully achieved.

[Insert Figure 2 here]

With covariate balance established, we proceed to examine the association between being an Islamic country and poverty outcomes. Table 2 presents the regression results. Column (1) reports the results from a model that includes only the Islamic dummy variable. The estimated coefficient is -0.709 and is not statistically significant. In Column (2), we include the full set of covariates, which substantially improves the explanatory power of the model. The coefficient on the Islamic dummy changes to -1.008, but remains statistically insignificant. This lack of substantial change suggests that any imbalance in Column (1) does not bias the results and reinforces the conclusion that being an Islamic country is not strongly associated with poverty outcomes. Column (3) incorporates regional fixed effects to account for unobserved regional factors. The coefficient on the Islamic dummy shifts to 0.717 but again remains statistically insignificant. Overall, across all model specifications, the results consistently indicate no statistically significant relationship between being an Islamic country and poverty rates.

[Insert Table 2 here]

Table B1 in the appendix presents the results of a robustness check. As previously discussed, for each Islamic country, we construct a synthetic counterpart using a weighted combination of non-Islamic countries. The table displays the poverty rate gaps between Islamic countries and their synthetic versions. Although many gaps are zero, the average poverty rate gap is -1.10 percentage points and is statistically significant at the 10% level. This implies that being an Islamic country is associated with a 1.10 percentage point reduction in the poverty rate, although the size of the effect is not particularly large. Apart from the difference in statistical significance, which is relatively weak, the magnitude of the effect aligns closely with the estimates reported in Table 2, particularly columns (1) and (2). This consistency is notable given that regional fixed effects cannot be included in the robustness check. Table B2 in the appendix details the donor countries and their weights used in constructing the synthetic controls.

#### 4.1 *Individuals vs. Government*

While our results suggest no significant association between being an Islamic country and poverty outcomes, it is worth exploring why this might be the case. If Islamic principles or identity were to affect poverty, it would likely occur through mechanisms such as *zakāt*, *sadaqah*, and other forms of charitable giving, core components of Islamic teachings aimed at reducing economic hardship and promoting social welfare. These practices are deeply rooted in the ethical foundations of Islam and promote the redistribution of wealth and care for the less fortunate. Therefore, any potential impact of Islamic identity on poverty would plausibly be mediated by the actual implementation of these charitable mechanisms.

Despite clear doctrinal guidance on charitable obligations, measuring the real-world applications of these principles across countries presents a challenge. Ideally, we would use cross-country data on contributions via *zakāt*, *sadaqah*, and other religious charitable mechanisms. However, due to the lack of consistent data, we turn to the Giving Index as a broader indicator of charitable behavior. This index measures the prevalence of generous actions, including financial donations, volunteering, and helping strangers. While these behaviors may not always stem from religious motivations, they reflect societal norms related to generosity and community support, norms that align with Islamic prescriptions for poverty alleviation.

We use of the Giving Index as the dependent variable and apply the same methodology used in the poverty analysis. To estimate propensity scores, we include covariates such as log GDP per capita, Gini index, natural resource rents, tax revenue, poverty rate, life expectancy, working-age population (15-64), urban population, education, unemployment rate, GDP growth rate and trade openness.

To evaluate differences between Islamic and non-Islamic countries in the Giving Index, we first need to ensure that the covariates are well-balanced. Column (1) of Table A3 in the appendix reports the standardized mean differences of the covariates after weighting, all of which are fall below the threshold for balance. Having confirmed covariate balance, we use the resulting weights in the final regression models. The results are reported in Table 3. Column (1) shows that the coefficient on the Islamic dummy is -0.749, and not statistically significant. In Column (2), after

including all covariates, the coefficient is -0.272 and remains insignificant. Column (3), which includes regional fixed effects, shows the coefficient changing to 0.968, still without statistical significance. These results indicate no meaningful difference in the Giving Index between Islamic and non-Islamic countries, which is consistent with our earlier findings regarding poverty outcomes.

[Insert Table 3 here]

While the preceding analysis focused on societal behavior and individual contributions to poverty alleviation and helping the poor, Islamic principles may also influence poverty outcomes through the actions of governments. It is plausible that governments in Islamic countries, inspired by religious teachings, adopt pro-poor policies. In this case, rather than relying solely on individual acts of supporting the needy, citizens may shift the responsibility for poverty alleviation onto the state by supporting or electing governments that actively pursue pro-poor policies. In such cases, the collective commitment to assisting those in need would manifest through institutional mechanisms rather than through direct personal assistance. Building on this perspective, we compare the performance of governments in Islamic and non-Islamic countries in terms of their efforts to assist the poor. This comparison allows us to examine whether Islamic countries, potentially influenced by religious teachings, show a stronger governmental commitment to poverty alleviation.

To explore this possibility, we compare the performance of Islamic and non-Islamic governments in providing social assistance. Using the same CBPS approach, we estimate propensity scores with the following covariates: log GDP per capita, Gini index, natural resource rents, tax revenue, poverty rate, working-age population, urban population, unemployment rate, socialist legal system dummy, inflation rate, trade openness, access to electricity, and foreign direct investment. As discussed in the data section, we use two dependent variables: (1) the percentage of vulnerable persons covered by social assistance programs, and (2) the percentage of the population receiving at least one social protection benefit. Column (1) of Table A4 in the appendix reports the standardized mean differences for the covariates. As shown, the covariates are well balanced, with all absolute standardized differences falling below commonly accepted thresholds.

Table 4 presents the ATT for the relationship between being an Islamic country and the coverage of vulnerable groups by social protection programs. In the baseline model, the coefficient on the

Islamic dummy is -4.840, which is not statistically significant. After including all covariates, the coefficient becomes -9.988 and is statistically significant at the 1% level. With the addition of regional fixed effects, the coefficient further shifts to -10.854, also significant at the 1% level.

[Insert Table 4 here]

Table 5 exhibits the regression estimates when the dependent variable is the population covered by at least one social protection benefit. In the baseline model, the coefficient on the Islamic dummy is -6.841, which is significant at the 10% level. After adding covariates, the coefficient changes to -10.470, significant at the 1% level, and to -12.149 after controlling for regional fixed effects, also significant at the 1% level. If we consider column (3) of these tables as the reference point, the results indicate that Islamic countries cover approximately 10% fewer vulnerable individuals and 12% fewer people overall through social protection programs compared to non-Islamic countries.

[Insert Table 5 here]

## 4.2 *Subgroup Analysis*

Although we have already examined how both societies and governments address poverty, it is important to consider additional factors that might influence our findings, given substantial heterogeneity across Islamic countries in terms of governance and political systems. To investigate this, we undertake a subgroup analysis to determine whether the observed relationships vary systematically across different categories of countries.

