University of Connecticut
DigitalCommons@UConn

Economics Working Papers | Department of Economics

2-1-2008

Church and State

Metin Cosgel
University of Connecticut

Thomas Miceli
University of Connecticut

Follow this and additional works at: http://digitalcommons.uconn.edu/econ_wpapers

Recommended Citation
Cosgel, Metin and Miceli, Thomas, "Church and State" (2008). *Economics Working Papers.* Paper 200804.
http://digitalcommons.uconn.edu/econ_wpapers/200804

This is brought to you for free and open access by the Department of Economics at DigitalCommons@UConn. It has been accepted for inclusion in Economics Working Papers by an authorized administrator of DigitalCommons@UConn. For more information, please contact digitalcommons@uconn.edu.

University of Connecticut

Department of Economics Working Paper Series

Church and State

Metin Coşgel
University of Connecticut

Thomas Miceli
University of Connecticut

Working Paper 2008-04

February 2008

341 Mansfield Road, Unit 1063
Storrs, CT 06269–1063
Phone: (860) 486–3022
Fax: (860) 486–4463
http://www.econ.uconn.edu/

This working paper is indexed on RePEc, http://repec.org/

Abstract

Church and state have historically had an uneasy relationship, sometimes close allies, at others harsh adversaries, and at still others largely independent of one another. This paper develops an economic model of this relationship, where the state's objective is to maximize net tax revenue, while the church provides religious goods. Religious goods benefit the state in two ways: first, they provide utility to citizens, thus allowing the state to extract more taxes before running up against citizens' reservation utility (the point at which they would revolt), and second, they potentially provide legitimacy to the state, thereby lowering the costs of tax collection. If the latter effect is strong enough, the state may find it optimal to take control of the church, either to enhance its legitimizing effect, or to suppress its de-legitimizing effect. To evaluate the model's implications, we use recent cross-country data on the relationship between religion and state, including measures coded from the 2001, 2003, and 2005 International Religious Freedom reports. We also examine in more detail some of the paradigmatic cases indicated by the model, presenting various types of evidence from current and historical examples of each case.

Journal of Economic Literature Classification: H10, P5, N4, Z12

Keywords: Church, state, religion, legitimacy, power

We acknowledge the comments of participants in the Economics Department Brownbag Seminar, February 7, 2008. We especially appreciate the comments of Dhammika Dharmapala, Dick Langlois, Lanse Minkler, Jared Rubin, and Christian Zimmermann. We also acknowledge the research assistance of Moussa Diop, Parag Waknis, and Michael Stone.

CHURCH AND STATE

1. INTRODUCTION

Throughout history, church and state have had an uneasy relationship. At times they have been close allies, at others harsh adversaries, and at still others largely independent of one another. The model in this paper attempts to explain these different configurations as special cases emerging from a single framework that is driven by the interaction between a self-interested sovereign (dictator) and citizens. The goal of the sovereign is to maximize his private consumption, which is equal to the taxes he can extract from the citizen, minus the cost of collection and possibly the cost of supporting a state-run church. The only limit on the sovereign's power is the ability of citizens to exit or revolt (i.e., replace the sovereign).[1]

The role of the church in this setting, whether independent or state-run, is to provide "religious goods" to the citizenry. Religious goods will have two effects on the state's power to tax. First, they provide utility to citizens in the form of worship, dispensation of sins, assuagement of grief, promise of salvation, etc. This benefits the state indirectly because it raises the level of citizen utility, thereby allowing the state to extract more resources from citizens before running up against their reservation utility (the point at which they would revolt). This aspect of the model reflects Marx's notion of religion as the "opiate of the masses." Second, religious goods can potentially provide

[1] We focus initially on a self-interested dictator given the relatively modern invention of democratic government, and the relative lack of benevolent dictators throughout history. Below, however, we discuss the implications of allowing a government whose objective is maximization of citizen utility.

"legitimacy" to the state, for example by declaring the sovereign to be divine or divinely inspired. This has the direct effect of lowering the cost of collecting taxes.

In this simple setting, we consider two regimes: one in which the state controls the church and therefore chooses the level of spending on religious goods (including no spending, or suppression), and one in which the state allows the church to act independently. From the sovereign's perspective the trade off is as follows. The advantage of state control of the church is that the state can choose the level of religious spending to suit its own objective (i.e., maximization of net tax revenues), whereas an independent church serves the interests of citizens. The disadvantage of state control is that spending on religious goods must be financed out of tax revenues, which are costly to collect (i.e., some resources are lost in the process of collecting taxes). The optimal regime from the sovereign's perspective depends on which of these factors is stronger.

The impact of religious goods on tax collection costs is crucial in this regard because the stronger that effect is, the more desirable it is for the state to control the church, either through an alliance (if church teaching is favorable toward the state), or through suppression (if church teaching is sufficiently unfavorable toward the state). As Adam Smith observed, the state ignores the influence of the church at its peril: "The sovereign can … never be secure unless he has the means of influencing in a considerable degree the greater part of the teachers of [the established] religion" (Smith [1776] 1965, p. 749). The key factor here is the nature of church "doctrine," that is, the extent to which the teaching of the church legitimizes or de-legitimizes the state. We treat church doctrine parametrically in the model.

To evaluate the results of the model, we present two types of evidence. The first is a quantitative analysis of the recently available cross-country data on the relationship between religion and state. In addition to providing basic information on some of the traditional variables of interest, these data contain abundant detail on the state-church relationship and include variables that can serve as suitable proxies for the two types of special influences on state control identified by the model, namely the power of the church and the level of legitimacy it provides to the state (as reflected by church doctrine). Controlling for various demographic, social, political, and other country characteristics, we examine the effects of church power and church doctrine on the state's financial control of the church. The results are consistent with the implications of the model.

Going beyond quantifiable evidence and econometric trends, we also examine in more detail some of the paradigmatic cases indicated by the model. This allows us to study each case from a broader perspective by including all types of evidence and considering both current and historical examples of each. Using the model as a guide, we examine the variety of ways in which church doctrine and church power have historically influenced the state's decision of whether to control, suppress, or grant independence to the church.

2. STATE AND THE PROVISION OF RELIGIOUS GOODS: OVERVIEW

As noted, the political economy of the relationship between state and religion can be grouped into three general categories based on the state's involvement in the provision of religious goods. The state can grant religious organizations complete autonomy in

setting the quantity of goods to produce, it can control the quantity itself, or it can suppress their provision altogether by setting the quantity equal to zero. There are, of course, numerous further possibilities within each category, and there are also various social, political, and other dimensions of the relationship between state and religion.[2] To simplify the analysis, we focus on the political economy of this relationship and reduce the possibilities to the three categories mentioned. As we discuss further in Section 6 below, each of these cases has been variously observed throughout history.

