

ABSTRACT

Reexamining the Effects of State Religion on Religious Service Attendance

Matthew Swift

Director: Charles M. North, Ph.D.

This paper reexamines the effects of state religion on religious service attendance across countries. Using attendance data from the World Values Survey and Gallup World Poll, it pays special attention to the variables used for state religion, regulation of religion, and government favoritism toward religion. Because this analysis uses a larger set of data than has been used in many previous studies, it provides a more representative sample of countries and sheds some light on how particular state religions may affect attendance. Results suggest a complex relationship between religious service attendance and various measures of state religion, not the simple negative relationship found in prior literature.

APPROVED BY DIRECTOR OF HONORS THESIS:

Dr. Charles North, Department of Economics

APPROVED BY THE HONORS PROGRAM:

Dr. Andrew Wisely, Director

DATE: _____

REEXAMINING THE EFFECTS OF STATE RELIGION ON RELIGIOUS SERVICE
ATTENDANCE

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By
Matthew Swift

Waco, Texas

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CHAPTER ONE

Introduction

The nature of the relationship between state and religion has been the subject of renewed interest among researchers since it became relatively clear that religion's demise is not an imminent reality. Perhaps because much modern political theory focuses on these relationships, issues of religion in the public square are particularly contentious among legal scholars in the Western world, producing controversies over the use of religious language on United States currency, France's ban of face-coverings in public, and a host of other public expressions of religion. Especially in the United States, a large body of legal research focuses on the acceptability of government support or regulation of religion based on conformity to constitutional standards, eschewing the question of what effects the support or regulation generally has on religion. Granted, that question is more difficult to answer and requires both theoretical and empirical evidence, but it is a worthwhile study since those who support the existence and practice of religion generally should not support government policies and practices that undermine religiosity. One branch in the study of the economics of religion has begun to provide broad answers by analyzing the effect of state religion on religious service attendance.

Scholarship regarding religious participation and state religion, for the most part, suggests that the presence of a state religion decreases attendance at religious services, particularly those of the established religion, and concludes that supporters of religion should oppose state religion. This paper reexamines the question of a state religion's

effects on religious service attendance by using the largest sample of countries yet examined, controlling for a number of supply- and demand-side variables, and taking advantage of more precise measures of state religion that have been developed in recent years. This analysis thereby overcomes some limitations of previous studies and sheds new light on the complicated relationships between state religion, regulation of and favoritism toward religion, and religious belief and practice.

Using a model similar to North and Gwin (2004), I find that state religion has no single significant effect on attendance, regardless of which of six state religion measurements I include as an independent variable. This result is driven in large part by a bigger, more globally representative set of data than those used by previous scholarship. Both North and Gwin (2004) and Barro and McCleary (2003) examined samples of 59 countries. In contrast, I have samples of 92 countries from the most recent waves of the World Values Survey and European Values Survey (WVS/EVS) and 116 countries from the Gallup World Poll (GWP). Including variables for supermajority religions and interaction variables between supermajority religions and state religion reveals some insight into both how attendance may vary between specific religions and how the effect of state religion might be influenced by specific religions. Ironically, a Protestant supermajority seems to have a negative effect on religious service attendance compared to no supermajority, whether or not that supermajority is also the state religion. The effects of other religious supermajorities are not as clear; their coefficients vary in significance depending on the measure of attendance and the year for which they were coded. Because I hypothesize that state religions have positive and negative effects on attendance that may cancel out, I also run regressions with more precise indices of

interactions between government and religion, specifically three indices created by Grim and Finke (2006) and six indices used by Fox and Tabor (2008). Generally speaking, variables related to religious regulation have significant negative effects on attendance, whereas variables related to religious favoritism have significant positive effects. However, since regulation and favoritism often have the same underlying causes, this result is most obvious when measures for both are included. Since focusing on these new, more particular measures instead of general “state religion” variables yields more practically applicable results, I end with a few implications of my results for future research and make some suggestions for improvement.

CHAPTER TWO

Literature Review

The notion that public religious institutions hinder religiosity is no new thesis. As early as the eighteenth century, thinkers such as Adam Smith and James Madison suggested that close relationships between church and state were more harmful than helpful to religious fervor. The thesis began to take more rigorous, specific forms in the latter part of the twentieth century as quantitative analysis allowed for the empirical testing of both culture- and market-based theories of religious participation.

Smith includes one of the first discussions of the economics of religion in *The Wealth of Nations*, taking a distinctly rational conception of human motivation and applying it to religious choice. Smith begins by describing micro-level decisions in the supply of religion but quickly moves to macro-level issues with an established religion. Because religious leaders are subject to self-interest just as other individuals are, Smith reasons, they tend to promote their particular denominations to the point of encouraging “the most violent abhorrence of all other sects,” sacrificing “truth, morals, [and] decency” in the meantime. Thus, Smith rejects the notion that the state needs to subsidize religions for their positive externalities. By analogizing individual churches and profit-seeking companies, Smith develops a theory of religious markets in which competition prevents the dominance of a large entity that can subsequently take advantage of consumers. However, Smith’s theory has several flaws that are exposed as his analogy breaks down. One of the assumptions of perfect competition, for example, is the existence of

homogeneous products. If people did prefer the same religion or if religious benefits were identical across religions, Smith's vision of eventual agreement on a "pure and rational religion" with slight variations might be possible. But contrary to Smith's theory, small radical sects with remarkable differences can and do survive even in an age with thousands of competing religious denominations. Smith's characterization of state religions as monopolies also assumes that these institutions necessarily create barriers to entry for other religious groups, but not all countries with state religions also have regulation targeted at the practice or funding of other religions. In fact, some countries have several official religions.

After Smith, the economics of religion took quite some time to gain popularity among academics, but this paper now continues a major line of scholarship by asking how state religion and regulation of religion affect attendance of religious services. Although country-level data are the vehicle for seeing these effects, the analysis is not limited to factors that operate with direct national effects. Scholarship approaches the factors affecting religious service attendance from both the demand side and the supply side. On the demand side, much research is devoted to factors that affect individuals' choices to attend religious services, such as age, economic climate, the opportunity cost of wages, expected benefits after life, and expected immediate benefits such as moral education. On the supply side, scholars examine the effects of national influences from state religions, government regulation, constitutional protection of religious freedom, religious competition, social pressures, and a number of other factors.

As part of the scholarship using religious market approaches, many studies have focused on pluralism measures such as the Herfindahl index as proxies for religious

competition, which in turn may reflect a country's religious health or stagnation.¹ In response to secularization theory, which posits that increasing pluralism is a sign of decreasing religiosity, many scholars with a more market-based approach to religious participation argue that, just as highly concentrated economic market structures are often used as indicators of healthy competition, religious pluralism should further religious participation.² However, more recent scholarship challenges both sides by questioning the validity of pluralism measures. Stark and Finke (2000) demonstrate that pluralism does not necessarily entail competition with the fictional example of a society under a strict caste system, with a particular religion for each caste. In that case, the society would lack religious competition even though it exhibits religious pluralism. Chaves and Gorski (2001), as well as Voas, Olson, and Crockett (2002), further discourage the use of religious pluralism in studies of religiosity by demonstrating some of the key mathematical problems with using the Herfindahl index when measures for religious participation rates are included as dependent or independent variables. Because the Herfindahl index is, by definition, the sum of the squares of the religious shares in a country, using both it and religious shares themselves as control variables introduces noncausal, nonzero correlations that distort the true effects of each (Chaves and Gorski 2001). Similarly, including pluralism measures as independent variables in equations featuring an indicator of overall religiosity as the dependent variable is statistically problematic because both are related to participation rates for specific religious groups (Voas, Olson, and Crockett 2002).

¹According to Barro and McCleary (2003), the Herfindahl index "can be interpreted as the probability that two randomly selected persons in a country . . . belong to the same religion."

²The Department of Justice and Federal Trade Commission will sometimes refer to Herfindahl indices as indicators of market concentration to evaluate the possibility of antitrust violations.

Limited data has been a significant problem with many previous studies of this topic.³ Data on church attendance itself has usually been limited to about 59 countries, as in Barro and McCleary (2003) and North and Gwin (2004). Over time, new rounds of the WVS/EVS, in particular, have expanded to include more countries. One recent study that takes partial advantage of the new breadth of data is by Fox and Tabor (2008). Their analysis uses 205 observations from 81 countries, almost all of which are included in this paper.⁴ Like North and Gwin (2004), I use the most recent data available for each country from these surveys, drawing from the aggregated fourth and fifth waves of the WVS/EVS. This 92-country sample is an improvement compared to North and Gwin's "quite diverse" sample of countries, introducing data for 37 new countries, 26 of which are African or Asian.⁵ I have also run key regressions on weekly attendance data from 116 countries covered by the GWP; this sample provides 70 new countries compared to North and Gwin (2004), 30 of which are African and 26 of which are Asian. The broader spectrum of data from each of these sources should provide a more global picture by decreasing the proportion of Western countries in the sample. Figure 1 (below) compares the makeup of my two samples to North and Gwin's sample and to reality by breaking down each sample of countries by continent.

³There are studies which purposely focus on the effects of disestablishment in particular areas, but the work that most closely relates to this paper usually emphasizes having a large and diverse sample of countries, attempting to get an accurate global view of how state religion or regulation effects religiosity.

⁴Israel is not included, and I use Serbia and Montenegro instead of Yugoslavia.

