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Muslims' Religious Freedom and Religiosity: Measurement and Impact

Abstract

Multiple measures of religious freedom and states' regulation of religion are at work in sociology of religion. These scales apply one score to a country or to a subset of its policies. A uniform state score conceals the internal religious diversity and the heterogeneous experiences of religious freedom that can result. These, in turn, encourage ecological fallacies and mask the disparate impact that religious freedom for one's own community and for other groups can have on individuals' preferences and decisions. To demonstrate the value of measuring and studying religious freedom at the individual level, this study applies individual-level assessments of freedom and religiosity from Sunni-Muslim-majority countries to the religious market theory literature. It shows that restricting individuals' religious freedom suppresses religious belief and behavior. Restrictions placed on other groups, however, can have independent positive and negative effects on religiosity. The study also raises concerns about the ability of current measures of religious freedom to measure individuals' freedom, at least in Muslim-majority countries.

Introduction

Multiple measures of religious freedom and states' regulation of religion are at work in the sociology of religion literature. These scales can apply one score to a country generally or assign a few scores based on various aspects of the states' policies towards religion, such as those that favor religion against those that regulate it. Assigning uniform state scores, however, presents methodological challenges in application. These ratings cover over the internal religious diversity within the states. This, in turn, conceals the heterogeneous experiences of religious freedom that can result from state policies. Applying ratings to the entire country encourages ecological fallacies and masks the disparate impact that religious freedom for one's own religious community and for other groups can have on individuals' policy and action preferences.

To demonstrate the value of measuring and studying religious freedom at the individual level, this chapter utilizes a set of surveys from Sunni-Muslim-majority countries that asked about the freedom members of the individuals' religion had to practice their religion and the freedom of members of other religions to practice their religion. It applies these individual-level assessments of freedom in combination with questions about religious religious belief and behavior to the religious market theory literature. Religious market theory proposes that the production and consumption of religious products reflect both state regulation of religious communities and individuals and religious groups' need and ability to compete for members. State policies favoring religious freedom or religious monopolies have both been theorized to increase religiosity in their publics (Iannaccone 1995; Finke 2013).

Previous studies of the religious market theory, which have concentrated on Western and Christian-majority countries, have relied on aggregate measures of religious freedom and religiosity, drawing conclusions about individual nature based on group data. This

methodological problem is avoided by the application of individually-assessed religious freedom measures for members of the respondents' own religion and for members of other religions from surveys in twenty-two Sunni-Muslim-majority countries in Eastern Europe, Africa, and Asia. Employing those distinct evaluations together represents more accurately the level of regulation in the entire religion market.

This chapter shows that restricting individuals' religious freedom suppresses their propensity to both religious belief and behavior. Perceiving restrictions placed on other groups, however, can have both positive and negative effects on individuals' religiosity. These independent effects from Sunni Muslims and others' religious freedom demonstrate the value of focusing on individuals' assessments of religious freedom in their lives and country. By comparing the results from models employing state regulation of religion scores and individual-level religious freedom scores, the study also raises concerns about the ability of current measures of religious freedom to measure individuals' freedom, at least in Sunni-Muslim-majority countries.

Religious Market Theory

Religious market theory (RMT) conceives of religions as products individuals purchase for consumption from religious leaders. Regulations are restrictions on the freedom citizens would otherwise experience. RMT proposes that deregulation would allow individuals to choose a religion "without penalty" (Finke 2013, 2). Religion providers distinguish their offerings by beliefs, strictness, and social service provision in order to attract more members (Iannaccone 1992; Iyer, Velu, and Weeks 2014). This process repeats over time as individuals choose whether to change products or levels of consumption. Because of individuals' religious freedom, new and old providers must balance being responsive to demand and modifying the

product to attract consumers without polluting the brand by instability (Iannaccone 1991, 1995). Deregulation is influencing the behavior both of producers and consumers. Restricting freedom make it less likely citizens “will find a religious movement suited to them” (Fox and Tabory 2008, 246). Due to low natural barriers-to-entry and diverse personal preferences, an unregulated religious market displays “competitive pluralism” (Gill 2008, 42). Market share ultimately reflect the entrepreneurialism of the religions’ leaders (Pearce, Fritz, and Davis 2010).

Researchers have applied multiple measures of regulation and freedom to understand the connection between a free market for sellers and consumers and increased consumption in studies that have generated inconsistent results. Iannaccone (1991) looks at the presence of a national religion. Chaves and Cann (1992) create a six-item index for religious monopoly based on establishment and financial support. North and Gwin (2004) use a nine-item index, including having an official religion, required group registration, censorship, religious education, restrictions on missionaries and conversion, and funding. McCleary and Barro (2006) focus on whether a state has an official religion and whether the government controls appointment of religious leaders. Fox and Tabory (2008, 252-254) construct six separate indexes of regulation, called “official support,” “general restrictions,” “religious discrimination,” “religious regulation,” and “religious legislation.” Each of these systems generates ratings of religious freedom for a country as a whole and applies that to country-aggregate measures of religious belief and behavior.