### 4.2.1 *Religious vs. Secular States*

The first potential source of heterogeneity may arise from the degree to which countries are theocratic. Although we previously emphasized that Islamic teachings, particularly through mechanisms such as *zakāt*, place strong importance on poverty alleviation, it is important to recognize that Islamic countries differ significantly in terms of governance. Some have religious governments that embed Islamic law into legal and policy frameworks, while others are secular and maintain a clear separation between religion and the state. This distinction may also influence

societal behavior. For example, in countries with secular governments, individuals may perceive that the state does not fulfil religious responsibilities related to poverty alleviation and may therefore feel compelled to fulfill those responsibilities themselves.

To explore this, we divide Islamic countries into two subgroups: those with religious governments and those with secular governments. As noted in the data section, Islamic countries that officially declare Islam as the state religion in their constitution are classified as religious Islamic countries; others are classified as secular. The control group remains unchanged and consists of all non-Islamic countries, without any further division into secular or religious subgroups.<sup>6</sup>

For the poverty analysis, we use the same set of covariates as in the previous analysis. Columns (1) and (2) of Table A5 in the appendix show the standardized mean differences for Islamic and secular states subgroups, respectively. All covariates are well balanced in both cases, which provides confidence in the validity of the comparison. Tables 6 and 7 present the estimated ATT for poverty rates for the cases where the variable of interest is, respectively, a binary indicator for religious state Islamic countries and secular state Islamic countries. In Table 6, the coefficient on religious state dummy is -4.193 in the baseline model, -2.156 after including covariates, and 1.788 after controlling for regional fixed effects. None of the coefficients are statistically significant. In Table 7, the coefficient on secular state dummy is 3.100, 1.467, and 1.177 across the three models. Again, none of the coefficients are statistically significant, suggesting no meaningful differences in poverty outcomes based on religious governance.

[Insert Table 6 here]

[Insert Table 7 here]

In analyzing individual behavior in countries with religious state vis-à-vis those in secular states, we use the Giving Index as the dependent variable, and the same set of covariates as in the previous model. Columns (2) and (3) of Table A3 in the appendix show that all covariates are well balanced for both religious and secular states subgroups, respectively. Tables 8 and 9 present the ATT estimates for the two subgroups. In Table 8, the coefficient on religious state dummy is 0.721 (baseline model), 0.815 (with covariates), and -2.397 (with regional fixed effects), none of which

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<sup>6</sup> This is due to the limited number of non-Islamic countries with an official state religion, only 16, making it impractical to construct a valid control subgroup.

are statistically significant. In Table 9, the coefficient on secular state dummy is -0.829, 0.293, and 4.145, with the last being statistically significant at the 5% level.

[Insert Table 8 here]

[Insert Table 9 here]

Turning to government social protection, Columns (2) and (3) of Table A4 in the appendix show all covariates are well balanced, with the exception of the Gini index in the religious state subgroup, which shows a standardized mean difference of -0.13. However, this level of imbalance is not considered substantial. Table 10 and 11 present the results for coverage of vulnerable persons by social protection programs, for religious and secular states subgroups, respectively. In Table 10, the coefficient on religious state dummy, is -6.119 (baseline), -11.674 (with covariates), and -21.002 (with regional fixed effects), with the last two being statistically significant at the 1% level. For secular states subgroup, the results reported in Table 11, the coefficient on secular state dummy is -0.987, -4.080, and -2.586, none of which are statistically significant.

[Insert Table 10 here]

[Insert Table 11 here]

Table 12 and 13 present the regression results for overall social protection coverage, for religious and secular states subgroups, respectively. Table 12 demonstrates a significantly negative association between religious state dummy and overall social protection coverage. The coefficient begins at -10.316 in the baseline model and becomes more pronounced as covariates and regional fixed effects are introduced, reaching -14.688 and -24.336, respectively, all statistically significant at the 1% level. For the secular state subgroup, Table 13 reveals no meaningful relationship between secular state dummy and overall social protection coverage. The estimated coefficients are -0.120 (baseline), -2.539 (with covariates), and -3.643 (with regional fixed effects), none of which are statistically significant.

[Insert Table 12 here]

[Insert Table 13 here]

#### 4.2.2 *Authoritarian vs. Non-Authoritarian Islamic Countries*

Another potential source of heterogeneity lies in the level of democracy across Islamic countries, as governments may not always represent the preferences or values of their populations. For instance, in authoritarian Islamic states, the government may seek to enforce Islamic principles, including those related to poverty alleviation, through top-down mandates—even when such practices do not reflect the actual preferences or engagement of the population. In such contexts, poverty-alleviation policies may be implemented formally by the state, without strong societal participation or voluntary support.

We therefore classify Islamic countries into authoritarian and non-authoritarian subgroups based on the Economist Intelligence Unit’s Democracy Index. We then compare these two groups in terms of poverty rates, the Giving Index, and government-provided social protection coverage. The analysis is conducted using the same CBPS method and the set of covariates applied in the previous subgroup analysis. As with the previous subgroup analysis, we do not construct an authoritarian non-Islamic control group due to lack of sufficient observations.

For the poverty rate analysis, covariate balance is shown in Columns (3) and (4) of Table A5 in the appendix, confirming balance for both subgroup comparisons. Tables 14 and 15 present the regression estimates. For authoritarian Islamic countries (Table 14), the coefficient is -2.166 (baseline), -2.458 (with covariates), and -3.779 (with regional fixed effects), the last being statistically significant at the 10% level. In Table 15, the coefficient on the non-authoritarian Islamic dummy is 0.511 (baseline), -0.613 (with covariates), and 2.448 (with regional fixed effects), again with the last being statistically significant at the 10% level.

[Insert Table 14 here]

[Insert Table 15 here]

For the Giving Index, the covariate balance is confirmed in Columns (4) and (5) of Table A3 in the appendix, for authoritarian Islamic and non-authoritarian Islamic countries, respectively. In Table 16, where the variable of interest is a binary indicator for authoritarian Islamic countries, the estimated coefficient is -1.210 (baseline), -0.765 (with covariates), and 0.408 (with regional fixed effects), none of which are statistically significant. For non-authoritarian Islamic countries, Table

17, the coefficient is -0.450 (baseline), 0.645 (with covariates), and 2.431 (with regional fixed effects), again none of them are statistically significant.

[Insert Table 16 here]

[Insert Table 17 here]

For the analysis of government social protection, covariate balance is verified in Columns (4) and (5) of Table A4 in the appendix, for the two subgroup of countries. Table 18 presents the results for the association between being an authoritarian Islamic country and social protection coverage for vulnerable populations. The coefficient is -4.125 (baseline), -13.032 (with covariates), and -18.283 (with regional fixed effects), with the latter two estimates are statistically significant at the 1% level, indicating a robust negative relationship between being an authoritarian Islamic country and social protection coverage for vulnerable individuals. Table 19 reports the corresponding estimates for non-authoritarian Islamic countries. The coefficient is -4.808 (baseline), -8.363 (with covariates), and -5.376 (with regional fixed effects), with the second and third estimates are statistically significant at the 1% and 5% levels, respectively.