⁵When using current data from either WVS/EVS or the GWP, I lose four countries by consolidating countries in North and Gwin's sample (East and West Germany, Puerto Rico and the USA, Northern Ireland and Great Britain, Serbia and Montenegro). Nine countries which appear in North and Gwin's sample are not included in the World Poll. In regressions including supermajority religions, I lose three countries when using WVS/EVS and one country when using GWP because of missing observations.

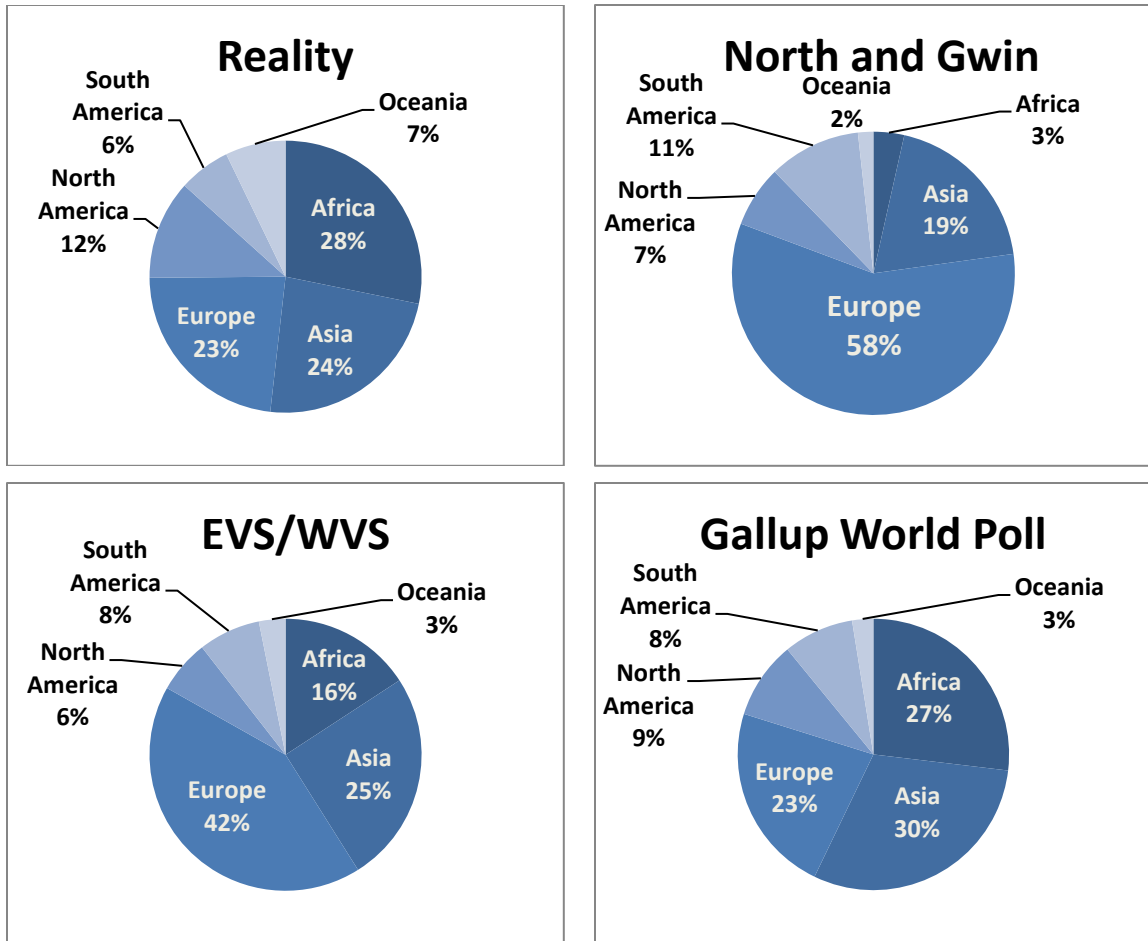


Figure 1.⁶ Comparison of the sample proportions of countries from each continent.

Scholarship in this area has been improving through the creation of measures for the interaction between states and religions, but significant gaps still exist, particularly in the variables for state religion itself. This issue arises partly from the inherent difficulty in defining and identifying state religions. Barro and McCleary (2003) note that Barrett, Kurian, and Johnson (2001, henceforth BKJ) do not define a state religion merely as the constitutionally established, official religion of a country. Although Barro and McCleary

⁶The proportions for “reality” are taken from the United Nations Statistics Division (<http://unstats.un.org/unsd/methods/m49/m49regin.htm>). I excluded non-self-governing territories, administrative regions, dependencies, etc. as determined by the U.N. (<http://www.un.org/Depts/Cartographic/english/geoinfo/geoname.pdf>). I coded all other proportions directly from the three samples.

(2003) use BKJ's coding of state religions, they also briefly note that disagreements over this coding exist. North and Gwin (2004) do their own legal research to code a stricter definition of state religion, relying on "research into the existence of legally instituted provisions setting a particular religion as the official or traditional religion of a country," but mention that the differing definitions were ultimately irrelevant to their conclusions. However, North and Gwin (2004) note that their results sometimes changed in significance depending on the definition used for state religion. Even the seemingly simple definition of a state religion as the established religion of a country leaves room for interpretation. For example, using only countries with specific state religions excludes officially "religious" countries such as Australia, which allows established religions at the state level, but not the national level. A simple comparison of BKJ's coding of state religions for 2000 and Fox's coding in the Religion and State (RAS) project for 2002 revealed only a 0.52 correlation between the 130 common observations.⁷ Thus, as my study confirms, varying definitions of state religion variables may influence what an empirical study suggests about the effects of state religion on religious service attendance.

⁷Fox's RAS data seem to involve a much stricter definition of official state religion than BKJ use. The RAS project finds only three countries to have a state religion in 2002 that BKJ does not recognize in 2000, whereas BKJ considers 30 countries to have state religions that the RAS project does not reflect in its coding. See Table 23 for the coding of these two variables.

CHAPTER THREE

Theoretical Considerations and Data

At its most basic level, economic theory suggests that religious service attendance should increase as the net social and political benefits of attending increase. Although the establishment of a state religion may decrease the costs of providing and attending those religious services, Smith's theory suggests that the individual benefits of supporting and attending a state-sponsored religious service vary inversely with state support. More specifically, he posits that religious leaders and their congregations will lose the urgency that comes with recognizing the precarious positions that their religions would otherwise hold in society. Most research into supply-side economics of religion concludes that the detriments of state religion to religious participation outweigh the benefits.⁸

Of course, a key problem for this analysis is the definitional entanglement of a state religion with its effects. Rather than attempting to redefine established state religion, some scholars opt to record government's more specific interactions with religion, developing indices to pool different expressions of government's favor, disfavor, or general regulation of religion. Grim and Finke (2006) contribute by creating the Government Regulation of Religion Index (GRI), the Government Favoritism of Religion Index (GFI), and the Social Regulation of Religion Index (SRI). Fox and Tabory (2008) use six variables which are composed of a variety of measures from the Religion and State (RAS) dataset: "official support" of one or more religions, "general

⁸Barro and McCleary (2003) are an exception.

restrictions” of religious practices, “religious discrimination” against minority religions, “religious regulation” on the majority religion or all religions, “religious legislation” including funding of religious organizations, and “general GIR” (Government Involvement in Religion), which combines the five previous variables. Although several studies, including North and Gwin (2004), make some forays into using particular policy measures as predictors of religious service attendance, they are generally limited to a few variables. To examine the relationship between government interaction with religion and religious participation more thoroughly, I use several groups of regressions to analyze the effects of six different state religion variables, Grim and Finke’s three indices, and Fox and Tabory’s six indices.

Table 1. Correlations between state religion dummy variables, 130 observations.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|-----------|----------|----------|----------|----------|-----------|-----------|
| BKJ 1900 | 1.0000 | | | | | |
| BKJ 1970 | 0.5164 | 1.0000 | | | | |
| BKJ 1990 | 0.5266 | 0.7285 | 1.0000 | | | |
| BKJ 2000 | 0.5252 | 0.6749 | 0.9101 | 1.0000 | | |
| Religious | 0.3800 | 0.5200 | 0.7217 | 0.7930 | 1.0000 | |
| Fox (RAS) | 0.2442 | 0.5905 | 0.5434 | 0.5192 | 0.3889 | 1.0000 |

Table 2. Correlations between government and religion indices, 130 observations.

| | GRI | GFI | SRI | Official support | General restrictions | Religious discrimination | Religious regulation | Religious legislation | General GIR |
|--------------------------|--------|--------|--------|------------------|----------------------|--------------------------|----------------------|-----------------------|-------------|
| GRI | 1.0000 | | | | | | | | |
| GFI | 0.4023 | 1.0000 | | | | | | | |
| SRI | 0.7570 | 0.4697 | 1.0000 | | | | | | |
| Official support | 0.2284 | 0.6383 | 0.3218 | 1.0000 | | | | | |
| General restrictions | 0.6686 | 0.3884 | 0.6172 | 0.3127 | 1.0000 | | | | |
| Religious discrimination | 0.7454 | 0.4248 | 0.6051 | 0.3266 | 0.7010 | 1.0000 | | | |
| Religious regulation | 0.6157 | 0.1632 | 0.4758 | 0.0625 | 0.4815 | 0.5251 | 1.0000 | | |
| Religious legislation | 0.4781 | 0.5877 | 0.5730 | 0.6531 | 0.5123 | 0.6011 | 0.3483 | 1.0000 | |
| General GIR | 0.6947 | 0.6179 | 0.6487 | 0.7110 | 0.7956 | 0.7958 | 0.5579 | 0.8083 | 1.0000 |

This analysis utilizes ordinary least squares regressions to analyze cross-sectional data from 92 countries using data from the WVS/EVS or 116 countries using data from the GWP. Because the distribution of values for the variable measuring attendance weekly or more was limited between values of 0 and 100, I created a new attendance variable: $\ln[\text{attendance rate} / (100 - \text{attendance rate})]$.⁹ This variable accounts for extreme values of religious participation that may not fit a linear model. Although this is generally the more statistically sound dependent variable, significance levels and signs for coefficients were not appreciably different from those of the untransformed attendance variable when using GWP data. Since a linear model provides more easily interpreted results, I include tables for both regressions using the logit transformation of the WVS/EVS data and regressions using the unchanged GWP data.