Ruiter and van Tubergen (2009, 866) recognized that this system introduced a statistical problem: “[a]n important drawback of this macro-oriented research is that inferences about micro-level processes are based on aggregate statistics, possibly leading to ‘ecological fallacies.’” Religious belief and religious participation are instances of individuals acting within

their personal circumstances. These persons should be analyzed separately. Ruiter and van Tubergen (2009) introduced studying the effect of regulation on individuals' religious behavior. Their 20-item index of regulation, however, is still a countrywide score.

These country regulation variables overestimate government's capacity to regulate religious groups and religious belief and behavior and to regulate it uniformly. Even in repressive environments (ex: state-backed monopolies or vehemently anti-religious regimes) grey and black religious markets form (Minarik 2018; Yang 2006). These policies are also not targeting all groups equally. Furthermore, citizens are not necessarily aware of all state regulation. Some regulations are remote from the public or target only some groups. These regulations thus would not drive consumption choices. National ratings are then inadequate metrics of restrictions on religious freedom. This issue can be circumvented by applying individual-level measure of religious freedom.

Individual Freedom in the Religious Market

The utility of measuring freedom at the individual level can be demonstrated by applying the individual measurements of freedom for members of one's own religion and members of other religions to the RMT literature. The fundamental prediction of RMT is that regulation decreases religiosity. This pattern is first tested using state ratings of religious freedom (H1). The relationships between the national scores for regulation of religion and religious belief, the importance of religion, and frequency of prayer and service attendance are considered in this chapter. This variety of variables helps demonstrate whether regulation reduces participation similarly across several dimensions of religiosity.

To address the concern that national-level measures are second-best proxies of individuals' levels of religious freedom, the study also examines the effect of individually-

identified levels of freedom on individuals' belief and behavior. RMT suggests that freedom encourages individual involvement and belief, because people have greater capacity to produce and consume a preferred religion. Religious belief and behavior should increase as religious freedom increases (H2).

Given the individual focus here, an additional concern can be addressed. In attributing a single national score, scholars have tacitly assumed that all citizens in that state are equally impacted by whatever policies fed into the scale. This is not a realistic assumption. Regulations supporting or suppressing religious groups often apply unevenly between groups. In market language, consumers should be influenced by the taxes and subsidies applied to the variety of products they could consume. RMT proposes that any regulation suppresses consumption, meaning individuals are less religious if members of other religions are less free (H3a). Citizens' could, instead, just ignore other consumers' experiences on the religious market. Alternatively, witnessing an alternative product being taxed may lead consumers to increase consumption of their chosen product because the implicit social support increases its apparent veracity or reduces the relative cost of their consumption (H3b). In this case, consulting the individual-level data as a measure of religious freedom would allow a more nuanced understanding of citizens' behavior in the religious marketplace and improve on uniform national freedom ratings.

Materials and Methods

Data

This study utilizes two surveys conducted in Africa, Asia, and Eastern Europe by the Pew Research Center in 2008-2009 and 2011-2012.[1] The first set of surveys were taken in sub-Saharan Africa (Pew 2010). The second focused on states with large Muslim communities (Pew 2012, 2013).

The intention here is to focus on Muslims' freedom, beliefs, and behavior. As such, non-Muslim respondents are culled from the African surveys. The Pew Research Center removed Algeria and Iran from its publications, so these states are not included in this study. The sample is restricted to Sunni-majority countries. Muslims who identified as Shi'ite or with a sect were also dropped, so the sample includes only those who indicated that they are Sunni or "Just a Muslim." This helps ensure that those indicating their own religion are of a shared religious group, while the "other" religion(s) they consider would be minority religions. This system mirrors the focus on Christians' religious behavior in Christian-majority countries in the originating literature. The resultant dataset has 21,587 respondents from twenty-two nationally-representative surveys. The countries are Albania, Bangladesh, Chad, Djibouti, Egypt, Indonesia, Jordan, Kazakhstan, Kosovo, Kyrgyzstan, Lebanon, Malaysia, Mali, Morocco, Niger, Pakistan, Palestine, Senegal, Tajikistan, Tunisia, Turkey, and Uzbekistan.

Studying Muslim respondents supplements the previously predominantly Christian-focused literature. Previous studies have included "several major Asian countries" and a "few predominantly Islamic countries," but Christendom predominates (North and Gwin 2004, 108). Although the Muslim-majority state governments may not encourage religious pluralism and inter-religious movement, "Islam in the global age has been increasingly fragmented, and multiple agencies, including populist preachers, Sufi masters, lay pious intellectuals, and officially sanctioned clergy compete for the loyalties of Muslims" (Tezcur, Azadarmaki, and Mehri 2006, 220). This pattern mirrors the intra-Christian competition that spurred Iannaccone, Finke, and Stark's work.