[Insert Table 18 here]

[Insert Table 19 here]

For overall social protection coverage, Table 20 shows that the coefficient on authoritarian Islamic dummy is -8.716 (baseline), -13.551 (with covariates), and -18.722 (with regional fixed effects). The estimates in the second and third columns are statistically significant at the 1% level, reinforcing the evidence of reduced social protection coverage in authoritarian Islamic states. In contrast, Table 21 reports regression estimates for non-authoritarian Islamic countries. The coefficient is -3.269, -6.853, and -3.854 across the three model specifications, with only the second estimate being statistically significant at the 1% level.

[Insert Table 20 here]

[Insert Table 21 here]

## 5. Conclusion

Islamic societies, guided by religious obligations such as *zakāt*, might be expected to exhibit lower levels of poverty when structural factors are accounted for. To empirically assess this hypothesis, we employ cross-country data and use CBPS method to compare Islamic countries with otherwise similar non-Islamic countries.

Our findings reveal that, on average, Islamic countries do not experience significantly lower poverty levels than their non-Islamic counterparts. We conclude that there appears to be a reluctance among Muslims to make the material sacrifices that Islamic teachings prescribe for addressing poverty. If these religious obligations were widely and sincerely fulfilled, we would expect to observe substantially lower poverty rates in Islamic societies.

To further investigate this disconnect, we use the Giving Index as a proxy for individuals' willingness to fulfill religious obligations and, more broadly, their inclination to support the poor. Additionally, recognizing that individuals in Islamic countries may delegate this responsibility to the states, we also compare the behavior of Islamic and non-Islamic governments in terms of their commitment to social protection. However, even with these supplementary indicators, we find no strong evidence of a consistent or substantial commitment by either individuals or governments in Islamic countries, to poverty alleviation.

Taken together, our findings contribute to the literature by emphasizing that, in practice, economic self-interest may override religious obligations. We also challenge theoretical perspectives that attribute high levels of religiosity among Muslims to the presence of positive externalities within religious communities, such as those implied by the club goods model of religion, which emphasizes selective incentives and communal benefits as drivers of religious participation. While our analysis does not directly examine the coping function of religion, the absence of a statistically significant inclination toward charitable spending associated with Islamic practice leaves open the possibility that religion primarily serves a psychological role for communities.

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## **Figures**

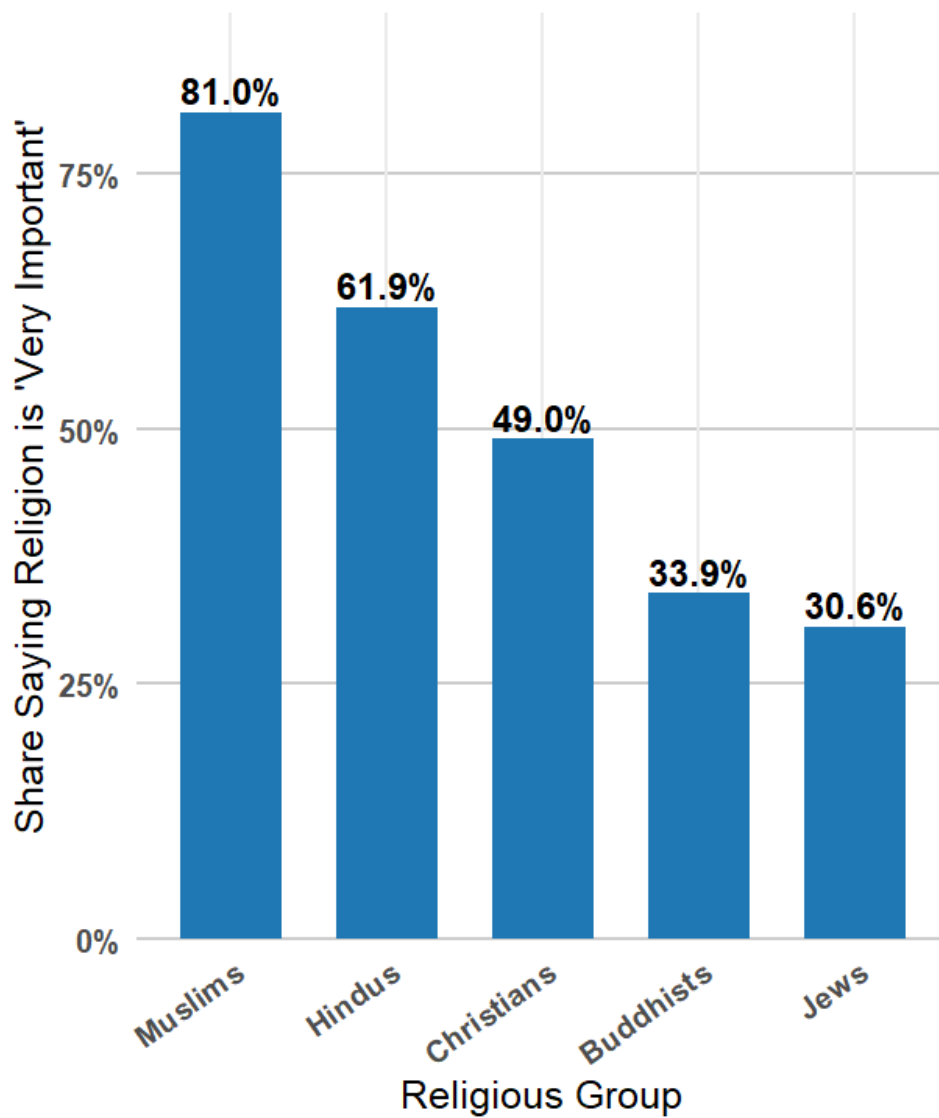


Figure 1. Share of individuals who say religion is "very important" in their life, by religious group. Based on data from the World Values Survey (2017-2021), Wave 7, this figure shows the percentage of individuals within each religious group who responded "very important" to the question: "How important is religion in your life?"