In an attempt to minimize omitted variable bias and maximize explanatory power, this analysis controls for a number of confounding variables that, though they are not the primary focus of the paper, may affect the supply or demand of religious services, including median age, population density, Gross Domestic Product (GDP) per capita, adult literacy rate, fertility rate, life expectancy, and supermajority religion. I ran a series of preliminary regressions and confirmed cases of multicollinearity between several of these variables with high correlation coefficients. I also compared the R-squared of regressions using each of these variables to determine whether their inclusion would decrease the efficiency of estimators without adding explanatory power.

⁹Attendance is reported in terms of the percent of the population attending weekly or more. Respondents to the WVS/EVS indicated how often they generally attend services, whereas respondents to the GWP indicated whether or not they had attended services that particular week. This logit transformation is similar to that used in North and Gwin (2004) which in turn mirrored a variable used by Barro and McCleary (2003). Since no country had an attendance rate of zero, the logit transformation did not require the loss of any observations.

Table 3. Correlations between other independent variables, 127 observations.

| | Median age | GDP per capita | Life expectancy | Literacy rate | Fertility rate | Population density |
|--------------------|------------|----------------|-----------------|---------------|----------------|--------------------|
| Median age | 1.0000 | | | | | |
| GDP per capita | 0.7617 | 1.0000 | | | | |
| Life expectancy | 0.7954 | 0.6524 | 1.0000 | | | |
| Literacy rate | 0.7476 | 0.5526 | 0.7318 | 1.0000 | | |
| Fertility rate | -0.8337 | -0.5339 | -0.8117 | -0.7884 | 1.0000 | |
| Population density | 0.1927 | 0.2167 | 0.1681 | 0.0543 | -0.1537 | 1.0000 |

Table 4. Summary statistics, dependent and other independent variables.

| Variable | Observations | Mean | Standard Deviation | Minimum | Maximum |
|-----------------------------------|--------------|--------|--------------------|---------|---------|
| WVS/EVS attendance | 92 | 3.1239 | 0.9598 | 0.9933 | 4.5465 |
| GWP attendance | 116 | 50.380 | 22.879 | 8.0000 | 89.000 |
| Median age | 133 | 29.703 | 9.0095 | 15.100 | 44.900 |
| GDP per capita | 133 | 12,199 | 12,538 | 366.00 | 60,228 |
| Life expectancy | 133 | 70.956 | 9.5120 | 48.210 | 83.660 |
| Literacy rate | 133 | 0.8335 | 0.2075 | 0.1930 | 1.0000 |
| Fertility rate | 133 | 2.6252 | 1.4789 | 1.0700 | 7.6000 |
| Population density | 133 | 525.47 | 1935.5 | 4.2000 | 16,074 |
| Communist | 133 | 0.3008 | 0.4603 | 0.0000 | 1.0000 |
| Date of constitutional protection | 131 | 1951.0 | 48.463 | 1689.0 | 2011.0 |

The median age of a country's population is a 2011 estimate from the CIA "World Factbook." If it follows the trend of previous scholarship, median age will probably have a negative or U-shaped effect on attendance because of the opportunity cost of wages. 2008 life expectancy data are taken from the World Christian Database (WCD) but are originally from the United Nations; shorter life expectancy may influence

greater attendance because of greater expected benefits from religion.¹⁰ The adult literacy rates, from the United Nations (2007) via the WCD, are indicators of educational outcomes, which are generally expected to have an inverse relationship with religiosity. 2008 GDP per capita figures, reported in United States dollars and adjusted for purchasing power parity, are from the United Nations; these serve as a proxy for the incomes of a country's population. As North and Gwin note, studies of the effect of income on religious service attendance have been mixed. Fertility rates and life expectancies are from the 2011 edition of the CIA "World Factbook" online. Higher fertility rates, although they can indicate a higher opportunity cost of attendance, may also indicate a greater perceived benefit from religious services in the form of spiritual or moral education for children. Population density is calculated by dividing 2005 population (WCD) by the land area in square miles (originally from the United States State Department's *International Religious Freedom Report* for 2003); higher population density suggests that religious adherents will have a shorter distance to travel to services and find communities of fellow believers. Finally, I use dummy variables for supermajority religions, where a religion is designated a supermajority it claims at least 80 percent of a country's population among its adherents. Data are taken from the *World Christian Encyclopedia*.¹¹ Using binary variables rather than religious shares avoids some of the problematic correlations with overall participation rates discussed in prior literature.

¹⁰Although the World Christian Database and the *World Christian Encyclopedia* on which it is based were originally compiled as part of an overall effort focused on Christian missionary work, they are some of the most respected scholarly sources of information regarding international religious institutions and practice.

¹¹All variables relating to large, majority, and supermajority religion are from North, Gwin, and Orman (2009).

The key independent variables in this analysis are the measures of state religion, government regulation or protection of religion, government favoritism toward religion, and social regulation of religion. BKJ (2001) coded governments as secular, atheistic, religious, or having a specific state religion, evaluating countries in 1900, 1970, 1990, and 2000. Previous researchers have typically only considered those countries with specific state religions as having a state religion for quantitative purposes. In an attempt to make my analysis robust to several definitions of state religion, I also ran regressions on two other state religion variables. One is created from BKJ's coding for countries which are officially religious but do not have an established religion, and the other is a stricter coding taken from the Religion and State project (Fox 2004). I created a version of North and Gwin's date of constitutional protection variable for my sample by researching the earliest date of official protection of religious liberty mentioned in the *World Christian Encyclopedia* for every country in my sample. This variable serves as an indicator of religious freedom and, if North and Gwin's results hold, should have a negative effect on religious service attendance. I also extended North and Gwin's binary Communism variable to cover my entire sample; this dummy variable identifies which countries currently have or have had Marxist and Leninist governments and also helps to account for varying levels of religious freedom.

Because scholars generally accept that state religions can have both positive and negative effects, I analyzed several indices in an attempt to differentiate these effects. Grim and Finke developed the GRI, GFI, and SRI from the answers to six, five, and five questions, respectively, about proselytizing, general religious freedom, funding of religious activity, inequitable government favors, and negative social attitudes toward

religions. These indices use the *International Religious Freedom Report* to capture information beyond “national constitutions and formal government publications.”¹² The GIR variables used by Fox and Tabory have differing levels of complexity: “official support” is based on two variables about established religions or the general relationship between church and state, “general restrictions” on one variable describing the limitations placed on some or all religions, “religious discrimination” on sixteen measures of particular restrictions for religious minorities, “religious regulation” on eleven similar indicators of restrictions for all or majority religions, and “religious legislation” on thirty-three variables related to government’s legal or financial support of religion (Fox and Tabory 2008; Fox 2004).

¹²Grim and Finke (2006) describes and justifies these variables in much greater detail and with much greater rigor than I can hope to address in this paper.

CHAPTER FOUR

Regression Results

Unfortunately, high correlations between many of the independent variables (see Table 3) create multicollinearity, which prohibits using them simultaneously. In particular, median age seems to subsume many of the effects that might otherwise be evident in GDP per capita, life expectancy, literacy rates, and fertility rates. Median age and GDP per capita are closely tied through the opportunity cost of labor and access to healthcare; countries with higher median ages generally have higher greater time and opportunity to reap the benefits of investing in human capital. Conversely, higher average incomes often allow individuals to buy (or be provided) life-extending medical care. The connection between median age and life expectancy is rather obvious, as populations with longer lives will have more elderly individuals to increase the median age. The relationship between median ages and literacy rates is less intuitive, but poor educational outcomes in many war- and disease-stricken African nations suggest that the two may have common underlying causes. Finally, fertility rates are inversely related to median ages since, all else equal, a younger population will have a higher proportion of child-bearing women. Preliminary regressions indicated that the coefficients of all of these variables had the expected signs. Since median age provides the most explanatory power and has intuitive causal explanations for its correlation to other variables, I chose it to be included in reported regressions. Correlation between date of constitutional protection and currently or formerly Communist government ($\rho = 0.3670$) also causes

multicollinearity when both are included, so I used the variable providing the greatest explanatory power in each set of regressions. To avoid unnecessarily reducing the efficiency of other estimators, population density is not included when evaluating state religion dummy variables; unreported regressions confirm that it is consistently insignificant in these regressions.