The case of independence between church and state is often considered as being an ideal towards which all societies should navigate. Social scientists of religion have long anticipated the gradual separation of church from state as one of the predictions of the well-known secularization theory, an anticipation that seems to survive despite recently growing criticisms of some of the theory's other predictions on religious behavior.[3] Independence appears far from being the norm in the World today, however, as can be seen in the cross-national data coded from the U.S. State Department's recent annual International Religious Freedom (IRF) Reports.[4] Judging by how many states have funded the provision of religious goods and imposed restrictions on religious practices, a surprisingly small proportion of countries in the world have actually achieved

---

[2] For empirically distinguishable forms of social and political influences on religion and international indexes of these influences, see Grim and Finke (2006).

[3] For the debate on secularization theory, see Stark (1999) and Norris and Inglehart (2004).

[4] The data files are available online at the website of the Association of Religious Data Archives (ARDA): thearda.com. See also Grim and Finke (2006) for a description of the data, indexes constructed from it, and a list of included countries. Other sources of cross-national data on state control of religion include the World values Surveys, the *World Christian Encyclopedia* (Barrett, Kurian, and Johnson, 2001), and measures of religious freedom offered by the Freedom House. For uses and limitations of these data, see Barro and McCleary (2006a: 54-57), Fox and Sandler (2005), and Grim and Finke (2006: 4-6).

independence of church from state. According to the annual IRF data for the years 2001, 2003, and 2005, in only 12 of the 196 surveyed countries have the states refrained from funding or regulating religious practices.[5]

More typical has been the case of some form of state control of the provision of religious goods. According to the IRF reports, about 80% of countries in the World have shown some form of involvement, funding religious education or buildings, paying clergy salaries or benefits, or sponsoring religious media, charity, or practices. Involvement has varied by regions. Table 1 shows the distribution of state funding of religion by geographic regions during this period. State funding was least common in Africa and East Asia and Pacific, where about two-thirds of the countries provided funding, the highest in South Asia and Near East and North Africa, and also very high in Europe and Eurasia. In the Western Hemisphere (excluding the U.S.), about three-quarters of countries provided some form of funding for the provision of religious goods and services.[6]

State control of the church has perhaps been the most common form of relationship between church and state. In the ancient world, religious institutions were typically subordinated and controlled by the state (Johnston, 2004). In some societies, the ruler was also the religious leader, as was the case in the Hindu religion or under the institution of *khalifat* in the early Islamic states. There were also other societies where the state and church were distinct institutions, yet the rulers exercised tremendous power

[5] More specifically, these are the countries for which the government funding index (variable labeled FUNDEXAG in the ARDA files) and the government regulation index (GRI_AG) are zero. Although there were 38 countries in which the state did not fund religion, there were various forms of restrictions on religious practices in 26 of them.
[6] The IRFR were not prepared for the United States.

over the church, as was the case in the earlier Buddhist and Christian societies. Echoes of this type of outcome can also be found in some modern states. The King of Nepal, for example, was until recently revered as a Hindu god, and the British monarch is still officially the Supreme Governor of the Church of England. The ruler's control of religion has also been the norm among tribal societies.

The case of state suppression of the church has been a more recent phenomenon (though state persecution of some religious sects, notably Christianity in the Roman Empire prior to Constantine, has occurred throughout history). Well-known manifestations of this phenomenon in the twentieth century have occurred under communist regimes, for example in the Soviet Union, where the state banned religious activities, confiscated Church property, and prohibited the provision of religious goods. Although this type of policy came to an end in most places with the fall of communism, suppression of religious activities can still be observed in some societies, for example in Tibet, Vietnam, Eritrea, and North Korea.

3. THE POLITICAL ECONOMY OF STATE AND RELIGION

The literature on the economics of religion has recently been extended to the political economy of the relationship between state and religion.[7] This is a trend consistent with the recent spread of political economy to new areas of research in economics, sociology, politics and other disciplines (Weingast and Wittman, 2006). It has also been greatly facilitated by the recent availability of reliable cross-national data

[7] For reviews of the general literature on the economics of religion, see Iannoccone (1998) and Barro and McCleary (2006a).

on religious behavior, freedom, and institutions. The literature on state and religion can be divided into two groups depending on whether the studied influence flows from the state to religion or the other way around.

The first group consists of those studies investigating how government policies have influenced religious behavior and institutions. Reviving Smith's ideas regarding the consequences of state regulation of religion, Iannaccone (1991), Finke and Stark (1992), and others have developed the religion-market model, which holds that greater competition in the religion market tends to stimulate higher levels of religious activity. Much of the initial evidence supporting this argument came from historical analyses of changing trends in regulation and religiosity in the United States and other specific cases, or from cross-national comparisons of measures of religious pluralism and religious participation in limited contexts. More recently, however, Barro and McCleary (2006a, 2006b) have used larger-scale cross-national data to test the implications of religion-market model along with other hypotheses regarding the political economy of state regulation of religion.

The second group of contributions to the literature on state and religion consists of those studying how the presence of religion has affected the behavior of the state itself. This is a fairly recent area of research in the political economy literature, investigating how and why the state has been involved in the provision of religious goods and services. Barro and McCleary (2005), for example, have studied the determinants of which countries have state religions, focusing on what determines the structure of the religion market and the likelihood of a government granted monopoly. Gill (2005) has similarly studied the origins of state regulation of religion, proposing a theoretical approach that

focuses on the political self-interest of government officials. The state's financial involvement in the provision of religious goods, however, has not been systematically investigated. As Grim and Finke (2006) have shown, state regulation of religion operates along a different dimension than state favoritism of one religion. The state's direct financial involvement may similarly be operating along yet another dimension.

We contribute to the literature on state and religion by developing a model that explicitly asks what factors influence the state's decision of whether or not to provide religious goods. Going beyond previous research centered on the basic question of market structure, we study the financial basis and "internal organization" of the production of religious goods and the determinants of the choice between state and private provision of these goods. We derive the basic argument from a political economy model of church and state behavior, building on simple microeconomic principles such as self-interest and maximization and introducing novel concepts such as legitimacy and church power. We then offer empirical support for the model's implications, first with econometric evidence based on the recently available cross-national data. The extensive coverage of some of the newly available data makes it possible to generate suitable proxies for "doctrine" and "church power," thus allowing a quantitative test of the implications of the model. To provide further support for the argument, we also discuss some of the historical and current examples of the prototypical cases in more detail.