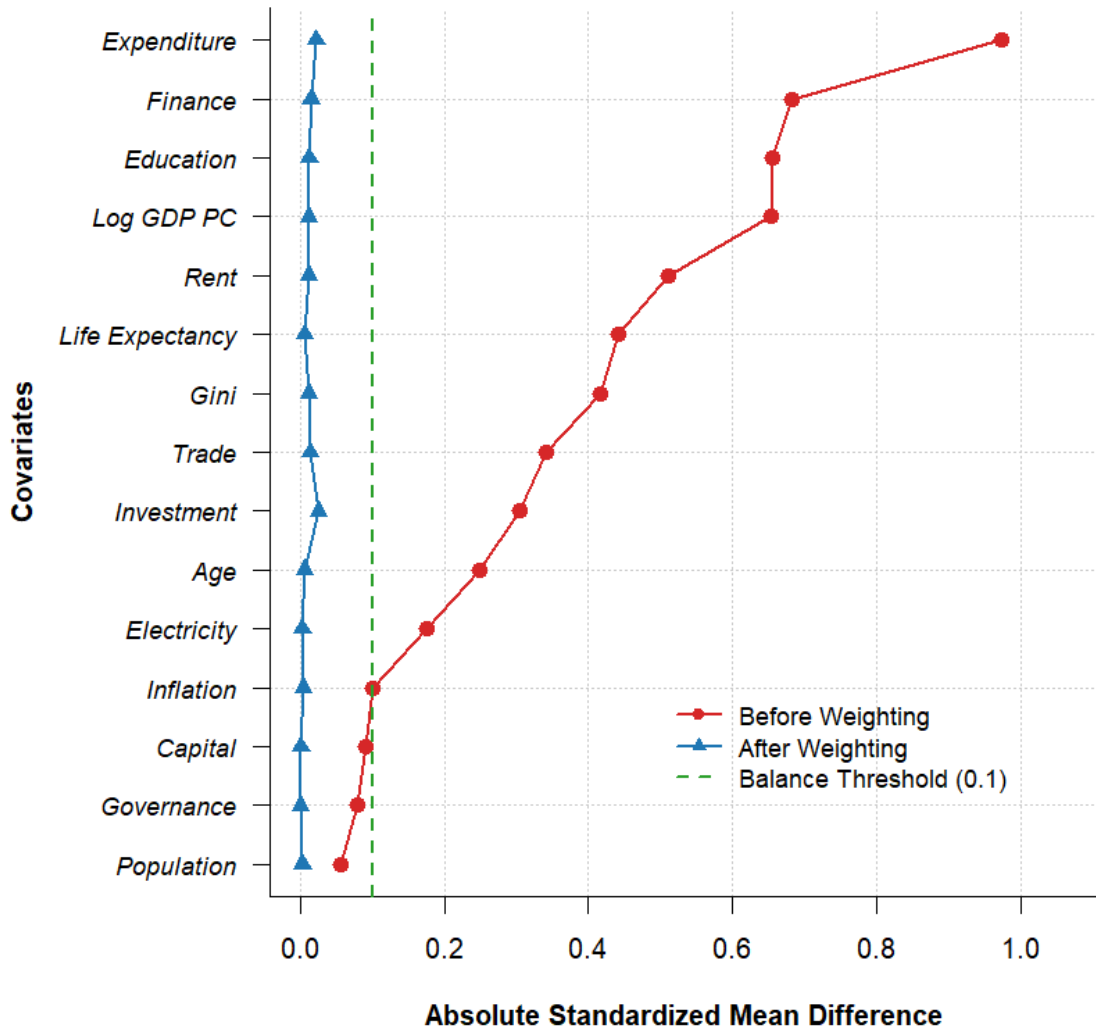


Figure 2: Absolute Standardized Mean Differences. The figure presents the absolute standardized mean differences for each covariate in the Islamic case, showing both Before Weighting (red line) and After Weighting (blue line) conditions. The green line marks the covariate balance threshold. For a detailed description of the covariates, please refer to Table 1.

## **Tables**

Table 1: Summary Statistics for Islamic and Non-Islamic Countries.

	Islamic				Non-Islamic			
	Mean	SD	Min	Max	Mean	SD	Min	Max
Poverty Rate	29.37	27.14	0.00	84.06	22.54	27.78	0.00	92.26
GDP PC (1000 \$)	5.68	1.15	0.47	66.78	13.78	18.91	0.29	106.19
Population (Millions)	36.93	59.27	0.42	257.29	44.12	170.42	0.10	1374.64
Urban	52.67	19.83	16.29	98.88	57.56	22.95	11.96	100.00
Gini	36.55	4.90	29.07	50.63	39.49	8.70	25.40	63.60
Trade	74.29	46.32	22.93	293.73	89.72	44.11	25.59	336.63
Electricity	76.40	30.71	8.60	100.00	81.56	27.99	4.31	100.00
Investment	3.09	2.60	-1.62	10.60	6.79	17.01	-2.36	132.31
Capital	25.80	8.40	14.78	50.34	25.06	7.67	8.66	58.82
Inflation	6.31	6.61	0.69	32.14	5.42	10.82	-0.32	88.65
GDP Growth	3.87	2.84	-6.36	8.72	3.36	2.18	-6.59	9.78
Life Expectancy	68.27	7.75	51.42	79.89	71.76	8.00	50.35	83.59
Governance	-0.03	2.46	-4.49	4.05	0.15	2.11	-4.47	4.14
Rent	9.76	9.26	0.00	43.37	5.29	8.26	0.00	55.30
Finance	32.44	27.50	0.00	117.34	57.31	43.55	1.80	212.60
Unemployment	8.28	6.32	0.26	26.18	8.09	5.80	0.63	26.52
Education	64.29	25.94	17.16	104.77	82.51	29.62	11.23	157.99
Tax	13.22	4.92	0.29	24.18	17.58	7.31	5.49	66.95
Age	61.49	8.37	48.46	84.80	63.27	5.71	49.98	73.01
Expenditure	5.54	2.31	0.96	10.49	8.67	3.92	2.16	25.59
Socialist	0.19	0.40	0.00	1.00	0.20	0.40	0.00	1.00
Vulnerable	17.99	21.11	0.40	100.00	38.12	33.56	0.00	100.00
Social Protection	27.73	23.52	1.70	98.58	52.15	33.38	2.93	100.00
Giving Index	30.61	8.90	17.00	49.14	33.41	10.67	12.33	59.17

The number of Islamic and non-Islamic countries is consistent across all variables (Islamic = 42, non-Islamic = 127), except for the variables Vulnerable (Islamic = 37, non-Islamic = 120), Social Protection (Islamic = 40, non-Islamic = 124), and Giving (Islamic = 40, non-Islamic = 110).

Table 2: Islamic Status and Poverty Rate.

	<i>Dependent variable:</i>		
	Poverty Rate		
	(1)	(2)	(3)
Islamic Dummy	-0.709 (4.112)	-1.008 (1.510)	0.717 (1.523)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	169	169	169
R <sup>2</sup>	0.0002	0.878	0.918
F Statistic	0.030	68.233	74.211

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Poverty Rate and the variable of interest is defined as being an Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Figure 1. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 3: Islamic Status and Giving Index.

	<i>Dependent variable:</i>		
	Giving Index		
	(1)	(2)	(3)
Islamic Dummy	-0.749 (1.595)	-0.272 (1.374)	0.968 (1.541)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	150	150	150
R <sup>2</sup>	0.001	0.323	0.450
F Statistic	0.220	4.981	5.592

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Giving Index and the variable of interest is defined as being an Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A3. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 4: Islamic Status and Social Protection for Vulnerable Persons.