The first set of key regressions focuses on the effects of six state religion variables while controlling for median age, currently or formerly Communist government, and sometimes supermajority religions (see Tables 5 through 8).¹³ Because WVS/EVS religious service attendance data include responses from 1996 to 2008 and GWP data from 2010, one might suppose that using the state religion variable from 1900 or 1970 rather than 1990 or 2000 might be helpful for reducing any endogeneity that results from circular effects between church attendance, or religiosity in general, and state religion. Surprisingly, however, the coefficients on all state religion variables are insignificant. BKJ's state religion dummy variables for 1900, 1970, 1990, and 2000 all have negative coefficients, but they also all have p-values of 0.211 or greater.¹⁴ Expanding the state religion variable to include countries coded as "religious" yields an insignificant coefficient regardless of which attendance variable is used. Finally, Fox's official state religion variable has a significant negative effect at the 10% level, but only on the WVS/EVS measure of attendance, and only when supermajority religions are not included.

¹³To reiterate, this variable focuses on countries with specifically Marxist or Leninist Communist governments. Other socialist countries, including many Latin American, South American, and African countries, are not included because their particular brands of socialism or Communism often do not have the same penchant for antireligious government practices.

¹⁴The 1970 variable has a negative coefficient when using the WVS/EVS attendance measure, but it has a positive coefficient when using GWP data.

Including dummy variables for supermajority religions both increases the explanatory power of the regressions and reveals some insights into the direct influence of religion on attendance.¹⁵ Regressions with GWP attendance as the dependent variable suggest that, on average, a Protestant supermajority is associated with decreases in religious service attendance from 14.36% to 19.43% compared to no supermajority.¹⁶ The effect of Catholic supermajorities is not always significant, but when it is, the coefficients range from 7.41 to 7.70.¹⁷ Because only one country, Greece, has an Orthodox supermajority, the significance (both statistical and practical) of the positive coefficient should be treated with caution. As with Catholicism, the coefficients for Buddhism are sometimes insignificant, but the significant coefficients suggest that the average Buddhist supermajority increases attendance by 17.72% to 19.90%. Surprisingly, Islamic supermajorities had no statistically significant effect in any regression.

¹⁵I compared the adjusted R-squared of various regressions rather than the R-squared which are reported in the results since, by definition, R-squared increases whenever the number of independent variables increases.

¹⁶The coefficients for Protestant supermajorities are significant at the 1% level in every regression.

¹⁷These coefficients are only significant at the 10% level, but the coefficients of regressions on WVS/EVS attendance are significant at the 1% level.

Table 5.¹⁸ Dummy variables for state religion: WVS/EVS data.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -0.1540 | -0.0696 | -0.0914 | -0.1331 | 0.0077 | -0.3418 |
| | (0.261) | (0.646) | (0.528) | (0.356) | (0.956) | (0.076) |
| Median age | -0.0722 | -0.0723 | -0.0722 | -0.072 | -0.0724 | -0.0732 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -0.3455 | -0.3785 | -0.3679 | -0.3536 | -0.3479 | -0.4106 |
| | (0.073) | (0.037) | (0.048) | (0.063) | (0.071) | (0.031) |
| Constant | 5.7092 | 5.6546 | 5.6587 | 5.6730 | 5.6195 | 5.7514 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.5214 | 0.5162 | 0.5173 | 0.5200 | 0.5152 | 0.5237 |
| F-statistic | 51.53 | 52.15 | 51.39 | 50.50 | 52.43 | 44.54 |

Table 6.¹⁹ Dummy variables for state religion: GWP data.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -3.0631 | 2.5956 | -3.2674 | -3.1676 | -0.5884 | -0.4870 |
| | (0.271) | (0.314) | (0.249) | (0.240) | (0.823) | (0.881) |
| Median age | -1.8237 | -1.8277 | -1.8072 | -1.8064 | -1.8252 | -1.8689 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -14.584 | -14.345 | -15.858 | -15.383 | -15.15 | -15.631 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Constant | 107.99 | 105.01 | 107.16 | 107.09 | 106.53 | 107.79 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6278 | 0.6267 | 0.6283 | 0.6283 | 0.6239 | 0.6272 |
| F-statistic | 81.43 | 75.77 | 74.25 | 75.09 | 73.51 | 71.52 |

¹⁸Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 92 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

¹⁹Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 116 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 7.²⁰ Dummy variables for state religion with supermajority religions: WVS/EVS data.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|--------------------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -0.1703 | -0.1048 | -0.1147 | -0.1318 | -0.0204 | -0.0955 |
| | (0.259) | (0.586) | (0.492) | (0.406) | (0.884) | (0.711) |
| Median age | -0.0724 | -0.0722 | -0.072 | -0.0716 | -0.0719 | -0.0721 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -0.3981 | -0.4592 | -0.4339 | -0.4099 | -0.4341 | -0.4443 |
| | (0.047) | (0.012) | (0.022) | (0.036) | (0.022) | (0.019) |
| Protestant supermajority | -1.2045 | -1.2275 | -1.2185 | -1.2071 | -1.3014 | -1.2255 |
| | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.002) |
| Catholic supermajority | 0.5784 | 0.5574 | 0.5643 | 0.5667 | 0.5145 | 0.5197 |
| | (0.006) | (0.009) | (0.007) | (0.005) | (0.011) | (0.005) |
| Orthodox supermajority | 0.6410 | 0.6785 | 0.6618 | 0.6482 | 0.5790 | 0.6657 |
| | (0.000) | (0.005) | (0.000) | (0.000) | (0.001) | (0.021) |
| Islamic supermajority | -0.006 | -0.0043 | 0.003 | 0.0245 | -0.0542 | -0.0008 |
| | (0.974) | (0.985) | (0.990) | (0.903) | (0.759) | (0.998) |
| Buddhist supermajority | 0.7504 | 0.7285 | 0.7386 | 0.7519 | 0.6558 | 0.6352 |
| | (0.000) | (0.002) | (0.001) | (0.000) | (0.000) | (0.000) |
| Constant | 5.6421 | 5.5912 | 5.5848 | 5.5767 | 5.5723 | 5.5790 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6803 | 0.6756 | 0.6764 | 0.6774 | 0.6743 | 0.6705 |
| F-statistic | - | - | - | - | - | - |

²⁰Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 89 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 8.²¹ Dummy variables for state religion with supermajority religions: GWP data.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|-----------------------------|----------|----------|----------|----------|-----------|--------------|
| State religion | -3.7357 | 2.6837 | -3.7500 | -3.4825 | -1.1014 | 3.1121 |
| | (0.211) | (0.374) | (0.214) | (0.239) | (0.712) | (0.449) |
| Median age | -1.8173 | -1.7970 | -1.7969 | -1.7921 | -1.8070 | -1.8573 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -14.606 | -15.044 | -15.972 | -15.414 | -15.519 | -15.699 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Protestant supermajority | -14.897 | -19.049 | -14.357 | -14.549 | -16.299 | -19.434 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Catholic supermajority | 7.4131 | 4.9352 | 7.6957 | 7.5799 | 6.7308 | 5.7597 |
| | (0.085) | (0.275) | (0.072) | (0.077) | (0.140) | (0.166) |
| Orthodox supermajority | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Islamic supermajority | -0.6048 | -2.1835 | 0.0841 | 0.3673 | -0.8602 | -3.3047 |
| | (0.868) | (0.571) | (0.982) | (0.923) | (0.819) | (0.412) |
| Buddhist supermajority | 19.103 | 15.397 | 18.674 | 18.396 | 17.722 | 16.22 |
| | (0.053) | (0.116) | (0.079) | (0.085) | (0.072) | (0.134) |
| Constant | 107.17 | 104.09 | 105.84 | 105.57 | 105.53 | 106.45 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6716 | 0.6685 | 0.6712 | 0.6706 | 0.6666 | 0.6722 |
| F-statistic | 110.83 | 99.75 | 106.58 | 107.17 | 103.11 | 101.57 |

²¹Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 115 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

One key factor to consider when comparing these results with North and Gwin's study is the cultural and religious breadth of the countries in this sample. When controlling for the sample by regressing on only those countries used in North and Gwin's analysis, the coefficients of all six state religion variables are negative, and they are significant at the 10% level in twelve out of twenty-four regressions. Six of these coefficients were also significant at the 5% level; the three of them that were significant at the 1% level were all related to Fox's variable (see Tables 9 to 12). This result reflects the large majority of theoretical and empirical research on the effect of state religion on religious participation, which either suggests or finds that the relationship is negative. Running the same regression on only countries not included in North and Gwin (2004) resulted in mostly positive coefficients for state religion variables (See Tables 13 and 14). Ironically, the statistical insignificance of the state religion coefficients in this study marks a significant departure from other scholarship; it implies that previous results are largely driven by Western Christian countries.