4. THE MODEL

The model is an adaptation of one first developed by Brennan and Buchanan (1980), and extended by Wintrobe (1998), in which a self-interested sovereign (the

Leviathan) maximizes the surplus of taxes over spending on a public good. To keep the model simple, we only consider spending on a "religious good," either by the state (in the case of a state-run church), or the religious community (in the case of an independent church). The basic conclusions of the model would not be affected if the state also provided a separate public good.[8]

In the model, the representative citizen has a utility function given by

$$U = x + v(q), \tag{1}$$

where x is composite consumption, and q is the quantity of a religious good, where $v'>0$, $v''<0$. The religious good consists of those services typically provided by the church, including worship, dispensation of sins, comforting the sick and grieving, etc. The citizen is endowed with wealth of E, an amount T of which the government confiscates in taxes. The citizen therefore has after-tax wealth of, $E–T$, which he or she can spend on x and, in the case of an independent church, on religious goods.

Tax collection is costly to the government because of resistance by citizens to having their property confiscated. We capture this by assuming that a fraction δ of each tax dollar collected must be spent on enforcement. This cost will tend to be lower, however, as the government is seen as being more legitimate. As noted, religious spending can potentially provide this legitimacy, for example by proclaiming that the sovereign is divinely inspired (or is himself divine). We thus write $\delta=\delta(\lambda q)$, where λ is a

[8] We have worked out the details of the more general model to verify this claim. In that version of the model, the state chooses the public good and finances it with taxes, regardless of the relationship between the church and state. We provide some details of this model in footnotes where appropriate or informative.

parameter that reflects the extent to which religious goods convey legitimacy, $\delta'<0$.[9] One interpretation of λ is that it reflects church doctrine, which we take as given.[10]

We do not restrict λ a priori in magnitude or sign; $\lambda>0$ means that religion legitimizes the state, $\lambda=0$ means that religion is neutral regarding the state, and $\lambda<0$ means that religion de-legitimizes the state (e.g., incites resistance). Thus, we assume that for $q>0$, $\delta\to 0$ as $\lambda\to\infty$ and $\delta\to 1$ as $\lambda\to-\infty$. We also assume that $\delta(0)\equiv\delta_0$, where $0<\delta_0<1$. The objective for the state is to maximize tax revenues net of enforcement costs and, in the case of a state-run church, the cost of the religious good.

4.1. State-Run Church

Consider first the case of a state-run church. Net tax revenues in this case are given by

$$T[1-\delta(\lambda q)] - c(q), \tag{2}$$

where $c(q)$ is the cost of providing the religious good. The state's problem is to choose q to maximize (2) subject to the constraint that $U\geq\overline{U}$, where $\overline{U}$ represents the citizen's best alternative utility (the exit option). Since the state finances religious spending in this case, the citizen's budget constraint is simply $x=E-T$. Substituting this into (1) and setting $U=\overline{U}$ (given that the constraint will be binding) yields the tax function:

$$T = E + v(q) - \overline{U}\ . \tag{3}$$

Substituting this expression into (2) yields the state's (unconstrained) objective function:

[9] Our notion of legitimacy is similar to Wintrobe's concept of "loyalty," which contributes to the dictator's "power" (Wintrobe, 1998, p. 46).

[10] A more general model would treat doctrine as a choice variable of the church, for example, as "revealed" to its founder or a prophet, or as dictated by a religious leader or governing body. We discuss the difficulties in developing such an extension in the conclusion.

$$[E + v(q) - \overline{U}](1-\delta(\lambda q)) - c(q). \tag{4}$$

The resulting first order condition for q is

$$v'(1-\delta) - T\lambda\delta' = c'. \tag{5}$$

Let $\hat{q}(\lambda)$ denote the resulting level of religious goods.

Note that the left-hand side of (5), which is the marginal benefit of q, captures the two effects of religious goods on tax revenues as described above. The first term is the direct marginal benefit of religious goods (net of enforcement costs) to the citizen. This benefits the state because the higher is the citizen's utility, the more able/willing he or she is to pay taxes. The second term is the marginal benefit of religious goods in the form of reduced enforcement costs (assuming $\lambda > 0$). At the optimum, the sum of these benefits equals the marginal cost of q. Differentiation of (5) shows that $\partial\hat{q}/\partial\lambda > 0$. That is, the state provides more religious goods as the beneficial effect of those goods on collection costs increases. Finally, substituting $\hat{q}$ into (4) yields the maximized value of the state's objective function under a state-run church:

$$V_1(\hat{q}) = [E + v(\hat{q}) - \overline{U}](1-\delta(\lambda\hat{q})) - c(\hat{q}). \tag{6}$$

Differentiating (6) with respect to λ (and invoking the Envelope Theorem) implies

$$\partial V_1/\partial\lambda = -\delta'\hat{q}\ [E + v(\hat{q}) - \overline{U}] > 0. \tag{7}$$

Thus, as religious goods confer greater legitimacy on the state, its net tax revenues increase.

4.2. Independent Church

Now consider the case of an independent church. The key difference here is that citizens rather than the government choose the level of religious spending. We initially assume that the church acts to maximize the well-being of citizens rather than pursuing a more selfish motive. This either reflects the case of perfect competition among independent churches in the "market for religion," or a single benevolent church. Later, we relax this assumption.

Given the preceding assumption, we can view the citizen as choosing both x and q to maximize (1) subject to the budget constraint $E-T=x+c(q)$. The resulting first-order condition for q is

$$v' = c'. \tag{8}$$

Denote the resulting level of religious goods by q^*. Note that this condition differs from (5) in two ways. First, there is no enforcement cost since religious spending is voluntary rather than tax-financed.[11] This will tend to make q^* larger than $\hat{q}$. Second, citizens ignore the effect of q on tax collection costs. This will tend to make q^* smaller than $\hat{q}$. (It also means that q^* is independent of λ.) Generally, therefore, it is not possible to say which regime results in greater provision of the religious good.

As above, the state collects taxes up to the point where the citizen's exit constraint is binding; that is, $U=\overline{U}$. The result is

$$T = E + v(q^*) - c(q^*) - \overline{U}. \tag{9}$$

[11] The independent church may, however, face a different cost of financing its output—namely, free riding by members. We ignore this problem here, but acknowledge that it could provide a different rationale for the state to take control of the church.

Substituting this into the expression for net taxes, $T[1-\delta(\lambda q)]$, yields the state's net return under an independent church:[12]

$$V_2(q^*) = [E + v(q^*) - c(q^*) - \overline{U}\,](1-\delta(\lambda q^*)). \tag{10}$$

Differentiating (10) implies that

$$\partial V_2/\partial\lambda = -\delta' q^* [E + v(q^*) - c(q^*) - \overline{U}\,] > 0. \tag{11}$$

Thus, although the church is independent of the state, net taxes still rise as religion confers greater legitimacy on the state.