The surveys included several measures of religiosity. Respondents were asked if they believe in "one God, Allah, and his prophet Muhammed." For behavior, respondents were asked

“how often do you attend the mosque for salah and Jum’ah Prayer,” how frequently “[o]utside of attending religious services, do you pray,” and whether they “fast, that is avoid eating during the daytime, during the holy month of Ramadan.” They were also asked “[h]ow important is religion in your life.” Their responses are measured at the *individual-level*, not aggregated to national-level percentages.

Other factors that could influence religious behavior are taken into account.

Modernization theory predicts that religiosity declines with education, economic development, and democratization (Lerner 1958; Taylor 2007). Security secularization theory proposes that as individuals feel less existential insecurity, they feel less need to turn to religion for protection (Norris and Inglehart [2004] 2011). Economic development proxies for such security. In both theories, then, strong economic circumstances would be tied to reduced religiosity. Norris and Inglehart’s ([2004] 2011) argue that, when available, individual-level measurements related to existential security should be employed, rather than national ratings. This is possible in this dataset, and their advice is taken. Standardized variables for individual assessments of “the current economic situation in our country” and of their “personal economic situation” assessments are used here. Higher scores indicate worse perceived conditions, thus greater insecurity. Information on respondents’ education was not included in the released dataset and thus could not be included.

Gender and age are incorporated due to cohort and lifecycle effects and the influence of gender norms and distinctions in Islamic law. Gender is a binary variable for male. Age is a factor variable of five-year increments with 40-44 years as the reference category. A previous communist regime indicator variable is used due to the anti-religious policies of communist

governments (Froese 200). A rural residence indicator is also included. A binary variable distinguishes respondents who identified themselves as “Just a Muslim” rather than Sunni.

[Table 1 here]

The sample is demographically diverse [Table 1]. Belief in Allah is nearly universal. While Islamic orthodoxy includes belief in Allah, atheists may continue to identify as Muslims from habit or heritage. Rates of fasting during Ramadan and believing that religion is very important in life are high. More than of half the sample reports attending the mosque at least once a week and more than two-thirds pray at least daily. The population is split evenly between men and women and between urban and rural residents. Nearly a sixth live in previously-communist countries.

[Table 2 here]

Consistent with the literature, national measures of regulation are included. Multiple metrics are invoked to account for misspecification in any one measure or conflicting results from different systems. The state scores are significantly but imperfectly correlated with each other (Table 2). By each national metric, as well as individual assessments of religious freedom, the countries show a broad distribution of levels of regulation (Table 3).

[Table 3 here]

One metric is the religious freedom scale “v2clrelig” from the Varieties of Democracy Database for 2009 and 2012 respectively. This scale uses country experts to “specif[y] the extent to which individuals and groups have the right to choose a religion, change their religion, and practice that religion in private or in public as well as to proselytize peacefully without being subject to restrictions by public authorities” from not respected (0) to fully respected (4) (Coppedge et al. 2017). This metric is interesting in that it treats religion as a natural right on

which states infringe instead of attempting to compile a series of regulations, which may or may be infringe individuals' freedom, and using that to identify citizens' experience of freedom.

The other two national-level measures are the Government Regulation of Religion (GRI) and Government Favoritism of Religion (GFI) indexes (Grim and Finke 2006). GRI features prohibitions on missionary work, interference with freedom of worship, and legal protections for freedom of religion. GFI features government funding for religion or related entities and establishing a religion. Scores, which range from 0 to 10, are taken from 2008, the most recent year available; the Palestinian territories were not rated, so those cases are dropped from models using these scores.[2] These metrics are limited by the policies they include as examples of the policy they try to measure. However, the scales separate restrictions from subsidies, which are merged in other scales. Including these methods of state intervention separately allows for them to disparately influence the market and subject behavior.

As regulation is theorized to function at the individual level, it is best measured at the individual level, not the national level. In these surveys, respondents were asked directly about religious freedom: "In our country, how free are you to practice your religion?" and "in our country, how free are people from religions different than yours to practice their religion?" The responses are scales of very free (4), somewhat free (3), not too free (2), and not at all free (1). For this chapter, these assessments are employed to test the relationship between religious freedom and religious beliefs and behavior.

Methods

The measures for belief in God and fasting are binary variables, so logistic regressions are used in this study. The importance of religion in respondents' lives is a four-point scale ranging from not at all important (1) to very important (4). Mosque attendance is a scale from

never (1) to more than once a week (6), and prayer is a scale from never (1) to several times a day (7). For these items, ordered logistic regression models are used.

All models are estimated as multilevel mixed-effects models, which cluster and have random intercepts by country. This accounts for the fact that respondents are answering these questions within countries, creating natural groupings, and avoids artificially inflating the significance of second-level (country) variables (Wells and Kriechaus 2006). In this case, those are the national regulation ratings. The first three models have a country religious freedom rating variable. The final model includes individual-level freedom variables, as well as one national-level measure of regulation, the GRI score.