Table 9.²² Dummy variables for state religion: WVS/EVS data, North and Gwin sample.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -0.3248 | -0.3267 | -0.2592 | -0.3885 | -0.2084 | -0.8667 |
| | (0.101) | (0.244) | (0.272) | (0.083) | (0.310) | (0.003) |
| Median age | -0.0782 | -0.0757 | -0.0767 | -0.0774 | -0.0792 | -0.0770 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -0.2118 | -0.3655 | -0.2649 | -0.2069 | -0.2513 | -0.3499 |
| | (0.392) | (0.147) | (0.287) | (0.400) | (0.313) | (0.148) |
| Constant | 5.8995 | 5.7559 | 5.7535 | 5.8287 | 5.8676 | 5.8446 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.3652 | 0.3537 | 0.3520 | 0.3782 | 0.3474 | 0.4367 |
| F-statistic | 21.58 | 21.33 | 18.81 | 20.12 | 20.42 | 28.05 |

Table 10.²³ Dummy variables for state religion: GWP data, North and Gwin sample.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -7.6975 | -3.9718 | -7.1540 | -8.4145 | -5.6347 | -13.502 |
| | (0.095) | (0.392) | (0.055) | (0.034) | (0.171) | (0.000) |
| Median age | -1.7736 | -1.7683 | -1.7641 | -1.7930 | -1.8535 | -1.7759 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -6.7655 | -9.1319 | -8.6279 | -6.7968 | -7.8099 | -9.2475 |
| | (0.159) | (0.079) | (0.071) | (0.159) | (0.097) | (0.063) |
| Constant | 104.85 | 101.69 | 102.68 | 104.18 | 106.23 | 103.13 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.5307 | 0.4983 | 0.5235 | 0.5408 | 0.5131 | 0.5655 |
| F-statistic | 22.11 | 16.02 | 17.17 | 19.07 | 17.37 | 27.23 |

²²Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 55 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

²³Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 46 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 11.²⁴ Dummy variables for state religion with supermajority religions: WVS/EVS data, North and Gwin sample.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|--------------------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -0.3158 | -0.5113 | -0.3475 | -0.3739 | -0.2549 | -0.4514 |
| | (0.135) | (0.094) | (0.107) | (0.062) | (0.177) | (0.115) |
| Median age | -0.0646 | -0.0636 | -0.0652 | -0.0656 | -0.0670 | -0.0693 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -0.3170 | -0.5199 | -0.3644 | -0.2895 | -0.3680 | -0.3760 |
| | (0.149) | (0.020) | (0.087) | (0.191) | (0.080) | (0.078) |
| Protestant supermajority | -1.0234 | -0.8032 | -0.9172 | -0.8962 | -1.0479 | -0.7818 |
| | (0.005) | (0.048) | (0.016) | (0.015) | (0.002) | (0.075) |
| Catholic supermajority | 0.7656 | 0.8691 | 0.8060 | 0.7947 | 0.7559 | 0.6738 |
| | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| Orthodox supermajority | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Islamic supermajority | -0.3105 | -0.4886 | -0.5344 | -0.3947 | -0.4640 | -0.5427 |
| | (0.584) | (0.311) | (0.323) | (0.358) | (0.298) | (0.310) |
| Buddhist supermajority | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Constant | 5.2973 | 5.2315 | 5.2455 | 5.2666 | 5.3578 | 5.3770 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6418 | 0.6477 | 0.6408 | 0.6495 | 0.6346 | 0.6354 |
| F-statistic | 18.35 | 19.48 | 19.74 | 20.45 | 17.39 | 18.00 |

²⁴Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 53 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 12.²⁵ Dummy variables for state religion with supermajority religions: GWP data, North and Gwin sample.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|--------------------------|----------|----------|----------|----------|-----------|-----------|
| State religion | -8.9619 | -8.4418 | -9.0624 | -9.1960 | -7.1697 | -12.900 |
| | (0.066) | (0.152) | (0.035) | (0.034) | (0.113) | (0.005) |
| Median age | -1.5737 | -1.5792 | -1.6400 | -1.6526 | -1.7148 | -1.7386 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -6.1033 | -9.7808 | -7.5049 | -5.5485 | -7.0685 | -7.2664 |
| | (0.194) | (0.034) | (0.114) | (0.280) | (0.137) | (0.141) |
| Protestant supermajority | -7.6943 | -5.8701 | -5.2764 | -5.0863 | -7.7592 | -0.3312 |
| | (0.065) | (0.309) | (0.286) | (0.316) | (0.101) | (0.951) |
| Catholic supermajority | 12.083 | 13.264 | 12.236 | 11.995 | 11.801 | 9.8684 |
| | (0.037) | (0.049) | (0.037) | (0.040) | (0.051) | (0.077) |
| Orthodox supermajority | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Islamic supermajority | 0.5393 | -4.3008 | -6.1402 | -2.6034 | -4.1945 | -6.2457 |
| | (0.951) | (0.579) | (0.475) | (0.666) | (0.506) | (0.466) |
| Buddhist supermajority | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Constant | 95.511 | 93.386 | 95.828 | 96.271 | 99.394 | 98.639 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6386 | 0.6141 | 0.6325 | 0.6402 | 0.6233 | 0.6307 |
| F-statistic | 18.51 | 17.90 | 19.48 | 21.54 | 17.55 | 18.39 |

²⁵Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 46 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 13.²⁶ Dummy variables for state religion: WVS/EVS data, sample not covered by North and Gwin.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | 0.0890 | 0.0569 | -0.0215 | 0.0716 | 0.2045 | -0.0826 |
| | (0.593) | (0.704) | (0.883) | (0.627) | (0.182) | (0.625) |
| Median age | -0.0521 | -0.0524 | -0.0516 | -0.0530 | -0.0556 | -0.0497 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) |
| Communist | -0.5928 | -0.5704 | -0.5962 | -0.5794 | -0.5204 | -0.5771 |
| | (0.037) | (0.037) | (0.030) | (0.038) | (0.063) | (0.040) |
| Constant | 5.1791 | 5.2070 | 5.2311 | 5.2168 | 5.1751 | 5.2033 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.5990 | 0.5969 | 0.5957 | 0.5977 | 0.6101 | 0.5443 |
| F-statistic | 17.65 | 16.57 | 17.73 | 17.65 | 19.53 | 11.73 |

Table 14.²⁷ Dummy variables for state religion: GWP data, sample not covered by North and Gwin.

| | BKJ 1900 | BKJ 1970 | BKJ 1990 | BKJ 2000 | Religious | Fox (RAS) |
|----------------|----------|----------|----------|----------|-----------|-----------|
| State religion | 0.1363 | 5.7771 | -3.1541 | -2.2024 | 1.2879 | 4.3423 |
| | (0.965) | (0.067) | (0.370) | (0.520) | (0.718) | (0.230) |
| Median age | -1.5662 | -1.6374 | -1.4926 | -1.5184 | -1.5960 | -1.7385 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Communist | -20.524 | -19.910 | -21.369 | -20.961 | -20.171 | -20.955 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Constant | 102.43 | 101.27 | 102.30 | 102.45 | 102.45 | 105.59 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.4696 | 0.4921 | 0.4754 | 0.4725 | 0.4706 | 0.4663 |
| F-statistic | 18.40 | 19.00 | 18.13 | 18.14 | 18.38 | 14.81 |

²⁶Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 37 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

²⁷Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 70 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

To see how supermajority religions might influence the effect of state religion on religious participation, I created four sets of interaction variables between some of BKJ and Fox's measurements of state religion and supermajority religions (Tables 15 and 16).²⁸ Multicollinearity between some supermajority religion variables and the interaction variables derived from them proves problematic, driving down t-statistics for some variables and causing others to be dropped from regressions altogether. Protestant supermajorities are eliminated from all eight regressions, but the effects of Protestant interaction variables are negative and significant at the 1% level in six of those regressions.²⁹ Although the Catholic supermajority variable for 2000 itself was positive and significant at varying levels, interaction variables between Catholic supermajorities and state religions were insignificant seven out of eight times.³⁰ Since Greece is the only supermajority Orthodox country in the WVS/EVS sample, the positive coefficient of the interaction variable is suspect, even though it is statistically significant at the 1% level. The Islamic interaction variables are never significant, but the 1900 supermajority variable has a positive effect that is significant at the 1% level in one regression. These results indicate that, compared to other state religions, both current and past Protestant state religions may be more prone to be associated with policies and practices which decrease attendance. Catholic state religions, in contrast, may increase attendance.

²⁸The interaction variables between the BKJ 1900 state religion variable and supermajority religions are the only variables to use the 1900 coding of supermajority religions. The other three sets of interaction variables use the 2000 coding of supermajority religions.

²⁹The remaining two regressions were on GWP data; the interaction with the BKJ 2000 state religion variable was significant at the 10% level. The interaction with Fox's state religion variable also had a negative coefficient, but was insignificant.

³⁰The 1900 Catholic interaction variable is significant at the 5% level in one regression, but the 1900 supermajority variable is insignificant in both regressions. The 2000 supermajority variable is significant at the 1% level in three regressions, the 5% level in two regressions, and the 10% level in the remaining one regression.