4.3. Comparison of the Two Regimes

In our model, we view the state as the dominant player in the sense that it has ultimate control over the church. In particular, we assume that it can seize control of the church, or suppress it, depending on how the church affects the state's net return.[13] While we recognize that this assumption does not capture situations in which church and state are co-equal (or where the church is dominant), we nevertheless feel that our approach reflects the generally dominant position of the state throughout history. (For example, we know of no cases of the church suppressing the state.) Given this specification, the choice between a state-run and an independent church depends only on

[12] Note that the state has no explicit choice variable in this case, given our assumption that it does not provide a public good. In the more general model, the state chooses the level of the public good to maximize net taxes, taking q^* as given. Generally, one can show that the state's optimal level of the public good will be increasing in q when $\lambda>0$, and decreasing in q when $\lambda<0$. This reflects the effect of q on tax collection costs.

[13] In our model, we do not distinguish between a truly state-run church and an "independent" church that is regulated by the state. For example, we do not distinguish between a state that *chooses q* and one that *subsidizes* the church so that it chooses the state's desired level of q.

a comparison of (6) and (10). We consider three cases, depending on the magnitude and sign of λ.

Case (i): λ=0, *Religion is Neutral Toward the State*

We first consider the case where λ=0; that is, religious goods are neutral regarding the state's legitimacy. In this case, (5) reduces to

$$(1-\delta_0)v' = c', \tag{12}$$

where, recall, $0< \delta_0<1$ is constant. Comparing this condition to (5) implies that $q^*> \hat{q} >0$. Thus, while the independent church provides more religious goods, the state-run church still provides a positive amount. This is true, as noted, because the better off citizens are, the more willing they are to pay taxes before the exit option becomes binding (reflecting the pacifying function of religion).

Net tax revenue for the state under the state-run church in this case is

$$V_1(\hat{q}) = [E + v(\hat{q}) - \overline{U}](1-\delta_0) - c(\hat{q}),$$

or, after re-arranging,

$$= [E + v(\hat{q}) - c(\hat{q}) - \overline{U}](1-\delta_0) - \delta_0 c(\hat{q}). \tag{13}$$

Compare this to net revenue under the independent church:

$$V_2(q^*) = [E + v(q^*) - c(q^*) - \overline{U}](1-\delta_0). \tag{14}$$

Notice that, since q^* by definition maximizes $v(q)-c(q)$, the term in square brackets must be larger in (14) than in (13). It follows immediately that $V_2(\hat{q}) > V_1(q^*)$, which leads to the following result:

Proposition 1: When religious spending is neutral towards the state (i.e., when λ=0), an independent church is preferred to a state-run church.

Intuitively, only the direct effect of church spending on citizen utility operates in this case, and since an independent, benevolent church achieves this effect without the need for distortionary taxation, it dominates the state-run church. This result is depicted in Figure 1 (a).

Case (ii): λ>0, Religion Legitimizes the State

Now let λ be positive so that religion confers some legitimacy on the state in the form of lower tax collection costs. As we showed above, $\hat{q}(\lambda)$ increases with λ while q^* remains fixed. Thus, for large enough λ, $\hat{q}(\lambda) > q^*$. That is, when the legitimizing benefits of religion are strong enough, the state-run church actually supplies more religious goods than does the independent church. How does this affect the choice between the independent and state-run churches?

Note first that $V_2(q) > V_1(q)$ for any strictly positive q, reflecting the distortionary effect of tax financing for the state-run church. This inherent advantage of the independent church, however, may be offset by the fact that the state-run church controls q. Specifically, recall that $\hat{q}$ maximizes $V_1(q)$ for any λ, whereas q^* is chosen by the independent church to maximize the citizen's utility (according to (8)). As a consequence, when λ>0, q^* must be less than the level of spending that would maximize $V_2(q)$, given that the independent church does not internalize the beneficial effect of religious spending on the sovereign's tax collection costs. This effect was not present when λ=0, so the independent church dominated, as shown in Figure 1 (a). However, when λ>0, the ability of the state-run church to internalize the impact of q on collection

costs gives it an advantage that, if strong enough, may overcome the tax distortion. Two possible cases are shown in Figures 1 (b) and (c).

In Figure 1 (b), $\hat{q} > q^*$, but $V_2(q^*) > V_1(\hat{q})$. Thus, even though the optimal level of religious spending by the state-run church exceeds that under the independent church, the latter still dominates. (Obviously, the independent church would also dominate for any λ such that $q^* > \hat{q}$.) However, as λ increases, there may come a point where $V_1(\hat{q}) > V_2(q^*)$, as illustrated in Figure 1 (c). In this case, the state-run church is preferred.

Case (iii): λ<0, Religion De-legitimizes the State

The final case is where religious teaching or doctrine acts to de-legitimize the state. This is captured in the model by $\lambda < 0$, which implies that increased religious spending actually raises tax collection costs. As in the previous cases, this will have no effect on the independent church inasmuch as q^* is independent of λ. It will, however, lower $\hat{q}$ since increases in q will now *raise δ.* (Specifically, the $-T\lambda\delta'$ term in equation (5) is now negative). It is important to emphasize, however, that $\hat{q}$ will not necessarily fall to zero in this case because the beneficial effect of religion on the citizen's utility remains present. In other words, the state will tolerate a positive level of religious spending (and indeed, will invest in some itself), even if that spending is anti-state, because it still serves the beneficial function of pacifying citizens.

If λ becomes sufficiently negative, however, the state-run church will cease to provide religious goods—in effect, the state will suppress the church.[14] The return to the sovereign in this case is

$$V_1(0) = [E + v(0) - \overline{U}\,](1-\delta_0). \tag{15}$$

If we assume, first, that suppression of religion is costless, and second, that such an action does not drive the citizen below his reservation utility, then this represents an extreme but viable version of the state-run church—namely, no church, or a purely secular state.[15] The sovereign will find this extreme outcome attractive over that range of λ where $V_1(0)>V_2(q^*)$, which will eventually hold as $\delta(\lambda q^*)$ approaches one.

As a summary of the preceding results, Figure 2 shows the ranges of λ over which the various cases apply. The critical values of λ are $\lambda_1>0$ and $\lambda_2<0$. First, in the range where $\lambda>\lambda_1$, the state-run church dominates. Here, church and state are allied in the sense that the sovereign chooses the level of religious spending and finances this spending with taxes. In this region, religion legitimizes the state and helps the sovereign achieve his goal of extracting as much tax revenue as possible from the citizens.