Results

[Table 4 here]

Belief in Allah is taken first. Muslims' freedom is positively associated with belief in Allah, while the relationship with others' freedom is not significant (Table 4). At the same time, the level of regulation has a significant positive relationship with respondents' propensity to believe in Allah in two of the national-level measures. This suggests the state ratings are not picking up the individual freedom effect. Table 4 also shows that rural residents are more likely to believe in Allah.

[Table 5 here]

The importance of religion in life is not found to be significantly impacted by freedom as measured with the national level scores (Table 5). On the other hand, perceiving oneself and others to be free to practice religion is positively correlated with feeling that religion is important. The freer people are to practice a religion, both for members of their own religion and for religious minorities, the more salient religion becomes. The country ratings, then, are not

capturing the individual effects. Economic conditions, gender, age, and residence in a previously-communist state are significantly related religions' importance.

[Table 6 here]

The models show no significant relationship between the national measures of regulation and fasting behavior (Table 6). In the individual measures, Muslims' religious freedom is significantly positively related to fasting during Ramadan, while the freedom of minority religion members' freedom is not a significant predictor. Ridge (2019) finds that laws enforcing the fast increase Muslims' propensity to observe Ramadan, but the individual freedom effect is robust to that effect. Gender, rural residence, and living in a previously-communist country are also significant predictors of fasting behavior.

[Table 7 here]

Prayer behavior is not significantly related to the national-level measures of regulation (Table 7). At the individual level, Muslim's freedom is positively associated with increased frequency of prayer. Non-Muslims' freedom, though, is not significantly related. These national-level measures, then, are not capturing individuals' freedom and its effects on this element of religiosity. Gender, age, and living in a previously-communist country are significant predictors of prayer frequency.

[Table 8 here]

No significant relationship is found between mosque attendance and the country regulation ratings (Table 8). Attendance is not significantly related to Muslims' religious freedom, but increasing freedom for other religions decreases respondents' mosque attendance frequency. The country ratings of religious freedom thus are not capturing the divergent effects

of individuals' religious freedom. Economic conditions, gender, age, rural residence, and residence in a previously-communist country predict attendance frequency.

Discussion

What do these results mean substantively for RMT and the application of individuals' religious freedom? The RMT literature has attempted to show that regulation, measured nationally, constrains the religious market and thereby suppresses religious belief and behavior. The results here, however, identify almost no effect of regulation on religious belief or behavior in the national measurements. A strong effect of regulation is only identified in the propensity to believe in Allah, and it runs counter to the prediction of religious market theory. The first hypothesis, then, is not affirmed.

The second hypothesis involves the focus measure — individually-assessed levels of religious freedom. There is a significant and recurrent effects of Muslims' religious freedom and their religious practice and religiosity. It is found in their propensity to believe in Allah, to identify religion as important, to fast during Ramadan, and to pray frequently. As Muslims' experience their lives as having more religious freedom, they demonstrate greater religiosity in both belief and in behavior. Despite not supporting RMT's prediction in the national-level measures, the findings based on the individuals' experience of freedom are consistent with it. The second hypothesis is thus strongly supported. The utility of considering individual assessments, alongside or instead of national ratings, is thus demonstrable.

This study has also noted that, although RMT purports to speak to the entire, diverse market, the uniform national measures of religious regulation do not account for the heterogeneous experience of regulation in religiously-diverse communities. According to the present representation of the religious market theory, all regulation is predicted to reduce

religiosity by constraining the market. The results presented here do not follow that pattern. Freedom for members of religious minorities *is* negatively associated with frequent mosque attendance. This is consistent with the second version of the third hypothesis, in which subjects may choose to participate more in their religion based on the condition of other religions. On the other hand, the identified importance of religion *increases* as members of both the majority and minority religious groups are perceived as having greater religious freedom. These independent effects of other groups' religious freedom demonstrate the value of considering of minority religion members' freedom to practice when studying the religious market and the effect of religious freedom on religiosity.

Conclusion

This chapter has invoked religious market theory and its applicability to Sunni Muslim-majority countries in order to demonstrate the value of measuring the level of religious freedom in states at the individual level. It examined whether the state scores for regulation of religion are negatively correlated with religiosity outside of Western and Christian-majority countries, which religious market theory predicts. This study, though, does not find strong indications of reduced religiosity from increasing state regulation in its examination of state regulation scores. This finding could indicate that the religious market theory does not hold in Sunni-Muslim-majority countries, as Chaves and Cann (1992) speculated, which challenges the theory itself. Alternatively, it could indicate an insufficiency in the present state-level metrics of regulation of religion. As the effect of respondent-reported individual freedom on religiosity functions as RMT predicts, the second interpretation is favored here.