Table 15.³¹ Dummy variables for state religion with interaction variables: WVS/EVS data.

| | BKJ 1900 | BKJ 2000 | Religious | Fox (RAS) |
|--------------------------|----------|----------|-----------|-----------|
| State religion | -0.1735 | -0.1490 | 0.0555 | -0.4928 |
| | (0.405) | (0.443) | (0.730) | (0.043) |
| Median age | -0.0735 | -0.0840 | -0.0850 | -0.0866 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Date of protection | -0.0050 | -0.0034 | -0.0036 | -0.0039 |
| | (0.000) | (0.002) | (0.003) | (0.000) |
| Population density | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| | (0.001) | (0.000) | (0.000) | (0.000) |
| Protestant interaction | -1.0543 | -0.9988 | -1.1380 | -0.6383 |
| | (0.000) | (0.002) | (0.000) | (0.083) |
| Catholic interaction | 0.7784 | -0.0320 | -0.3260 | 0.1583 |
| | (0.021) | (0.925) | (0.426) | (0.776) |
| Orthodox interaction | 0.3842 | 0.8032 | 0.6842 | 1.2130 |
| | (0.220) | (0.000) | (0.001) | (0.000) |
| Islamic interaction | -0.2126 | 0.1764 | -0.0238 | 1.1393 |
| | (0.467) | (0.551) | (0.931) | (0.023) |
| Buddhist interaction | 0.0958 | - | - | - |
| | (0.901) | - | - | - |
| Protestant supermajority | - | - | - | - |
| | - | - | - | - |
| Catholic supermajority | -0.1623 | 0.6892 | 0.8561 | 0.6485 |
| | (0.532) | (0.002) | (0.019) | (0.000) |
| Orthodox supermajority | - | - | - | - |
| | - | - | - | - |
| Islamic supermajority | 0.4461 | 0.0399 | 0.0958 | -0.4194 |
| | (0.008) | (0.788) | (0.553) | (0.320) |
| Buddhist supermajority | - | 1.0501 | 0.9137 | 0.9258 |
| | - | (0.000) | (0.000) | (0.000) |
| Hindu supermajority | 0.2066 | - | - | - |
| | (0.141) | - | - | - |
| African supermajority | 0.3713 | - | - | - |
| | (0.058) | - | - | - |
| China/Asia supermajority | 0.5323 | - | - | - |
| | (0.181) | - | - | - |
| Constant | 15.180 | 12.451 | 12.780 | 13.391 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.6943 | 0.6949 | 0.6934 | 0.7147 |
| F-statistic | - | - | - | - |

³¹Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week as measured by the WVS/EVS. Regressions use 88 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

Table 16.³² Dummy variables for state religion with interaction variables: GWP data.

| | BKJ 1900 | BKJ 2000 | Religious | Fox (RAS) |
|--------------------------|----------|----------|-----------|-----------|
| State religion | -1.1586 | -1.9470 | 2.3910 | -0.1424 |
| | (0.776) | (0.668) | (0.535) | (0.985) |
| Median age | -1.9404 | -2.0697 | -2.0914 | -2.1132 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Date of protection | -0.0327 | -0.0407 | -0.0434 | -0.0455 |
| | (0.199) | (0.150) | (0.161) | (0.123) |
| Population density | 0.0017 | 0.0021 | 0.0021 | 0.0021 |
| | (0.084) | (0.051) | (0.037) | (0.030) |
| Protestant interaction | -12.127 | -8.1842 | -10.865 | -9.1258 |
| | (0.009) | (0.074) | (0.010) | (0.243) |
| Catholic interaction | 4.1734 | -2.3526 | -9.4961 | 0.1314 |
| | (0.519) | (0.777) | (0.402) | (0.992) |
| Orthodox interaction | -8.6409 | - | - | - |
| | (0.128) | - | - | - |
| Islamic interaction | -13.536 | -3.7224 | -7.9574 | 14.404 |
| | (0.234) | (0.646) | (0.312) | (0.166) |
| Buddhist interaction | 11.440 | - | - | - |
| | (0.333) | - | - | - |
| Protestant supermajority | - | - | - | - |
| | - | - | - | - |
| Catholic supermajority | 2.1326 | 12.453 | 17.182 | 10.187 |
| | (0.668) | (0.024) | (0.093) | (0.009) |
| Orthodox supermajority | - | - | - | - |
| | - | - | - | - |
| Islamic supermajority | 4.6427 | 4.9553 | 6.3344 | -7.4865 |
| | (0.638) | (0.335) | (0.227) | (0.232) |
| Buddhist supermajority | - | 16.061 | 15.401 | 15.735 |
| | - | (0.354) | (0.330) | (0.357) |
| Hindu supermajority | 6.5113 | - | - | - |
| | (0.048) | - | - | - |
| African supermajority | 3.5861 | - | - | - |
| | (0.401) | - | - | - |
| China/Asia supermajority | 7.1332 | - | - | - |
| | (0.092) | - | - | - |
| Constant | 169.40 | 186.50 | 190.76 | 196.60 |
| | (0.001) | (0.001) | (0.002) | (0.001) |
| R-squared | 0.6353 | 0.6164 | 0.6178 | 0.6270 |
| F-statistic | - | 53.53 | 50.82 | 50.71 |

³²Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 113 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

The next set of key regressions focuses on the indices created by Grim and Finke (see Tables 19 and 20). Oddly, SRI is only significant once in eight regressions at the 10% level, and the effect in that regression is positive. It appears that these social attitudes and actions, or at least Grim and Finke's coding of them, have no measurable effect on religious participation, especially since SRI is meant to be measure of negative social attitudes and actions toward religion. Government favoritism toward religion as measured by GFI has a significant positive influence on religious service attendance in six out of eight regressions: at the 1% level in one regression, the 5% level in another, and the 10% in the remaining three. Regardless of which attendance measure is the dependent variable, GFI is most significant when it and GRI, but not SRI, are included in the regression. GRI has a significant negative coefficient when included with GFI only, SRI only, or both GFI and SRI, but it is insignificant in regressions without other indices. This suggests that the portion of Smith's theory dealing with government support should be qualified: Government favoritism toward religion, considered by itself, may not help or harm attendance rates, but we must consider both favoritism and regulation as factors to get a realistic picture of the effects of each.³³ I ran a simple F-test to determine if the difference between the coefficients for GRI and GFI is significantly different from zero, or more simply, whether or not their coefficients offset each other. For every regression in which both GRI and GFI are significant, there is no significant difference in the absolute value of their coefficients.³⁴ The counteracting effects of GRI and GFI may explain why official state religion measures are almost always insignificant in this study.

³³When using GWP data, GFI is significant at the 10% level even when other indices are not included.

³⁴The p-values for the tests on the coefficients from regression (4) of Table 19 and regressions (4) and (7) of Table 20 are 0.7582, 0.9030, and 0.2728, respectively.

When supermajority religions are included in these regressions, no appreciable differences arise if the GWP attendance measure is the dependent variable. However, when the WVS/EVS measure is used and GRI is included, SRI is significant at the 5% and 10% levels instead of GFI. GFI is insignificant in all four of these regressions. Protestant, Catholic, and Buddhist supermajorities have significant ($p < 0.01$) coefficients with the same signs as in regressions with state religion variables.

Table 17.³⁵ Effects of Grim and Finke's GRI, GFI, SRI: WVS/EVS data.

| Regression | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|
| Government regulation | -0.0355 | - | - | -0.0652 | -0.0793 | - | -0.0954 |
| | (0.207) | - | - | (0.063) | (0.038) | - | (0.021) |
| Government favoritism | - | 0.0271 | - | 0.0556 | - | 0.0345 | 0.0494 |
| | - | (0.278) | - | (0.087) | - | (0.294) | (0.245) |
| Social regulation | - | - | 0.0005 | - | 0.0504 | -0.0148 | 0.0385 |
| | - | - | (0.982) | - | (0.103) | (0.615) | (0.228) |
| Median age | -0.0864 | -0.0844 | -0.0835 | -0.0906 | -0.0863 | -0.0857 | -0.09 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Date of protection | -0.0022 | -0.0032 | -0.0029 | -0.0021 | -0.0018 | -0.0031 | -0.0018 |
| | (0.092) | (0.013) | (0.018) | (0.092) | (0.147) | (0.015) | (0.143) |
| Population density | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| | (0.002) | (0.003) | (0.004) | (0.000) | (0.001) | (0.002) | (0.000) |
| Constant | 10.2422 | 11.905 | 11.512 | 10.014 | 9.563 | 11.758 | 9.52 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.536 | 0.5335 | 0.5275 | 0.5554 | 0.5467 | 0.5351 | 0.5614 |
| F-statistic | 44.80 | 38.14 | 37.93 | 37.02 | 38.55 | 30.97 | 32.83 |

³⁵Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week, as measured by the WVS/EVS. Regressions use 91 observations. P-values are in parentheses immediately below their respective coefficients. All F-statistics are highly significant ($p < 0.0001$). Standard errors used to calculate p-values are robust to heteroscedasticity.