Next, over the range $\lambda_2<\lambda<\lambda_1$, the independent church dominates. Here, church and state operate independently, though religion still affects the state's ability to collect taxes. Note in particular that this range includes situations in which the church legitimizes the state ($\lambda>0$), is neutral toward the state ($\lambda=0$), and de-legitimizes the state

[14] In the model where the state provides a separate public good, the state will provide more of the public good when it suppresses the church (i.e., sets $q=0$) than when it allows the church to remain independent, all else equal.

[15] If (15) is negative, then $q=0$ is not consistent with a positive return for the sovereign. In that case, the state will allow the amount of religious spending necessary to prevent popular revolt.

(λ<0). In all cases, however, the state allows the church to remain independent because doing so provides indirect benefits to the state by pacifying citizens (which makes them more compliant taxpayers), and also saves the state the cost of supporting the church out of tax revenues (which is distortionary).

Finally, over the range where $\lambda<\lambda_2$, the state suppresses the church (that is, takes over the church and sets q=0). Here, the de-legitimizing effects of church teachings are so detrimental to the state that it finds it optimal to eliminate religion altogether (or at least to greatly curtail religious spending).

4.4. Non-Benevolent Church

It cannot be disputed that throughout history, there have been cases where the church has acted out of motives other than beneficence toward its followers. Here we examine the implications of allowing the independent church to act in a self-interested manner; specifically, to maximize profit.

Formally, the church chooses q to maximize $R–c(q)$, subject to the citizen's utility constraint:

$$E - T - R + v(q) = \overline{U}\ , \tag{16}$$

where R represents total contributions to the church, or the tithe. Assuming that the church takes the tax liability of the citizen, T, as given (owing to the state's superior claim), it will first solve (16) for R and then choose q to maximize

$$E - T + v(q) - \overline{U} - c(q), \tag{17}$$

which yields the same first-order condition as (8). Thus, the church provides the same level religious goods, q^*, as the competitive church. This is true here because, by maximizing the citizen's utility, it can extract the maximum donation.

Now let π be the profits earned by the non-benevolent church, where $\pi \geq 0$. That is, $R - c(q^*) = \pi$, or $R = c(q^*) + \pi$. Substituting this expression into (16) and solving for T yields the citizen's tax payment

$$T = E + v(q^*) - c(q^*) - \pi - \overline{U}\,, \tag{18}$$

and the corresponding return to the state

$$V_2(q^*, \pi) = [E + v(q^*) - c(q^*) - \pi - \overline{U}\,](1 - \delta(\lambda q^*)). \tag{19}$$

Note that (10) is a special case of this expression where $\pi = 0$. Higher values of π reflect a stronger church in the sense that it can extract a larger share of the citizen's total ability to pay. (Thus, π is bounded above by $E - v(q^*) - c(q^*) - \overline{U}$, the point at which $T = 0$.)

Now consider the comparison between the independent and state-run churches. Note that a larger π makes the independent church less desirable from the state's perspective.[16] In terms of Figure 2, increases in π cause the V_2 curve to shift down, thus reducing the range over which the independent church dominates (i.e., λ_1 decreases while λ_2 increases). At some point, the independent church may no longer be viable. Figure 3 summarizes the various regions where each of the three regimes dominates, depending on the nature of church doctrine (λ) and the degree of church power (π). As the diagram reveals, an independent church occupies a region where religious doctrine is neither too favorable nor too detrimental to the state, and where the church's power is limited.

[16] As Smith ([1776] 1965, p. 765) notes, "It may be laid down as a certain maxim, that, all other things being supposed equal, the richer the church, the poorer must necessarily be, either the sovereign on the one hand, or the people on the other."

4.5. Democratic State

To this point, we have concentrated on dictatorial states in which the sovereign acts purely out of self-interest. In this section we ask how the analysis changes when the state is democratic (or at least, benevolent). Specifically, suppose that the state acts to maximize the utility of citizens subject to its budget constraint.

In the case of a state-run church, the state will choose q to maximize $U=E-T+v(q)$ subject to $T[1-\delta(\lambda q)]=c(q)$. The first order conditions turns out to be identical to (5), yielding $\hat{q}(\lambda)$ in religious goods, the same amount as provided by the self-interested state. The maximized value of the state's objective function in this case, however, is the citizen's maximized utility (rather than net taxes), given by

$$V_1^{\mathrm{d}}(\hat{q}) = E + v(\hat{q}) - \frac{c(\hat{q})}{1-\delta(\lambda\hat{q})} \ . \tag{20}$$

Now consider the independent church, which we initially assume is also benevolent. As above, it chooses q^* in religious goods (the solution to (8)), and the citizen's maximized utility is

$$V_2^{\mathrm{d}} = E + v(q^*) - c(q^*). \tag{21}$$

Clearly, this will exceed (20) for all values of λ, given that the independent church does not incur the distortion associated with tax financing. Thus, we have:

Proposition 2: If the church and state are both benevolent, then an independent church dominates the state-run church for all λ.[17]

[17] In fact, the state raises no taxes at all in this case, given our simple model in which the only publicly-provided good is religion. When the state provides a separate public good,

Finally, suppose that the church is a profit-maximizer. In that case, the citizen's realized utility (and the benevolent state's objective function) becomes

$$V_2^{\mathrm{d}} = E + v(q^*) - c(q^*) - \pi, \tag{22}$$

where π is again the church's profit. If this profit is large enough, the state may prefer to take over the church and operate it as a state-run church (or to suppress it). In this case, however, the benevolent state is actually acting in the *citizen's* interest to prevent exploitation by an overly powerful church.

5. A QUANTITATIVE ANALYSIS OF CHURCH AND STATE

5.1. Data and Methodology

To evaluate the model's implications, we use recent cross-national data on the relationship between state and religion. Until recently, research on the political economy of religion had been hampered by the availability of reliable data gathered consistently across nations. Various new sources of data have now become available, however, based on cross-national opinion polls or constructed reliably from systematic reports. One of the first contributions was the *World Christian Database* (Barrett, Kurian, and Johnson, 2001), which presents detailed current and historical information on all world religions and church-state relationships in a large number of countries. Barro and McCleary

---

one might expect that a state-run church could dominate for large enough λ due to the favorable effect λ has on tax collection costs. However, this turns out not to be true (i.e., Proposition 2 continues to hold). The reason is that taxes must be raised to finance the public good under both regimes (state-run and independent churches). Thus, the independent church still dominates because in that case, taxes do not have to be raised to finance the church.

(2005, 2006a, 2006b) have used this data for their analysis. Other recent sources of data include the country reports and the measure of "Freedom of Expression and Belief" prepared by the Freedom House, the Religion and State dataset assembled by Fox and Sandler (2004), and the values surveys conducted by the European Values Study Foundation and World Values Survey Association.