These scores are not accurately capturing citizens' experience of religious freedom. This could be caused by many factors (ex: focusing on policies that do not influence the peoples'

lives, focusing on regulations relating only to a fraction of the population, or failure to identify more local discrepancies or actions that impact individuals' religious lives). The inability to account for heterogeneous effects in diverse populations could also contribute to the discrepancies; for instance, this study found that minorities' religious freedom influenced Muslims' religious behavior, that that effect was distinct from their own religious freedom, and that it could be both supportive and suppressive with regard to their religiosity. Which particular state or sub-national policies are most important to individual freedom cannot be identified using this data and are beyond the scope of this chapter. They are constructive areas, however, for future research.

It is possible that the state regulation metrics are more adequately capturing the effect of state action on individual freedom in the West or in Christian-majority countries. This could account somewhat for the disparity in state ratings results between this study and the previous literature. To test this, however, individually-assessed levels of religious freedom for members of one's own and even other religions would have to be taken in those countries. Diverse countries could create questions that are still more specific by asking about particular groups, instead of grouping the other religions together. These assessments of religious freedom would have myriad additional uses in studying church-state relations.

[1] The Pew Research Center bears no responsibility for the analyses or interpretations of the data presented here.

[2] The data comes from the Association of Religion Data Archives.

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Table 1: Summary Statistics

| Variable | Mean | Standard Deviation | Minimum | Maximum |
|-------------------------------|------|-----------------------|---------|---------|
| Attend Mosque at Least Weekly | 0.52 | 0.50 | 0 | 1 |
| Pray Daily | 0.66 | 0.47 | 0 | 1 |
| Fast for Ramadan | 0.88 | 0.33 | 0 | 1 |
| Belief in God | 0.98 | 0.15 | 0 | 1 |
| Religion in Very Important | 0.79 | 0.41 | 0 | 1 |
| National Economy | 2.54 | 0.96 | 1 | 4 |
| Personal Economy | 2.34 | 0.86 | 1 | 4 |
| Male | 0.52 | 0.50 | 0 | 1 |
| Age | 4.15 | 2.40 | 1 | 9 |
| Rural | 0.49 | 0.50 | 0 | 1 |
| Formerly Communist | 0.16 | 0.36 | 0 | 1 |
| Muslims' Religious Freedom | 3.70 | 0.58 | 1 | 4 |
| Others' Religious Freedom | 3.58 | 0.67 | 1 | 4 |

Table 2: Correlation of Religious Freedom Measures

| | Varieties of Democracy | Grim/ Finke GRI | Grim/ Finke GFI | Muslims' Freedom | Non- Muslims' Freedom |
|-----------------------------|---------------------------|--------------------|--------------------|---------------------|-----------------------------|
| Varieties of Democracy | 1.00 | -0.52 | -0.31 | 0.06 | 0.08 |
| Grim/Finke GRI | | 1.00 | 0.59 | -0.13 | -0.13 |
| Grim/Finke GFI | | | 1.00 | -0.02 | -0.02 |
| Muslims' Freedom | | | | 1.00 | 0.52 |
| Non- Muslims' Freedom | | | | | 1.00 |

*All correlations significant $p < 0.05$

Table 3: Regulation Statistics

| Variable | Mean | Standard Deviation | Minimum | Maximum |
|-----------------------------------|------|-----------------------|---------|---------|
| Varieties of Democracy | 2.72 | 0.89 | 0 | 4 |
| Grim/Finke GRI | 5.60 | 3.06 | 0 | 10 |
| Grim/Finke GFI | 5.34 | 3.25 | 0 | 10 |
| Muslims' Religious Freedom | 3.70 | 0.58 | 1 | 4 |
| Non-Muslims' Religious Freedom | 3.59 | 0.67 | 1 | 4 |

Table 4: Belief in Allah

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|-------------------|-------------------|-------------------|-------------------|
| (Intercept) | 5.57*** (1.08) | 2.58*** (0.64) | 2.65*** (0.58) | 1.90** (0.67) |
| Varieties of Democracy | -0.49 (0.35) | | | |
| Grim/Finke GFI | | 0.27** (0.09) | | |
| Grim/Finke GRI | | | 0.28** (0.09) | 0.28** (0.09) |
| Muslims' Religious Freedom | | | | 0.31*** (0.09) |
| Non-Muslims' Religious Freedom | | | | -0.13 (0.09) |
| National Economy | 0.08 (0.07) | 0.07 (0.07) | 0.07 (0.07) | 0.07 (0.07) |
| Personal Economy | 0.12 (0.07) | 0.12 (0.08) | 0.12 (0.08) | 0.12 (0.08) |
| Male | -0.12 (0.09) | -0.12 (0.09) | -0.12 (0.09) | -0.12 (0.09) |
| 18-24 | -0.06 (0.17) | -0.05 (0.17) | -0.05 (0.17) | -0.03 (0.17) |
| 25-29 | 0.02 (0.18) | 0.04 (0.18) | 0.04 (0.18) | 0.05 (0.18) |
| 30-34 | -0.14 (0.19) | -0.12 (0.19) | -0.12 (0.19) | -0.11 (0.19) |
| 35-39 | 0.41 (0.21) | 0.41 (0.21) | 0.41 (0.21) | 0.41 (0.21) |
| 45-49 | -0.13 (0.20) | -0.13 (0.20) | -0.13 (0.20) | -0.12 (0.20) |
| 50-54 | 0.25 (0.22) | 0.25 (0.22) | 0.25 (0.22) | 0.26 (0.22) |
| 55-59 | 0.35 (0.26) | 0.35 (0.26) | 0.36 (0.26) | 0.37 (0.26) |
| 60+ | 0.40 (0.23) | 0.40 (0.23) | 0.41 (0.23) | 0.40 (0.23) |
| Rural | 0.29** (0.10) | 0.29** (0.10) | 0.29** (0.10) | 0.29** (0.10) |
| Formerly Communist | -1.40 (0.81) | -0.29 (0.77) | -1.00 (0.70) | -0.97 (0.70) |
| Just a Muslim | -0.11 (0.12) | -0.11 (0.12) | -0.11 (0.12) | -0.11 (0.12) |