	<i>Dependent variable:</i>		
		Vulnerable	
	(1)	(2)	(3)
Islamic Dummy	-4.840 (3.712)	-9.988*** (3.120)	-10.854*** (3.632)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	157	157	157
R <sup>2</sup>	0.011	0.438	0.463
F Statistic	1.701	7.889	5.853

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Vulnerable Persons Covered by Social Protection and the variable of interest is defined as being an Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 5: Islamic Status and Social Protection.

	<i>Dependent variable:</i>		
	Social Protection		
	(1)	(2)	(3)
Islamic Dummy	-6.841* (4.133)	-10.470*** (2.657)	-12.149*** (3.116)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	164	164	164
R <sup>2</sup>	0.017	0.674	0.683
F Statistic	2.740	21.971	15.421

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Population Covered by at Least One Social Protection Benefit and the variable of interest is defined as being an Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 6: Religious Islamic Status and Poverty Rate.

	<i>Dependent variable:</i>		
	Poverty Rate		
	(1)	(2)	(3)
Religious State Dummy	-4.193 (3.533)	-2.156 (1.626)	1.788 (2.101)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	145	145	145
R <sup>2</sup>	0.010	0.832	0.918
F Statistic	1.408	39.548	62.185

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Poverty Rate and the variable of interest is defined as being a Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A5. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 7: Secular Islamic Status and Poverty Rate.

	<i>Dependent variable:</i>		
	Poverty Rate		
	(1)	(2)	(3)
Secular State Dummy	3.100 (4.585)	1.467 (1.250)	1.177 (1.401)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	151	151	151
R <sup>2</sup>	0.003	0.936	0.943
F Statistic	0.457	121.701	96.020

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Poverty Rate and the variable of interest is defined as being a Non-Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A5. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 8: Religious Islamic Status and Giving Index.

	<i>Dependent variable:</i>		
	Giving Index		
	(1)	(2)	(3)
Religious State Dummy	0.721 (1.640)	0.815 (1.146)	-2.397 (2.117)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	127	127	127
R <sup>2</sup>	0.002	0.580	0.715
F Statistic	0.193	12.023	14.162

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Giving Index and the variable of interest is defined as being a Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A3. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 9: Secular Islamic Status and Giving Index.

	<i>Dependent variable:</i>		
	Giving Index		
	(1)	(2)	(3)
Secular State Dummy	-0.829 (1.789)	0.293 (1.663)	4.145** (1.766)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	133	133	133
R <sup>2</sup>	0.002	0.254	0.488
F Statistic	0.215	3.113	5.668

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Giving Index and the variable of interest is defined as being a Non-Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A3. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 10: Religious Islamic Status and Social Protection for Vulnerable Persons.

	<i>Dependent variable:</i>		
		Vulnerable	
	(1)	(2)	(3)
Religious State Dummy	-6.119 (4.083)	-11.674*** (4.248)	-21.002*** (6.040)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	136	136	136
R <sup>2</sup>	0.016	0.345	0.406
F Statistic	2.246	4.547	3.933

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Vulnerable Persons Covered by Social Protection and the variable of interest is defined as being a Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 11: Non-Religious Islamic Status and Social Protection for Vulnerable Persons.

	<i>Dependent variable:</i>		
		Vulnerable	
	(1)	(2)	(3)
Secular State Dummy	-0.987 (3.492)	-4.080 (2.528)	-2.586 (2.707)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	141	141	141
R <sup>2</sup>	0.001	0.550	0.632
F Statistic	0.080	10.981	10.306

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Vulnerable Persons Covered by Social Protection and the variable of interest is defined as being a Non-Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 12: Religious Islamic Status and Social Protection.

	<i>Dependent variable:</i>		
	Social Protection		
	(1)	(2)	(3)
Religious State Dummy	-10.316*** (3.945)	-14.688*** (3.662)	-24.336*** (4.335)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	141	141	141
R <sup>2</sup>	0.047	0.479	0.575
F Statistic	6.839	8.269	8.122

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Population Covered by at Least One Social Protection Benefit and the variable of interest is defined as being a Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 13: Secular Islamic Status and Social Protection.

	<i>Dependent variable:</i>		
	Social Protection		
	(1)	(2)	(3)
Secular State Dummy	-0.120 (4.583)	-2.539 (2.484)	-3.643 (2.365)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	147	147	147
R <sup>2</sup>	0.00000	0.748	0.832
F Statistic	0.001	27.927	31.209

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Population Covered by at Least One Social Protection Benefit and the variable of interest is defined as being a Non-Religious Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 14: Authoritarian Islamic Status and Poverty Rate.

	<i>Dependent variable:</i>		
	Poverty Rate		
	(1)	(2)	(3)
Authoritarian State Dummy	-2.166 (4.313)	-2.458 (1.644)	-3.779* (2.240)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	150	150	150
R <sup>2</sup>	0.002	0.871	0.910
F Statistic	0.252	56.214	58.698

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Poverty Rate and the variable of interest is defined as being an Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A5. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 15: Non-Authoritarian Islamic Status and Poverty Rate.

	<i>Dependent variable:</i>		
	Poverty Rate		
	(1)	(2)	(3)
Non-Authoritarian State Dummy	0.511 (4.384)	-0.613 (1.306)	2.448* (1.254)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	146	146	146
R <sup>2</sup>	0.0001	0.924	0.952
F Statistic	0.014	97.814	110.051

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Poverty Rate and the variable of interest is defined as being a Non-Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A5. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 16: Authoritarian Islamic Status and Giving Index.

	<i>Dependent variable:</i>		
	Giving Index		
	(1)	(2)	(3)
Authoritarian State Dummy	-1.210 (1.748)	-0.765 (1.504)	0.408 (2.044)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	132	132	132
R <sup>2</sup>	0.004	0.334	0.440
F Statistic	0.479	4.555	4.633

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Giving Index and the variable of interest is defined as being an Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A3. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 17: Non-Authoritarian Islamic Status and Giving Index.

	<i>Dependent variable:</i>		
	Giving Index		
	(1)	(2)	(3)
Non-Authoritarian State Dummy	-0.450 (1.610)	0.645 (1.327)	2.431 (1.533)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	128	128	128
R <sup>2</sup>	0.001	0.416	0.589
F Statistic	0.078	6.258	8.148

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Giving Index and the variable of interest is defined as being a Non-Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A3. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 18: Authoritarian Islamic Status and Social Protection for Vulnerable Persons.

	<i>Dependent variable:</i>		
		Vulnerable	
	(1)	(2)	(3)
Authoritarian State Dummy	-4.125 (4.352)	-13.032*** (4.292)	-18.283*** (5.042)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	139	139	139
R <sup>2</sup>	0.007	0.433	0.467
F Statistic	0.898	6.777	5.175

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Vulnerable Persons Covered by Social Protection and the variable of interest is defined as being an Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 19: Non-Authoritarian Islamic Status and Social Protection for Vulnerable Persons.