A more comprehensive source of data in terms of both the number of countries surveyed and the extent of information available for each country is contained in the annual International Religious Freedom (IRF) Reports prepared by the U.S. State Department since the passage of the International Religious Freedom Act in 1998. Researchers from the American Religious Data Archive (ARDA) have recently assigned quantitative measures to the information contained in these reports, systematically coding the information for 196 nations and making the data available to other researchers on their website. Using these data, Grim and Finke (2006) have developed various indexes that measure different forms of social and governmental control of religion.

The IRF data are particularly relevant to our analysis because they include detailed information on state funding of religion and other variables that can be used as reasonable proxies for the power of religious organizations and for the way religion can convey legitimacy to the state. Because of its more extensive coverage, we use the aggregate file of the IRF data based on the ARDA's coding of the 2001, 2003, and 2005 reports. Relying primarily on the IRF data for variables directly related to the church-state relationship, we also include variables from other sources to control for the various social, political, demographic, and economic factors that might have also influenced this relationship.

The dependent variable in our regressions is a proxy for state financing of religious spending, namely an index of religious activities funded by the state. The ARDA file includes numerous variables and indexes on different forms of government regulation or support of religious activities, including those that can serve as suitable proxies for state involvement in the provision of religious goods formulated in the model. Since the model's argument is based on financial involvement, the most suitable proxy would be state funding of religion. Although the state's choice is simplified in the model (representing an all-or-nothing decision of whether to fund religious spending), in reality this can be implemented in various ways and degrees. To account for this variation, the index depends on whether the government funds the following items related to religion: religious education/schools, buildings/upkeep/repair, clergy salaries/benefits, print/broadcast media, charity/public service work, and religious practice or mission work. The index of funding gives equal weight to each of these items and has been rescaled to range between zero and one.

An explanatory variable of primary interest is church doctrine, the way religion can convey legitimacy to the state. Although the IRF reports do not include this information exactly, there are a number of variables that can be used to construct a proxy index of doctrine. We have identified five variables that are particularly relevant to the legitimacy relationship between church and state: whether the state has a Concordat with the Vatican, a relationship to the Vatican or other such international religious authorities (Anglican, Orthodox, Dalai Lama, etc.), agreements or special arrangements with domestic religious brands or institutions, whether there are any holy sites (e.g., shrines or places of pilgrimage), and whether there is a favored or established religious brand.

Giving equal weight to these variables, we have rescaled the index of doctrine to range between zero and one.

The other factor of primary interest is the power of the church, its ability to extract a share of the general population's ability to pay. The IRF data include two variables on tax-exemptions applying to religious organizations that seem particularly relevant here, namely whether religious organizations are taxed and whether the donations to them are tax-deductible. We also use an index that has been commonly used to proxy market power in similar contexts, namely the Herfindahl index of religion adherence shares (including non-religion, in the year 2000), which is available in Barro's Religion Adherence Data.[18]

To isolate the effects of variables representing legitimacy and power, we include several other variables that control for other characteristics of countries that could also influence the state provision of religious goods. A determinant of state funding that was discussed in the model is the difference between dictatorship and democracy. To control for differences in political structure, we use the "2000 Political Typology" index based on the Freedom House's "Democracy's Century" report. We have reversed and rescaled the index available on the ARDA website to range between zero and one, such that higher numbers represent greater levels of democracy (on a coding consisting of the following

[18] We assume the index did not change significantly between 2000 and 2001-05, the period covered by the IRF data. Departing from the common practice, Barro and McCleary (2005: 1346-7) have used a different set of proxies for power, namely the fractions of population adhering to the main and second religions. We checked the robustness of our results to the choice of an index for power by running the same regressions using their variables and found the results to be consistent between the two formulations. Barro's Religion Adherence Data is available on the Web: http://www.economics.harvard.edu/faculty/barro/data_sets_barro.

types of regimes: protectorate, totalitarian, authoritarian, monarchy, restricted democratic practice, and democracy).

Various other differences in country characteristics and standards of living could also be determinants of state provision of religious goods. To control for some of the well-known and consistently measured differences in geographic, demographic, and socio-economic factors, we include population, land area, income (per capita GDP), life expectancy at birth, and the proportion of Internet users. Income and population generally fit the model better (with consistent results) in non-linear form, so we include these variables in logs. Table 2 shows the means and standard deviations of all variables included in the regression analyses.

We examined the relationship between these variables under various specifications. In a baseline specification, we first regress all explanatory variables on state funding of religion in a standard OLS model. To check the robustness of these results to model specification, we consider two other possibilities regarding the qualitative nature of the dependent variable and the possibility of its endogeneity with some of the explanatory variables. First, since the index of state funding is a qualitative dependent variable that takes on limited values, we consider the possibility that a limited dependent variable model may be more appropriate. To see how the results change under this specification, we estimate the same equation in an ordered probit model. Second, we allow for an endogenous relationship between the dependent variable and some of the variables of primary interest. Although these relationships are formulated in the model in a simple partial equilibrium framework, in reality they could be jointly determined. One possibility is a two-way causation between state funding and church power. To allow for

this possibility, we use instrumental variables that predict church power (Herfindahl index of religion adherence shares) and could be considered as being exogenous to state funding of religion. In a similar context, Barro and McCleary (2005) have used a long lag of the endogenous variable as an instrument, a reasonable procedure we adopt (based on the importance of historical inertia for church power) by using the index of religion shares for the year 1900. We also included in the list of instruments a "Government Regulation of Religion" index (coded by the ARDA) and two variables that capture other historical determinants of church power, namely the "1900 Political Typology" index (Freedom House) and a dummy variable on whether the country has a communist past (equals one if communist in 1970). We use the method of three stage least squares to estimate the parameters of these equations.

Yet another possibility is an additional two-way causation between state funding of religion and state doctrine, but it is difficult to find good instruments for the index of doctrine, itself a proxy variable. We considered this possibility in a separate model with three simultaneous equations, using as instruments for doctrine the percent of GDP used on military expenditures, an index of government regulation of religion, and an index of country's recent democratic past ("1950 Political Typology" index by Freedom House). Although not reported here to avoid redundancy, the results are consistent with the three stage model reported in Table 3 that involves a two-way causation between state funding and church power only. Although the coefficients of variables in the basic equation become less significant, the signs are identical to those of the three stage model reported in the Table.

5.2. Results

Table 3 shows the outcome of the three alternative methods of estimating the relationship between the variables. The results are remarkably consistent. Although the coefficients and standard errors change across the three methods as one would expect, the signs of all coefficients are identical. Their significance is also remarkably consistent. The *p*-values corresponding to each coefficient generally fall within a close range across the three methods, raising our confidence that they capture the strength (or weakness) of the empirical evidence regarding the predictions of the model.