| | | | | |
|--------------------------|---------|---------|---------|---------|
| AIC | 4121.11 | 4073.93 | 4072.55 | 4065.62 |
| Num. obs. | 21232 | 20320 | 20320 | 20320 |
| Num. groups: Country | 22 | 21 | 21 | 21 |
| Var: Country (Intercept) | 2.01 | 1.54 | 1.46 | 1.46 |

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 5: Importance of Religion

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| Varieties of Democracy | -0.28 (0.23) | | | |
| Grim/Finke GFI | | 0.00 (0.08) | | |
| Grim/Finke GRI | | | -0.05 (0.08) | -0.03 (0.07) |
| Muslims' Religious Freedom | | | | 0.40*** (0.03) |
| Non-Muslims' Religious Freedom | | | | 0.09** (0.03) |
| National Economy | 0.08*** (0.03) | 0.07** (0.03) | 0.07** (0.03) | 0.08** (0.03) |
| Personal Economy | -0.14*** (0.03) | -0.12*** (0.03) | -0.12*** (0.03) | -0.10*** (0.03) |
| Male | -0.09** (0.04) | -0.08* (0.04) | -0.08* (0.04) | -0.08* (0.04) |
| 18-24 | -0.28*** (0.06) | -0.24*** (0.07) | -0.24*** (0.07) | -0.22*** (0.07) |
| 25-29 | -0.22** (0.07) | -0.21** (0.07) | -0.21** (0.07) | -0.21** (0.07) |
| 30-34 | -0.15* (0.07) | -0.15* (0.07) | -0.15* (0.07) | -0.14 (0.07) |
| 35-39 | 0.03 (0.08) | 0.05 (0.08) | 0.05 (0.08) | 0.03 (0.08) |
| 45-49 | 0.03 (0.08) | 0.04 (0.08) | 0.04 (0.08) | 0.05 (0.08) |
| 50-54 | 0.16 (0.08) | 0.16 (0.08) | 0.16 (0.08) | 0.16 (0.09) |
| 55-59 | 0.02 (0.09) | 0.03 (0.09) | 0.03 (0.09) | 0.04 (0.09) |
| 60+ | 0.38*** (0.09) | 0.39*** (0.09) | 0.39*** (0.09) | 0.37*** (0.09) |
| Rural | 0.02 (0.04) | 0.01 (0.04) | 0.01 (0.04) | 0.02 (0.04) |
| Formerly Communist | -2.47*** (0.58) | -2.35*** (0.68) | -2.39*** (0.63) | -2.31*** (0.63) |
| Just a Muslim | -0.45*** (0.05) | -0.43*** (0.05) | -0.44*** (0.05) | -0.44*** (0.05) |
| 1 2 | -6.87*** (0.64) | -6.03*** (0.54) | -6.30*** (0.50) | -4.38*** (0.51) |

| | | | | |
|--|----------------------|----------------------|----------------------|----------------------|
| 2 3 | -5.14 ^{***} | -4.28 ^{***} | -4.55 ^{***} | -2.62 ^{***} |
| | (0.64) | (0.54) | (0.50) | (0.51) |
| 3 4 | -2.95 ^{***} | -2.10 ^{***} | -2.37 ^{***} | -0.42 |
| | (0.64) | (0.54) | (0.49) | (0.51) |
| AIC | 25475.43 | 24696.25 | 24695.87 | 24471.04 |
| Num. obs. | 21417 | 20500 | 20500 | 20500 |
| Groups (Country) | 22 | 21 | 21 | 21 |
| Variance: Country: (Intercept) | 1.14 | 1.27 | 1.25 | 1.25 |
| *** p < 0.001, ** p < 0.01, * p < 0.05 | | | | |