	<i>Dependent variable:</i>		
		Vulnerable	
	(1)	(2)	(3)
Non-Authoritarian State Dummy	-4.808 (3.463)	-8.363*** (2.197)	-5.376** (2.623)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	138	138	138
R <sup>2</sup>	0.014	0.661	0.707
F Statistic	1.927	17.145	14.144

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Vulnerable Persons Covered by Social Protection and the variable of interest is defined as being a Non-Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 20: Authoritarian Islamic Status and Social Protection.

	<i>Dependent variable:</i>		
	Social Protection		
	(1)	(2)	(3)
Authoritarian State Dummy	-8.716*	-13.551***	-18.722***
	(4.609)	(3.358)	(3.879)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	146	146	146
R <sup>2</sup>	0.024	0.689	0.717
F Statistic	3.577	20.724	15.836

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Population Covered by at Least One Social Protection Benefit and the variable of interest is defined as being an Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

Table 21: Non-Authoritarian Islamic Status and Social Protection.

	<i>Dependent variable:</i>		
	Social Protection		
	(1)	(2)	(3)
Non-Authoritarian State Dummy	-3.269 (4.108)	-6.853*** (2.133)	-3.854 (2.385)
Covariates	No	Yes	Yes
Regional Fixed Effects	No	No	Yes
Observations	142	142	142
R <sup>2</sup>	0.005	0.771	0.826
F Statistic	0.633	30.464	28.666

This table reports the estimated Average Treatment Effect on the Treated (ATT), where the dependent variable is the Population Covered by at Least One Social Protection Benefit and the variable of interest is defined as being a Non-Authoritarian Islamic country, a binary indicator. Column (1) includes only the variable of interest without any covariates or fixed effects. Column (2) adds a set of covariates, which are the same as those listed in Table A4. Column (3) further includes regional fixed effects to account for unobserved regional heterogeneity, in addition to the covariates. Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors in parentheses.

## **Appendix A**

Table A1: Variable Description and Data Source.

Variable	Description	Data Source
Poverty Rate	Population living below \$3.65 per day, 2017 PPP (% of total population).	World Bank PIP
GDP PC	Gross Domestic Product divided by midyear population (Constant 2017 US\$).	World Bank PIP
Population	Total resident population.	World Bank PIP
Urban	Urban population (% of total population).	World Bank WDI
Gini	Gini inequality index (0-1).	World Bank WDI
Trade	Trade openness (exports + imports) as % of GDP.	World Bank WDI
Electricity	Population with access to electricity (% of total population).	World Bank WDI
Investment	Foreign direct investment, net inflows (% of GDP).	World Bank WDI
Capital	Gross capital formation (% of GDP).	World Bank WDI
Inflation	Annual consumer price index growth (%).	World Bank WDI
GDP Growth	Annual GDP growth rate (%).	World Bank WDI
Life Expectancy	Average number of years newborn would live.	World Bank WDI
Governance	Governance index measure.	World Bank WDI
Rent	Natural resource rents (% of GDP).	World Bank WDI
Finance	Domestic credit to private sector (% of GDP).	World Bank WDI
Unemployment	Unemployment rate (%).	World Bank WDI
Education	Gross secondary school enrollment ratio (% of eligible age group).	World Bank WDI
Tax	Tax revenue (% of GDP).	World Bank WDI
Age	Population between the ages 15 to 64 (% of total population).	World Bank WDI
Expenditure	Government expenditure on education and health (% of GDP).	World Bank WDI
Socialist	A dummy variable that is 1 if legal system classified under the socialist law, and 0 otherwise.	Nunn & Puga (2012)
Vulnerable	Vulnerable persons covered by social assistance (%).	ILO
Social Protection	Population covered by at least one social protection benefit (%).	ILO
Giving Index	Average of adult participation rate in money donations, time volunteering, and helping strangers (0-100).	Charities Aid Foundation

*Notes:* PIP- Poverty and Inequality Platform; WDI- World Development Indicators; ILO- International Labour Organization.

Table A2: List of Islamic Countries Classified by Official Religion Status and Political Regime.

Country Name	Religious	Secular	Authoritarian	Non-Authoritarian
Albania	0	1	0	1
Algeria	1	0	1	0
Azerbaijan	0	1	1	0
Bangladesh	1	0	0	1
Bosnia and Herzegovina	0	1	0	1
Burkina Faso	0	1	0	1
Chad	0	1	1	0
Comoros	1	0	1	0
Djibouti	1	0	1	0
Egypt	1	0	1	0
Gambia	0	1	1	0
Guinea	0	1	1	0
Guinea-Bissau	0	1	1	0
Indonesia	0	1	0	1
Iran	1	0	1	0
Iraq	1	0	0	1
Ivory Coast	0	1	1	0
Jordan	1	0	1	0
Kazakhstan	0	1	1	0
Kyrgyzstan	0	1	0	1
Lebanon	0	1	0	1
Malaysia	1	0	0	1
Maldives	1	0	0	1
Mali	0	1	0	1
Mauritania	1	0	1	0
Morocco	1	0	0	1
Niger	0	1	1	0
Nigeria	0	1	0	1
Pakistan	1	0	0	1
Palestine	1	0	0	1
Qatar	1	0	1	0
Senegal	0	1	0	1
Sierra Leone	0	1	0	1
Sudan	0	1	1	0
Syria	0	1	1	0
Tajikistan	0	1	1	0
Tunisia	1	0	0	1
Turkey	0	1	0	1
Turkmenistan	0	1	1	0
United Arab Emirates	1	0	1	0
Uzbekistan	0	1	1	0
Yemen	1	0	1	0
<b>Total</b>	<b>18</b>	<b>24</b>	<b>23</b>	<b>19</b>

Table A3: Standardized Mean Differences of Covariates Used in Giving Index Models Across Islamic Country Subgroups.

	Islamic	Religious	Secular	Authoritarian	Non-Authoritarian
Log GDP PC	-0.008	-0.018	-0.014	-0.007	-0.008
Gini	-0.008	-0.094	-0.013	-0.008	-0.008
Rent	0.001	0.074	0.005	0.005	-0.003
Tax	-0.022	-0.125	-0.015	-0.022	-0.022
Poverty Rate	-0.001	-0.043	0.009	-0.001	-0.001
Life Expectancy	-0.001	0.036	-0.013	-0.002	0.000
Age	-0.003	0.030	-0.014	-0.002	-0.001
Urban	0.001	0.031	-0.008	0.000	0.000
Education	-0.008	-0.061	-0.011	-0.008	-0.007
Unemployment	0.001	0.014	-0.002	-0.003	-0.001
GDP Growth	0.001	0.017	0.001	-0.004	0.005
Trade	-0.005	0.009	-0.018	-0.005	-0.008

This table reports the standardized mean differences of covariates between subgroups of Islamic countries—categorized by religiosity and political regime—that were included in models where the Giving Index is the dependent variable. A covariate is considered balanced if the absolute value of its standardized mean difference is below 0.1. As shown, all values fall within this threshold, indicating good balance across groups.