Table 18.³⁶ Effects of Grim and Finke's GRI, GFI, SRI: GWP data.

| Regression | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|
| Government regulation | -0.8232 | - | - | -1.5395 | -2.0469 | - | -2.2992 |
| | (0.134) | - | - | (0.016) | (0.018) | - | (0.010) |
| Government favoritism | - | 0.8696 | - | 1.4678 | - | 1.0994 | 1.2927 |
| | - | (0.070) | - | (0.010) | - | (0.070) | (0.028) |
| Social regulation | - | - | 0.0359 | - | 1.304 | -0.4401 | 0.9006 |
| | - | - | (0.935) | - | (0.058) | (0.415) | (0.206) |
| Median age | -2.0928 | -2.1254 | -2.0659 | -2.2151 | -2.1106 | -2.1482 | -2.2128 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Date of protection | -0.0291 | -0.0539 | -0.0474 | -0.0254 | -0.0203 | -0.0498 | -0.0197 |
| | (0.340) | (0.068) | (0.127) | (0.363) | (0.499) | (0.090) | (0.488) |
| Population density | 0.0022 | 0.0021 | 0.002 | 0.0026 | 0.0025 | 0.0022 | 0.0027 |
| | (0.041) | (0.043) | (0.065) | (0.011) | (0.022) | (0.038) | (0.008) |
| Constant | 168.57 | 211.31 | 200.99 | 159.83 | 150.79 | 204.39 | 148.59 |
| | (0.006) | (0.000) | (0.001) | (0.004) | (0.012) | (0.001) | (0.009) |
| R-squared | 0.5771 | 0.5807 | 0.5681 | 0.6063 | 0.5915 | 0.5838 | 0.6127 |
| F-statistic | 62.60 | 56.18 | 52.61 | 53.66 | 55.88 | 44.29 | 49.30 |

The final set of key regressions focuses on the indices used by Fox and Tabory. I began by running each of the six indices in its own regression with median age and population density as controls. Although the results for some specific variables vary slightly with which attendance measure is used as the dependent variable, the overall implications are consistent with my other results. When using WVS/EVS data, religious discrimination and religious regulation have significant negative effects at the 5% level,

³⁶Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 114 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

while official support, general restrictions, and general GIR are significant at the 10% level. In an interesting echo of the analysis of Grim and Finke's GFI and GRI, religious legislation has a significant ($p < 0.01$) positive effect only when combined with any other variable except official support. When using GWP data for these individual regressions, religious regulation is significant at the 1% level, religious legislation at the 5% level, and official support at the 10% level. A number of unreported regressions helped to determine that official support, general restrictions, and general GIR sometimes created multicollinearity with each other and with religious discrimination or religious regulation. However, Fox's official state religion variable (which is part of official support) did not exhibit these problems; in fact, it was both negative and significant when included in the last regressions listed in Table 21 and Table 22. This result should be attributed to the narrower definition of this state religion variable and perhaps the simultaneous control for many positive effects associated with state religion. These last regressions also include the remaining three GIR variables: religious regulation, religious discrimination, and religious legislation. Depending on whether WVS/EVS data or GWP data is used, religious regulation is significant at the 5% or 1% level, and Fox's state religion variable is significant at the 1% or 10% level. For both attendance measures, religious discrimination's effect is negative and significant at the 5% level, and religious legislation's effect is positive and significant at the 1% level. These results confirm the analysis of Grim and Finke's indices: Regulatory or restrictive influences tend to decrease religious participation, and government support of religion through legal or financial means tends to increase it, but both should be included an examination of their effects.

Including supermajority religions in regression (7) of Table 21, which uses WVS/EVS data, does not change the significance level or sign of any coefficient except for official state religion. It is insignificant at the 10% level in that regression and when supermajority religions are added to regression (7) of Table 22. The only other noteworthy difference in the GWP regression is a decrease in significance for the religious discrimination variable from the 5% to the 10% level. The significant variables for supermajority religions have the expected signs.

Table 19.³⁷ Effects of Fox and Tabory's GIR variables: WVS/EVS data.

| Regression | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|
| Official support | 0.0041 | - | - | - | - | - | - |
| | (0.090) | - | - | - | - | - | - |
| General restrictions | - | -0.1160 | - | - | - | - | - |
| | - | (0.090) | - | - | - | - | - |
| Religious discrimination | - | - | -0.0161 | - | - | - | -0.0297 |
| | - | - | (0.033) | - | - | - | (0.017) |
| Religious regulation | - | - | - | -0.0480 | - | - | -0.0469 |
| | - | - | - | (0.034) | - | - | (0.032) |
| Religious legislation | - | - | - | - | 0.0137 | - | 0.0855 |
| | - | - | - | - | (0.185) | - | (0.000) |
| General GRI | - | - | - | - | - | -0.0063 | - |
| | - | - | - | - | - | (0.097) | - |
| Official state religion | - | - | - | - | - | - | -0.6774 |
| | - | - | - | - | - | - | (0.002) |
| Median age | -0.0796 | -0.0826 | -0.0815 | -0.0882 | -0.0777 | -0.0821 | -0.0839 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Population density | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| | (0.010) | (0.001) | (0.006) | (0.002) | (0.007) | (0.005) | (0.005) |
| Constant | 5.7121 | 5.9494 | 5.8738 | 6.1167 | 5.5637 | 5.9534 | 5.7080 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.4962 | 0.5104 | 0.5121 | 0.5224 | 0.5014 | 0.5069 | 0.6164 |
| F-statistic | 44.29 | 59.58 | 60.21 | 54.66 | 43.41 | 51.80 | 32.49 |

³⁷Dependent variable is a logit transformation of the percentage of the population that attends religious services once or more per week, as measured by the WVS/EVS. Regressions use 90 observations. P-values are in parentheses immediately below their respective coefficients. All F-statistics are highly significant ($p < 0.0001$). Standard errors used to calculate p-values are robust to heteroscedasticity.

Table 20.³⁸ Effects of Fox and Tabory's GIR variables: GWP data.

| Regression | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|
| Official support | 1.3539 | - | - | - | - | - | - |
| | (0.080) | - | - | - | - | - | - |
| General restrictions | - | -1.6281 | - | - | - | - | - |
| | - | (0.273) | - | - | - | - | - |
| Religious discrimination | - | - | -0.2263 | - | - | - | -0.4953 |
| | - | - | (0.299) | - | - | - | (0.044) |
| Religious regulation | - | - | - | -1.2271 | - | - | -1.524 |
| | - | - | - | (0.005) | - | - | (0.002) |
| Religious legislation | - | - | - | - | 0.4959 | - | 1.6824 |
| | - | - | - | - | (0.056) | - | (0.000) |
| General GRI | - | - | - | - | - | -0.0288 | - |
| | - | - | - | - | - | (0.738) | - |
| Official state religion | - | - | - | - | - | - | -7.7680 |
| | - | - | - | - | - | - | (0.073) |
| Median age | -2.0125 | -2.0082 | -1.9869 | -2.1107 | -1.9768 | -1.9881 | -2.1164 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Population density | 0.0021 | 0.0021 | 0.0019 | 0.0021 | 0.0019 | 0.0019 | 0.0021 |
| | (0.046) | (0.051) | (0.075) | (0.037) | (0.068) | (0.077) | (0.023) |
| Constant | 104.14 | 108.93 | 107.66 | 113.33 | 102.87 | 107.23 | 107.25 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| R-squared | 0.5711 | 0.5637 | 0.5633 | 0.5945 | 0.5714 | 0.5590 | 0.6509 |
| F-statistic | 73.78 | 71.60 | 69.99 | 84.73 | 68.72 | 68.37 | 50.41 |

³⁸Dependent variable is the percentage of the population that attends religious services once or more per week as measured by the World Poll. Regressions use 114 observations. P-values are in parentheses immediately below their respective coefficients. Standard errors used to calculate p-values are robust to heteroscedasticity. All F-statistics are highly significant ($p < 0.0001$).

CHAPTER FIVE

Conclusions

The answer to the original question of a state religion's effects on religious service attendance, then, is unclear. Contrary to most previous studies on this topic, these results support that, on average, state religion has no effect on religious service attendance, although a very narrow coding of state religion may yield a significant coefficient depending on what other control variables are included. This analysis also reveals that, although the net influence of an official state religion is statistically insignificant, the elements comprising state religion seem to have significant effects. Somewhat unsurprisingly, state religion provides both support for and obstacles to religiosity, at least insofar as it can be measured by religious service attendance.

Challenging part of Smith's theory, I did not find that government favoritism toward a religion negatively affected religious participation; rather, regressions including Grim and Finke's GFI or Fox's religious legislation index demonstrate the opposite. While recognizing the danger inherent in creating a "lazy" clergy and congregation by decreasing religious competition, Smith seems to have overemphasized the reasonable but unnecessary implication that government favoritism must harm religion. Given the change in results caused simply by surveying a more culturally and geographically diverse range of countries, the effects of cultural idiosyncrasies also appear to play an important role. As the coefficients on supermajority religion variables and interaction

variables suggest, particular religions may have both a direct impact on overall religious service attendance and an indirect effect by influencing the effects of state religion.

The effect of median age on attendance is always negative, and regressions using GWP data produce a range of coefficients which indicate that every year added to median age decreases attendance by between 1.79% and 2.22% ($p < 0.01$). Because the observations for median age are between 15.1 and 44.9 inclusive, this supports previous scholarship by demonstrating the negatively sloped portion of age's U-shaped effect on religious service attendance. North and Gwin's claims about years of constitutional protection of religion and Marxist-Leninist governments were not conclusively supported since the coefficients of each were often insignificant.

Perhaps because scholarship regarding the measurement of religious regulation (both governmental and social) is still limited, discussion of the shortcomings of current definitions of state religion and measures for religious regulation seems to have been neglected. A related, more overarching problem is the significant amount of endogeneity which probably occurs in these studies simply because of the interconnected natures of religious participation, government, and culture. Scholarship has largely failed in the search for instrumental variables in this area. If this analysis using religious variable indices is any indication, variables that focus on particular practices and policies rather than nonspecific attitudes and laws provide more statistically significant information for researchers. Future work may focus on how particular regulatory, restrictive, or favorable practices affect religious service attendance, or researchers may shift their focus to those outcomes which have previously been related to religiosity, such as voter turnout, crime rates, or educational success.

Furthermore, future research efforts may have sufficient resources available to control for fixed effects across countries and time. Because religious participation at any given point depends partially on prior religious participation, incorporating strong statistical controls for time effects may prove important. Fox and Tabory's analysis includes a variable for the date of survey which had a significant effect, but unreported regressions in this study found a similar variable to be insignificant. The Religion and State project from which Fox's GIR indices sprung already spans thirteen years, and it is also in the process of gaining another round of data. Another wave of the WVS/EVS is due to be released in the near future, and this may present an opportunity to examine some countries at several points over a 30-year period.