Table 6: Fasting for Ramadan

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| (Intercept) | 4.05*** (0.86) | 2.90*** (0.58) | 3.16*** (0.54) | 2.61*** (0.57) |
| Varieties of Democracy | -0.25 (0.28) | | | |
| Grim/Finke GFI | | 0.07 (0.08) | | |
| Grim/Finke GRI | | | 0.02 (0.08) | 0.03 (0.08) |
| Muslims' Religious Freedom | | | | 0.11* (0.05) |
| Non-Muslims' Religious Freedom | | | | 0.02 (0.05) |
| National Economy | -0.02 (0.04) | -0.03 (0.04) | -0.03 (0.04) | -0.03 (0.04) |
| Personal Economy | 0.01 (0.04) | 0.02 (0.04) | 0.02 (0.04) | 0.02 (0.04) |
| Male | -0.15** (0.05) | -0.12* (0.05) | -0.12* (0.05) | -0.13* (0.05) |
| 18-24 | -0.34*** (0.10) | -0.31** (0.10) | -0.31** (0.10) | -0.30** (0.10) |
| 25-29 | -0.15 (0.11) | -0.11 (0.11) | -0.11 (0.11) | -0.10 (0.11) |
| 30-34 | -0.06 (0.11) | -0.04 (0.11) | -0.04 (0.11) | -0.04 (0.11) |
| 35-39 | -0.09 (0.11) | -0.08 (0.11) | -0.08 (0.11) | -0.09 (0.11) |
| 45-49 | -0.10 (0.12) | -0.09 (0.12) | -0.09 (0.12) | -0.09 (0.12) |
| 50-54 | 0.21 (0.13) | 0.23 (0.13) | 0.23 (0.13) | 0.23 (0.13) |
| 55-59 | 0.20 (0.14) | 0.22 (0.14) | 0.22 (0.14) | 0.22 (0.14) |
| 60+ | 0.20 (0.12) | 0.22 (0.12) | 0.22 (0.12) | 0.22 (0.12) |
| Rural | 0.15** (0.06) | 0.15** (0.06) | 0.15** (0.06) | 0.15** (0.06) |
| Formerly Communist | -2.30*** (0.66) | -1.97** (0.72) | -2.18** (0.68) | -2.16** (0.68) |
| Just a Muslim | -0.67*** (0.07) | -0.68*** (0.07) | -0.68*** (0.07) | -0.68*** (0.07) |

| | | | | |
|--------------------------|----------|----------|----------|----------|
| AIC | 10732.38 | 10442.90 | 10443.46 | 10439.52 |
| Num. obs. | 21405 | 20497 | 20497 | 20497 |
| Num. groups: Country | 22 | 21 | 21 | 21 |
| Var: Country (Intercept) | 1.36 | 1.43 | 1.47 | 1.46 |

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Frequency of Prayer

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| Varieties of Democracy | 0.02 (0.23) | | | |
| Grim/Finke GFI | | -0.04 (0.10) | | |
| Grim/Finke GRI | | | -0.09 (0.06) | -0.09 (0.06) |
| Muslims' Religious Freedom | | | | 0.10*** (0.03) |
| Non-Muslims' Religious Freedom | | | | 0.02 (0.03) |
| National Economy | 0.02 (0.02) | 0.02 (0.02) | 0.02 (0.02) | 0.02 (0.02) |
| Personal Economy | -0.03 (0.02) | -0.02 (0.02) | -0.02 (0.02) | -0.02 (0.02) |
| Male | -0.10*** (0.03) | -0.07* (0.03) | -0.07* (0.03) | -0.07* (0.03) |
| 18-24 | -0.47*** (0.05) | -0.44*** (0.05) | -0.44*** (0.05) | -0.44*** (0.05) |
| 25-29 | -0.26*** (0.06) | -0.23*** (0.06) | -0.23*** (0.06) | -0.23*** (0.06) |
| 30-34 | -0.21*** (0.06) | -0.19** (0.06) | -0.19** (0.06) | -0.18** (0.06) |
| 35-39 | -0.03 (0.06) | -0.02 (0.06) | -0.02 (0.06) | -0.02 (0.06) |
| 45-49 | 0.09 (0.07) | 0.09 (0.07) | 0.09 (0.07) | 0.09 (0.07) |
| 50-54 | 0.24*** (0.07) | 0.25*** (0.07) | 0.25*** (0.07) | 0.25*** (0.07) |
| 55-59 | 0.26*** (0.08) | 0.26*** (0.08) | 0.26*** (0.08) | 0.26*** (0.08) |
| 60+ | 0.59*** (0.07) | 0.59*** (0.07) | 0.59*** (0.07) | 0.58*** (0.07) |
| Rural | -0.01 (0.03) | -0.01 (0.03) | -0.01 (0.03) | -0.01 (0.03) |
| Formerly Communist | -2.39*** (0.52) | -2.51*** (0.69) | -2.43*** (0.51) | -2.41*** (0.50) |
| Just a Muslim | -0.37*** (0.04) | -0.36*** (0.04) | -0.36*** (0.04) | -0.36*** (0.04) |
| 1 2 | -3.61*** (0.70) | -3.85*** (0.73) | -4.10*** (0.39) | -3.62*** (0.40) |