Table A4: Standardized Mean Differences of Covariates Used in Models of Government Social Protection Across Islamic Country Subgroups.

	Islamic	Religious	Secular	Authoritarian	Non-Authoritarian
Log GDP PC	-0.008	-0.004	-0.053	-0.007	-0.018
Gini	-0.008	-0.130	-0.011	-0.005	-0.039
Rent	0.008	0.083	0.030	0.011	-0.004
Tax	-0.013	-0.097	-0.037	-0.010	-0.029
Poverty Rate	0.002	-0.062	0.034	0.003	-0.008
Age	-0.004	0.079	-0.042	-0.003	-0.002
Urban	-0.003	0.056	-0.026	-0.004	0.004
Unemployment	-0.006	0.018	-0.007	-0.004	-0.015
Socialist	0.002	0.000	0.023	0.004	0.003
Inflation	0.001	0.012	0.017	0.004	-0.047
Trade	-0.010	0.060	-0.056	-0.008	-0.019
Electricity	-0.001	0.064	-0.027	-0.002	0.016
Investment	-0.014	0.007	-0.030	-0.019	0.002

This table reports the standardized mean differences of covariates between subgroups of Islamic countries—categorized by religiosity and political regime—that were included in models where the dependent variables are the percentage of vulnerable persons covered by social assistance programs and the percentage of the population covered by at least one social protection benefit. A covariate is considered balanced if the absolute value of its standardized mean difference is below 0.1. As shown, all covariates are well balanced across groups except for the Gini index in the model where the variable of interest is Religious Islamic countries, suggesting a slight imbalance in income inequality between those groups.

Table A5: Standardized Mean Differences of Covariates Used in Poverty Rate Models Across Islamic Country Subgroups.

	Religious	Secular	Authoritarian	Non-Authoritarian
Log GDP PC	0.005	-0.080	-0.009	-0.056
Gini	-0.076	-0.041	-0.023	-0.063
Trade	-0.003	-0.083	-0.020	-0.056
Electricity	0.060	-0.044	-0.004	0.008
Investment	-0.046	-0.027	-0.019	-0.015
Capital	0.025	-0.010	0.001	-0.009
Expenditure	-0.079	-0.090	-0.028	-0.054
Education	-0.032	-0.058	-0.014	-0.045
Governance	-0.004	-0.019	0.014	-0.061
Finance	-0.017	-0.081	-0.011	-0.028
Inflation	0.002	0.028	0.006	-0.071
Rent	0.065	0.044	0.024	-0.001
Life Expectancy	0.047	-0.067	-0.002	-0.011
Age	0.044	-0.061	-0.004	-0.028
Population	0.007	-0.004	0.007	0.018

This table reports the standardized mean differences of covariates between subgroups of Islamic countries—categorized by religiosity and political regime—that were included in models analyzing poverty rates. For the main binary Islamic variable, the standardized mean differences are shown separately in Figure 1. A covariate is considered balanced if the absolute value of its normalized mean difference is below 0.1. As shown, all values fall within this threshold, indicating good balance across groups.

## **Appendix B**

Table B1: Actual vs. Synthetic Poverty Rates and the Corresponding Gaps.

Country	Actual	Synthetic	Gap
Albania	4.63	4.63	0.00
Algeria	3.18	7.27	-4.09
Azerbaijan	0.00	7.00	-7.00
Bangladesh	51.82	51.82	0.00
Bosnia and Herzegovina	0.68	2.79	-2.11
Burkina Faso	71.82	71.82	0.00
Chad	62.85	62.85	0.00
Comoros	38.96	38.96	0.00
Djibouti	44.27	44.27	0.00
Egypt	16.89	16.89	0.00
Gambia	50.40	50.40	0.00
Guinea	57.24	74.40	-17.15
Guinea-Bissau	72.04	72.04	0.00
Indonesia	38.09	35.35	2.74
Iran	3.93	3.93	0.00
Iraq	2.10	6.07	-3.96
Ivory Coast	57.27	57.27	0.00
Jordan	0.75	6.87	-6.11
Kazakhstan	0.94	1.21	-0.27
Kyrgyzstan	18.27	18.27	0.00
Lebanon	0.06	4.03	-3.97
Malaysia	0.87	2.87	-2.00
Maldives	2.65	2.65	0.00
Mali	65.28	65.28	0.00
Mauritania	28.05	38.54	-10.49
Morocco	10.06	10.06	0.00
Niger	84.06	84.06	0.00
Nigeria	64.12	64.12	0.00
Pakistan	44.87	44.87	0.00
Palestine	2.54	2.54	0.00
Qatar	0.00	0.00	0.00
Senegal	57.60	57.60	0.00
Sierra Leone	65.67	65.67	0.00
Sudan	50.59	50.59	0.00
Syria	26.28	26.28	0.00
Tajikistan	25.43	25.43	0.00
Tunisia	3.67	3.66	0.00
Turkey	2.58	5.80	-3.22
Turkmenistan	28.12	28.12	0.00
United Arab Emirates	0.00	0.00	0.00
Uzbekistan	12.53	12.53	0.00
Yemen	62.42	50.99	11.43
Average	29.37	30.47	-1.10*

Asterisks \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table B2: Donor country weights for each target country in synthetic control construction.