In closing, this study, which incorporates data from more countries than any other analysis I have read, seems to diverge from most other research on the issue, although it relies heavily on that research in its empirical methods and sources of data. State religion has long been vilified as damaging to the very institutions it supports, and while this analysis concurs that regulatory influences often associated with state religion decrease religious participation, results also indicate that these costs do not necessarily outweigh the benefits afforded by a state religion. Whether this is the result of an overall change in the nature of state religion over time or simply a more representative sample of the international average, it raises questions about the actual effects of government support of religion and how these might vary across countries. Especially as an interdisciplinary study, the economics of religion still has many interesting, even controversial, facets that remain to be explored, and we can expect it to become a more precise and meaningful area of study as both data and definitions improve.

Table 21. Coding for selected independent variables.

| Country | Date of constitutional protection | Marxist-Leninist | BKJ 2000 | Fox (RAS) |
|------------------------|-----------------------------------|------------------|----------|-----------|
| Afghanistan | 2011 | 1 | 1 | 1 |
| Albania | 1993 | 1 | 0 | 0 |
| Algeria | 1963 | 0 | 1 | 1 |
| Andorra | 1993 | 0 | 1 | 1 |
| Angola | 1971 | 1 | 0 | 0 |
| Argentina | 1853 | 0 | 1 | 1 |
| Armenia | 1995 | 1 | 1 | 1 |
| Australia | 1900 | 0 | 0 | 0 |
| Austria | 1867 | 0 | 0 | 0 |
| Azerbaijan | 2011 | 1 | 1 | 0 |
| Bangladesh | 1972 | 0 | 1 | 1 |
| Belarus | 1989 | 1 | 1 | 0 |
| Belgium | 1831 | 0 | 0 | 0 |
| Benin | 1968 | 1 | 0 | 0 |
| Bolivia | 1967 | 0 | 1 | 1 |
| Bosnia and Herzegovina | 1954 | 1 | 1 | 0 |
| Botswana | 1966 | 0 | 0 | 0 |
| Brazil | 1967 | 0 | 0 | 0 |
| Bulgaria | 1971 | 1 | 0 | 0 |
| Burkina Faso | 1970 | 0 | 0 | 0 |
| Burundi | 1974 | 0 | 0 | 0 |
| Cambodia | 1947 | 1 | 0 | 1 |
| Cameroon | 1972 | 0 | 0 | 0 |
| Canada | 1852 | 0 | 0 | 0 |
| Chad | 1975 | 0 | 0 | 0 |
| Chile | 1925 | 0 | 0 | 0 |
| China | 1954 | 1 | 0 | 0 |
| Colombia | 1886 | 0 | 1 | 0 |
| Congo Brazzaville | 1969 | 1 | 0 | 0 |
| Costa Rica | 1949 | 0 | 1 | 1 |
| Croatia | 1953 | 1 | 1 | 0 |
| Cyprus | 2011 | 0 | 0 | 0 |
| Czech Republic | 1948 | 1 | 1 | 0 |
| Denmark | 1953 | 0 | 1 | 1 |
| Djibouti | 2011 | 0 | 0 | 1 |

| | | | | |
|--------------------|------|---|---|---|
| Dominican Republic | 1966 | 0 | 1 | 1 |
| Ecuador | 1945 | 0 | 0 | 0 |
| Egypt | 1971 | 0 | 1 | 1 |
| El Salvador | 1886 | 0 | 1 | 0 |
| Estonia | 2011 | 1 | 0 | 0 |
| Ethiopia | 1955 | 1 | 0 | 0 |
| Finland | 1869 | 0 | 1 | 1 |
| France | 1905 | 0 | 0 | 0 |
| Georgia | 1991 | 1 | 1 | 0 |
| Germany | 1949 | 1 | 0 | 0 |
| Ghana | 1969 | 0 | 0 | 0 |
| Greece | 2011 | 1 | 1 | 1 |
| Guatemala | 1966 | 0 | 1 | 0 |
| Haiti | 1964 | 0 | 1 | 0 |
| Honduras | 1880 | 0 | 1 | 0 |
| Hong Kong | - | 1 | 0 | - |
| Hungary | 1972 | 1 | 0 | 0 |
| Iceland | 1874 | 0 | 1 | 1 |
| India | 1949 | 0 | 0 | 0 |
| Indonesia | 1945 | 0 | 0 | 0 |
| Iran | 2011 | 0 | 1 | 1 |
| Iraq | 1970 | 0 | 1 | 1 |
| Ireland | 1867 | 0 | 0 | 0 |
| Israel | 1948 | 0 | 1 | 1 |
| Italy | 1948 | 0 | 1 | 0 |
| Japan | 1946 | 0 | 0 | 0 |
| Jordan | 1952 | 0 | 1 | 1 |
| Kazakhstan | 1992 | 1 | 0 | 0 |
| Kenya | 1969 | 0 | 0 | 0 |
| Kyrgyzstan | 1991 | 1 | 1 | 0 |
| Laos | 1947 | 1 | 0 | 0 |
| Latvia | 1991 | 1 | 0 | 0 |
| Lebanon | 1926 | 0 | 0 | 0 |
| Liberia | 1847 | 0 | 1 | 0 |
| Lithuania | 1991 | 1 | 0 | 0 |
| Luxembourg | 1868 | 0 | 1 | 0 |
| Macedonia | 1991 | 1 | 1 | 0 |
| Madagascar | 1959 | 0 | 0 | 0 |
| Malaysia | 1957 | 0 | 1 | 1 |

| | | | | |
|-----------------------|------|---|---|---|
| Mali | 1960 | 0 | 0 | 0 |
| Malta | 1964 | 0 | 1 | 1 |
| Mauritania | 1961 | 0 | 1 | 1 |
| Mexico | 1917 | 0 | 0 | 0 |
| Moldova | 1992 | 1 | 1 | 0 |
| Mongolia | 1960 | 1 | 0 | 0 |
| Morocco | 1962 | 0 | 1 | 1 |
| Mozambique | 1975 | 1 | 0 | 0 |
| Nepal | 1967 | 0 | 1 | 0 |
| Netherlands | 1814 | 0 | 0 | 0 |
| New Zealand | 1947 | 0 | 0 | 0 |
| Nicaragua | 1911 | 0 | 0 | 0 |
| Niger | 1960 | 0 | 0 | 0 |
| Nigeria | 1963 | 0 | 0 | 0 |
| Norway | 1969 | 0 | 1 | 1 |
| Pakistan | 1956 | 0 | 1 | 1 |
| Palestine | - | 0 | 0 | - |
| Panama | 1972 | 0 | 1 | 0 |
| Paraguay | 1967 | 0 | 1 | 0 |
| Peru | 1933 | 0 | 1 | 0 |
| Philippines | 1899 | 0 | 0 | 0 |
| Poland | 1952 | 1 | 0 | 0 |
| Portugal | 1933 | 0 | 1 | 0 |
| Qatar | 1970 | 0 | 1 | 1 |
| Romania | 1948 | 1 | 0 | 0 |
| Russia | 1936 | 1 | 0 | 0 |
| Rwanda | 1962 | 0 | 0 | 0 |
| Saudi Arabia | 2011 | 0 | 1 | 1 |
| Senegal | 1963 | 0 | 0 | 0 |
| Serbia and Montenegro | 1992 | 1 | 0 | - |
| Sierra Leone | 1972 | 0 | 0 | 0 |
| Singapore | 1966 | 0 | 0 | 0 |
| Slovakia | 1989 | 1 | 0 | 0 |
| Slovenia | 1991 | 1 | 1 | 0 |
| South Africa | 1870 | 0 | 0 | 0 |
| South Korea | 1962 | 0 | 0 | 0 |
| Spain | 1967 | 0 | 1 | 0 |
| Sri Lanka | 1972 | 0 | 1 | 1 |
| Sweden | 1951 | 0 | 1 | 0 |

| | | | | |
|--------------------------|------|---|---|---|
| Switzerland | 1874 | 0 | 0 | 0 |
| Syria | 1973 | 0 | 0 | 0 |
| Taiwan | 1947 | 0 | 0 | 0 |
| Tajikistan | 1994 | 1 | 1 | 0 |
| Tanzania | 1965 | 0 | 0 | 0 |
| Thailand | 1968 | 0 | 1 | 0 |
| Togo | 1963 | 0 | 0 | 0 |
| Trinidad and Tobago | 1974 | 0 | 0 | 0 |
| Tunisia | 1959 | 0 | 1 | 1 |
| Turkey | 1961 | 0 | 0 | 0 |
| Uganda | 1967 | 0 | 0 | 0 |
| Ukraine | 1991 | 1 | 1 | 0 |
| United Kingdom | 1689 | 0 | 1 | 1 |
| United States of America | 1791 | 0 | 0 | 0 |
| Uruguay | 1967 | 0 | 0 | 0 |
| Uzbekistan | 1992 | 1 | 1 | 0 |
| Venezuela | 1961 | 0 | 1 | 0 |
| Vietnam | 2011 | 1 | 0 | 0 |
| Zambia | 1964 | 0 | 0 | 1 |
| Zimbabwe | 2011 | 0 | 0 | 0 |

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