| | | | | |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|
| 2 3 | -2.61 ^{***} | -2.85 ^{***} | -3.09 ^{***} | -2.62 ^{***} |
| | (0.70) | (0.73) | (0.39) | (0.40) |
| 3 4 | -2.29 ^{**} | -2.53 ^{***} | -2.77 ^{***} | -2.30 ^{***} |
| | (0.70) | (0.73) | (0.39) | (0.40) |
| 4 5 | -1.96 ^{**} | -2.21 [*] | -2.45 ^{***} | -1.98 ^{***} |
| | (0.70) | (0.73) | (0.39) | (0.40) |
| 5 6 | -1.50 [*] | -1.74 [*] | -1.99 ^{***} | -1.51 ^{***} |
| | (0.70) | (0.73) | (0.39) | (0.40) |
| 6 7 | -1.03 | -1.27 | -1.51 ^{***} | -1.04 ^{**} |
| | (0.70) | (0.73) | (0.39) | (0.40) |
| AIC | 52943.36 | 51332.59 | 51330.79 | 51316.32 |
| Num. obs. | 21238 | 20330 | 20330 | 20330 |
| Groups (Country) | 22 | 21 | 21 | 21 |
| Variance: Country: (Intercept) | 0.88 | 0.89 | 0.82 | 0.82 |

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Frequency of Mosque Attendance

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| Varieties of Democracy | -0.06 (0.21) | | | |
| Grim/Finke GFI | | -0.09 (0.06) | | |
| Grim/Finke GRI | | | -0.10 (0.06) | -0.10 (0.06) |
| Muslims' Religious Freedom | | | | 0.05 (0.03) |
| Non-Muslims' Religious Freedom | | | | -0.08*** (0.02) |
| National Economy | -0.09*** (0.02) | -0.10*** (0.02) | -0.10*** (0.02) | -0.10*** (0.02) |
| Personal Economy | 0.01 (0.02) | -0.00 (0.02) | -0.00 (0.02) | -0.00 (0.02) |
| Male | 1.75*** (0.03) | 1.75*** (0.03) | 1.75*** (0.03) | 1.75*** (0.03) |
| 18-24 | -0.37*** (0.05) | -0.34*** (0.05) | -0.34*** (0.05) | -0.34*** (0.05) |
| 25-29 | -0.24*** (0.05) | -0.23*** (0.05) | -0.23*** (0.05) | -0.23*** (0.05) |
| 30-34 | -0.13* (0.05) | -0.13* (0.05) | -0.13* (0.05) | -0.13* (0.05) |
| 35-39 | -0.11* (0.06) | -0.10 (0.06) | -0.10 (0.06) | -0.10 (0.06) |
| 45-49 | 0.08 (0.06) | 0.09 (0.06) | 0.09 (0.06) | 0.09 (0.06) |
| 50-54 | 0.27*** (0.06) | 0.28*** (0.06) | 0.28*** (0.06) | 0.28*** (0.06) |
| 55-59 | 0.37*** (0.07) | 0.35*** (0.07) | 0.35*** (0.07) | 0.36*** (0.07) |
| 60+ | 0.35*** (0.06) | 0.35*** (0.07) | 0.35*** (0.07) | 0.35*** (0.07) |
| Rural | 0.09** (0.03) | 0.10*** (0.03) | 0.10*** (0.03) | 0.10*** (0.03) |
| Formerly Communist | -2.23*** (0.49) | -2.54*** (0.51) | -2.29*** (0.47) | -2.31*** (0.47) |
| Just a Muslim | -0.42*** (0.04) | -0.46*** (0.04) | -0.46*** (0.04) | -0.45*** (0.04) |
| 1 2 | -1.69** (0.62) | -2.13*** (0.40) | -2.12*** (0.36) | -2.25*** (0.38) |

| | | | | |
|--------------------------------|-----------------|--------------------|--------------------|--------------------|
| 2 3 | -0.93 (0.62) | -1.37*** (0.40) | -1.36*** (0.36) | -1.49*** (0.38) |
| 3 4 | -0.39 (0.62) | -0.82* (0.40) | -0.81* (0.36) | -0.94* (0.38) |
| 4 5 | -0.04 (0.62) | -0.46 (0.40) | -0.45 (0.36) | -0.59 (0.38) |
| 5 6 | 1.14 (0.62) | 0.73 (0.40) | 0.74* (0.36) | 0.61 (0.38) |
| AIC | 59879.67 | 57109.76 | 57109.15 | 57101.74 |
| Num. obs. | 21379 | 20466 | 20466 | 20466 |
| Groups (Country) | 22 | 21 | 21 | 21 |
| Variance: Country: (Intercept) | 0.77 | 0.72 | 0.70 | 0.70 |

*** p < 0.001, ** p < 0.01, * p < 0.05