Albania		Algeria		Azerbaijan		Bangladesh	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Ukraine	0.423	Mongolia	0.8	Gabon	0.309	Haiti	0.706
North Macedonia	0.242	Panama	0.163	Ukraine	0.302	India	0.106
Kosovo	0.183	China	0.037	North Macedonia	0.205	Myanmar	0.102
Uruguay	0.102			Armenia	0.133	North Macedonia	0.07
Australia	0.03			Trinidad and Tobago	0.049	Malawi	0.014
Colombia	0.002			Cyprus	0.002		
Costa Rica	0.002						
Argentina	0.001						
Sri Lanka	0.001						
Bosnia and Herzegovina		Burkina Faso		Chad		Comoros	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Kosovo	0.232	Uganda	0.431	Lesotho	0.48	Guatemala	0.57
Moldova	0.226	Burundi	0.218	Liberia	0.309	Burundi	0.196
Ukraine	0.165	Benin	0.092	Burundi	0.089	Brazil	0.136
Greece	0.147	Solomon Islands	0.086	Congo, Rep.	0.089	Haiti	0.074
Costa Rica	0.084	Lesotho	0.083	Timor-Leste	0.019	Central African Rep.	0.024
Thailand	0.074	Togo	0.04	Cameroon	0.013		
Slovenia	0.057	Vanuatu	0.027				
Poland	0.015	Central African Rep.	0.012				
		Congo, Dem. Rep.	0.006				
		Namibia	0.006				
Djibouti		Egypt		Gambia		Guinea	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Haiti	0.279	Nepal	0.21	Nepal	0.278	Congo, Dem. Rep.	0.467
Congo, Dem. Rep.	0.247	Greece	0.153	Burundi	0.256	Malawi	0.158
Lithuania	0.244	Gabon	0.137	Central African Rep.	0.203	Uganda	0.114
Luxembourg	0.164	Armenia	0.123	Guatemala	0.16	Lao PDR	0.113
Malawi	0.066	Venezuela, RB	0.114	Ukraine	0.085	Nauru	0.094
		Tonga	0.075	Kiribati	0.019	South Sudan	0.054
		Cameroon	0.07				
		Russian Federation	0.058				
		India	0.053				
		Argentina	0.009				
Guinea-Bissau		Indonesia		Iran		Iraq	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Solomon Islands	0.366	Myanmar	0.268	Ukraine	0.441	Serbia	0.57
Uganda	0.327	Armenia	0.193	Trinidad and Tobago	0.332	Gabon	0.263
Burundi	0.199	Sri Lanka	0.192	Cabo Verde	0.093	Greece	0.137
Central African Rep.	0.108	India	0.172	Venezuela, RB	0.063	Ukraine	0.023
		Ethiopia	0.104	China	0.038	Liberia	0.004
		Uganda	0.06	Colombia	0.027	Armenia	0.002
		Liberia	0.007	Russian Federation	0.006		
		Burundi	0.003				
		Nepal	0.001				

Table B2: (continued)

Ivory Coast		Jordan		Kazakhstan		Kyrgyzstan	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Cameroon	0.494	Samoa	0.519	Czechia	0.427	Kiribati	0.221
Benin	0.388	Viet Nam	0.095	Gabon	0.057	North Macedonia	0.189
Nauru	0.061	Ukraine	0.09	Tonga	0.025	Belarus	0.177
Tanzania	0.034	Greece	0.079	Ukraine	0.206	Timor-Leste	0.13
Myanmar	0.015	Kosovo	0.079	Uruguay	0.284	Moldova	0.113
Kenya	0.005	Slovenia	0.056			Kosovo	0.086
China	0.003	Serbia	0.041			Ukraine	0.064
		Luxembourg	0.039			Nauru	0.018
						Lao PDR	0.001
Lebanon		Malaysia		Maldives		Mali	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Greece	0.4	Thailand	0.572	Czechia	0.603	Uganda	0.443
Kosovo	0.143	Gabon	0.187	Kosovo	0.161	Cameroon	0.309
Korea, Rep.	0.138	Switzerland	0.082	Bhutan	0.146	Burundi	0.159
Nepal	0.085	Trinidad and Tobago	0.043	Luxembourg	0.09	Sao Tome and Principe	0.081
Belarus	0.073	Suriname	0.037			Central African Rep.	0.007
Switzerland	0.04	Luxembourg	0.033				
Sweden	0.035	Denmark	0.032				
Cyprus	0.029	St. Lucia	0.011				
Germany	0.024	United States	0.002				
Slovak Rep.	0.015						
Serbia	0.008						
Moldova	0.003						
Armenia	0.001						
Hungary	0.001						
Tonga	0.001						
Mauritania		Morocco		Niger		Nigeria	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Myanmar	0.422	El Salvador	0.354	Mozambique	0.385	Eswatini	0.344
Congo, Rep.	0.287	Bhutan	0.208	Central African Rep.	0.24	Cameroon	0.239
Lao PDR	0.196	Guyana	0.144	Burundi	0.238	Central African Rep.	0.159
Seychelles	0.06	Korea, Rep.	0.108	Tanzania	0.137	South Sudan	0.15
Luxembourg	0.032	Japan	0.055			India	0.108
		Viet Nam	0.042				
		Samoa	0.03				
		China	0.024				
		North Macedonia	0.013				
		Cyprus	0.011				
		Thailand	0.006				
		Nepal	0.002				

Table B2: (continued)

Pakistan		Palestine		Qatar		Senegal	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Ukraine	0.387	Hungary	0.256	Trinidad and Tobago	1	Tanzania	0.33
Madagascar	0.252	Moldova	0.164			Benin	0.252
Uganda	0.175	Romania	0.159			Guatemala	0.147
Haiti	0.157	Seychelles	0.155			Vanuatu	0.145
Italy	0.028	Lithuania	0.145			Micronesia, Fed. Sts.	0.065
		Argentina	0.107			Solomon Islands	0.036
		Kiribati	0.012			Japan	0.018
						Rwanda	0.005
						Israel	0.002
Sierra Leone		Sudan		Syria		Tajikistan	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Malawi	0.282	Nepal	0.369	Ukraine	0.299	Serbia	0.335
Congo, Dem. Rep.	0.226	Burundi	0.218	Guatemala	0.294	Cameroon	0.272
Ukraine	0.222	South Sudan	0.16	Nepal	0.237	Myanmar	0.253
Burundi	0.161	Venezuela, RB	0.109	South Sudan	0.152	Bhutan	0.078
Uganda	0.094	Cameroon	0.071	Solomon Islands	0.017	Kiribati	0.061
Malta	0.015	Uganda	0.058				
		Ethiopia	0.015				
Tunisia		Turkey		Turkmenistan		United Arab Emirates	
Donor	Weight	Donor	Weight	Donor	Weight	Donor	Weight
Ukraine	0.504	Dominican Republic	0.347	Mongolia	0.292	Trinidad and Tobago	1
North Macedonia	0.113	Belarus	0.186	Congo, Rep.	0.252		
Cyprus	0.107	Korea, Rep.	0.163	Myanmar	0.16		
Suriname	0.085	Brazil	0.122	Bhutan	0.144		
Paraguay	0.08	United States	0.055	Venezuela, RB	0.115		
Tuvalu	0.044	Venezuela, RB	0.041	Timor-Leste	0.033		
Bhutan	0.04	Mauritius	0.04	Sri Lanka	0.004		
Japan	0.017	Uruguay	0.033	China	0.001		
Samoa	0.005	China	0.011				
Guatemala	0.002						
Guyana	0.001						
Uzbekistan		Yemen					
Donor	Weight	Donor	Weight				
Moldova	0.63	Cameroon	0.614				
Argentina	0.151	South Sudan	0.112				
Timor-Leste	0.138	Kiribati	0.089				
Venezuela, RB	0.038	Ethiopia	0.087				
Dominican Republic	0.029	Timor-Leste	0.049				
India	0.013	Serbia	0.041				
		Germany	0.006				
		Argentina	0.002				



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