The signs and the significance of the control variables are interesting. Population and income have a positive and significant relationship with state funding, possibly because of scale economies in the provision of religious goods by the state and its greater abilities due to higher incomes. The land area of a country, life expectancy of its citizens at birth, and the proportion of Internet users seem to have no significant effect on state funding of religion.

The results provide strong empirical support for our arguments on the relationship between church doctrine, church power, and state provision of religious goods. The coefficient of the index of church doctrine is positive and significant, indicating that the church's ability to provide legitimacy to the state has a positive effect on the state provision of religious goods. The coefficients of tax exemptions to donors and the church are also positive but not very significant. This may reflect a more complicated relationship between these exemptions and state provision of religious goods (due, for example, to different tax elasticities of donations under state provision), suggesting that these variables may not be reflecting the power of the church directly. In any case, the

coefficient of the Herfindahl index of power is positive and significant, which provides sufficiently strong support for our argument about a positive relationship between church power and state provision of religious goods. The coefficient of the index of democracy is negative and significant, confirming the argument that more democratic (benevolent) states are less likely to get involved in the provision of religious goods and are thus more likely to allow independence to the church.

One difficulty in interpreting these results as confirmation of the model as a whole is that they tell us little about the difference between the instances of independence and state suppression of the church. In both independence and state suppression, state spending is zero, making it difficult to distinguish between them by looking at state spending only.[19] To further differentiate between these cases, we thus need to look at other evidence on the private provision of religious goods. Going beyond current quantitative evidence on church-state relationship is useful in a more general sense because it allows us to examine the overall argument more comprehensively. There are numerous interesting configurations of the relationship between church doctrine, church power, and state provision of religious goods observed in history. For a fuller analysis of the three paradigmatic cases covered by the model, we therefore offer a more informal survey of some current and historical examples.

[19] Fortunately, this was not a major problem for quantitative analyses because there were only seven countries in which state funding was zero and state regulation was high. Dropping these observations from the sample or using interaction dummies to capture the differential effect on the dependent variable did not change the results significantly.

6. CHURCH AND STATE: CASE STUDIES

The strict separation implied by the case of complete independence means that the state does not in any way get involved in the provision of religious goods. Although no country has been able to maintain this type of complete independence between church and state throughout its history, a benchmark case has been achieved in the United States. The legal basis for independence can be found in the First Amendment to the U.S. Constitution and in the powerful metaphor of a "wall of separation" made popular by Thomas Jefferson. It is also enforced by an intricate network of checks and balances. Although the legal scholars have long debated the different dimensions, deeper realities, and further implications of the notion of separation, its economic significance can be reduced to the simple question of whether the government is directly involved in the provision of religious goods.[20]

The political economy model developed here provides a new interpretation of the origins and strength of the separation between church and state in the U.S. The state's decision to grant independence to the church has been the product of a combination of factors regarding church doctrine, church power, and democracy. Church doctrine is a factor because religion does not legitimize the state (λ=0). There have been no political ties to the Vatican or other religious organizations, no inherited history of divinely ordained rulers, or any other mechanism for religion to convey legitimacy. Indeed, as we have noted, the government was founded on a rejection of the church as a political institution. To be sure, religion plays a role in the American political sphere, but it

[20] For the debate on the meaning and historical origins of "the wall of separation," see Hamburger (2002).

carries no more or less weight than any other organized interest group in influencing policy decisions.

The power of church (π) has also been low in the U.S. because of individual freedom and religious diversity. There is a great variety of religious brands and emphasis on the local church, thus preventing any single brand from dominating the scene. This was true even in the early days of the Republic when de Tocqueville ([1835] 2000, p. 278) observed that "There is an innumerable multitude of sects in the United States." As a result, there is no history or tradition of religious organizations collecting taxes instead of or on behalf of the state, and these organizations typically do not generate high revenues from contributions or own a high proportion of the nation's assets through donations. In combination with the presence of a democratic state acting to maximize the utility of citizens, these factors ensure that the quantity of religious goods is decided privately by citizens without state involvement. This represents the prototypical case for an independent church according to the model.

A similar argument can be made about countries sharing some of these same characteristics. For example, although Australia and New Zealand have much smaller populations than the U.S. and differ in many other respects, they share such things as democratic government, colonial history, liberal immigration policies, and ethnic and religious diversity. They also share a high degree of democracy and low degrees of religious legitimacy and church power. The result is an independent church.[21]

[21] The case of an independent church is not limited to modern times, however. Stark (2007, Chapter 3) argues that the Roman Republic lacked a state-sponsored religion, having instead a relatively free "religious market" wherein multiple gods were worshipped in privately funded temples. In this case, polytheism represents the counterpart to "sects" in the modern, predominantly monotheistic world.

At the opposite end of the spectrum, there have been several instances of state suppression of the church in recent history. The best known example may be the Soviet Union, where a combination of high church power, a conflicting and de-legitimizing relationship with the state ($\lambda<0$), and low degrees of democracy, caused the state to suppress the church. Prior to the 1917 Revolution, the Orthodox Church had traditionally been a powerful element in the Russian Empire (Kivelson and Greene, 2003). The Orthodox population dominated the religious makeup, consisting of 76% of total population in 1900 (Barrett, Kurian, and Johnson, 2001). During centuries of its monopoly power, the Church had accumulated enormous wealth and power.[22] The Orthodox Church, which was established as the state church and actively promoted Tsarist autocracy, also had a significant role in legitimizing the state. When the Bolsheviks took power in 1917, however, Church doctrine came into sharp conflict with the new regime, making it incompatible with the communist ideology (and thus potentially de-legitimizing). Since the high power of the Church also became an undesirable factor, the new state took drastic measures to suppress the Russian Orthodox Church systematically. The state nationalized all Church property (including buildings), closed seminaries, persecuted or executed religious leaders, and prohibited the publication of religious materials (Powell, 1978; Shmelyov, 2005; Walters, 1986). Although the intensity of suppression changed throughout the Soviet regime, the history of the Orthodox Church during this period became an illustration of how sufficiently high

[22] For example, as Burleigh (2007: 40) states, just prior to the revolution, " the Orthodox Church claimed a hundred million adherents, two hundred thousand priests and monks, seventy-five thousand churches and chapels, over eleven hundred monasteries," and so on.

church power and church doctrine that is sufficiently negative toward the ideology of the state would lead to suppression of church.

A similar outcome has occurred in other communist regimes. In China, for example, beginning in the 1950s and intensifying during the Cultural Revolution between 1966 to 1976, the state sought to suppress religion. Confucianism had been dominant in China for thousands of years, building strong institutions, shaping Chinese civilization, and gathering significant power. However, as Chinese communists consolidated power in the 1950s, organized religion became a de-legitimizing factor against their rule, and the state gradually implemented a policy of suppressing religious activities.[23] (Indeed, the communist regime went so far as to declare that Confucianism was not a religion (Stark, 2007, p. 269).) A similar process has taken place in Vietnam, Eastern Europe, and other communist states.[24]

Communist ideology has not been the only source of a conflicting and de-legitimizing relationship between church and state. State suppression of church has also recently been observed in Rwanda, Africa's most Catholic society. After the civil war and the 1994 genocide that resulted in a power shift, accusations arose that the Catholic Church was involved in the genocide and had sided with the former government. Viewing the Church with suspicion, the new government charged its leaders with crimes and suppressed its activities.[25]

---

[23] For the history of church-state relations in China, see Goldman (1986) and Yang and Tamney (2005).
[24] Haynes (1998: Chapter 5), Ramet (1991), and Ramet and Treadgold (1995).
[25] For history and different perspectives on the Rwanda crisis, see Prunier (1998) and Berry and Berry (1999). For a general history of conflicts between religion and politics in the twentieth century, see Burleigh (2007).

The final regime, state control of the church, has been perhaps the most commonly observed relationship between church and state throughout history. Although such an alliance may have emerged as early as in primitive hunter-gatherer societies, we know too little about the practice and organization of primitive religions or about early rulers and religious organizations to assert with any confidence that their relationship can be understood in the context of our theory. It is well-established, however, that in the ancient world, most civilizations had state-sponsored churches (Stark, 2007, p. 97), and the available evidence supports our argument regarding the direct relationship between state control of religion and high degrees of church power and legitimation.

The extreme case of a high degree of legitimacy conferred by religion existed when the ruler was decreed to be divinely ordained, a situation that was characteristic of most societies in the Ancient World (Stark, 2007, pp. 101-102). In ancient Egypt, for example, the pharaohs were divine figures, thus grounding the legitimacy of the kingdom in religious authority. The power of the religious organization was also high, owing to the vast treasures coming from the collection of revenues for the temples. Although the nature and status of sacred kingship changed during the long history of ancient Egypt, the degree of church power and the legitimacy generally remained high, and the state sought to control the priesthood by taking charge of the provision of religious goods.[26]

State control of the church remained the norm among the more advanced agricultural societies of the medieval period, despite significant changes in the nature of church doctrine and power. The doctrinal change was the rising importance of monotheistic religions, which supported beliefs in an abstract god. As a result, the nature

[26] Johnston (2004: 547-77), O'Connor and Silverman (1995).

of the legitimacy of rulers in Judaic, Christian, and Muslim societies generally changed (with some exceptions) from one in which the ruler was divinely ordained to one based on worldly protection of believers or the promotion of religion. There also emerged greater division of labor between the rulers and direct providers of religious goods.

Religion nevertheless continued to provide a high degree of legitimacy to the state by sanctifying political succession and providing the basis for taxation in the canonical law. Tithing, for example, became institutionalized as a tax representing the "God's share," originating from the Old Testament and widely used from at least the time of Abraham and up to modern times. Muslim societies similarly adopted a tax called *ushr* (one-tenth) with the same basis, along with a poll-tax on religious minorities.[27] It was thus in the interest of the state to spend on religious goods in these societies because it conferred legitimacy in the form of lower tax collection costs.

The high degree of church power during this period also contributed to state's decision to be involved in the provision of religious goods. The church had monopoly power in the interpretation of scriptures and the provision of religious services, eventually gaining command over a vast amount of resources through fees, donations, and bequests (Ekelund, et al, 1996). Indeed, by the ninth century, the Catholic Church had become the largest landowner in Western Europe, owning about one-third (and as high as 44 percent in northern France) of all cultivated land (Herlihy, 1961: 86), and this situation persisted throughout the Middle Ages.[28]

---

[27] For the relationship between the state, religious community, and taxation in Islamic history, see Coşgel, Ahmed, and Miceli (2007).
[28] Also see Smith ([1776] 1965, p. 754).

The economic power of religious organizations was similarly high in contemporary Islamic societies. An enormous amount of wealth started to accumulate under a new mode of organization called the *madrasa* (including a mosque, library, and boarding house), a center for religious education developed by early schools of law in the tenth and eleventh centuries and supported by donations of land or rent-bearing property (Lapidus, 2002: 135).[29] As a result of high degrees of church power and legitimation, in a parallel development in both Christian and Muslim monarchies of the Medieval Period, the rulers typically sought to control religious organizations by paying salaries and appointing leaders, establishing schools and seminaries, and granting tax exemptions and other subsidies for the provision of religious goods and services.

Consistent with the model, there have been some recent cases of state control of the church associated with high degrees of church power but low (even negative) degrees of legitimation. The experience of Turkey since the early twentieth century is a good example of this seemingly anomalous scenario. Emerging from the ruins of the Ottoman Empire after the First World War, the new Republic of Turkey enacted various reforms aimed at reducing the influence of religion in public life and moving towards a more secular and westernized state. The new ideology, of course, came into serious conflict with the centuries-old tradition of an Islamic state, and religious groups viewed the new state as corrupt and oppressive. The ability of the state to derive legitimacy from religion, therefore, significantly declined and even occasionally became negative.

---

[29] For the history and limitations of providing public goods under this system (called the *waqf*), see Kuran (2001). Although we do not have reliable statistics on the proportion of property kept under the waqf system in the early Islamic states, the proportion had reached as high as three-querters of cultivated land by the early 20th century in Turkey (Kuran, 2001: 849).

Despite a neutral or even de-legitimizing relationship between state and religious organizations, however, the state has continued to be actively involved in the provision of religious goods because of the enormous power of organized religion. Currently, over 97 percent of the Turkish population is Muslim, religion continues to be a significant factor in public life, and some of the religious groups are well-organized in a hierarchical manner, commanding a vast amount of resources accumulated through donations and bequests. As a result, in an attempt to control religion, the state has been heavily involved in the provision of religious goods by paying the salaries of clerics, maintaining religious buildings, financing the construction of new mosques, and funding and overseeing the design of religious curriculum in public schools.[30] Turkey's experience has been shared by several other predominantly Muslim countries, such as Tunisia and Egypt, which have chosen a more secular path after gaining independence in the twentieth century. Because of the enormous power of organized religion in these countries, and despite a low or even a negative legitimation relationship between rulers and religious groups, the states have continued to control, rather than suppress, these groups by heavily funding religion.[31]

A few caveats may be in order as we conclude the survey of possible configurations of the relationship between church doctrine, church power, and state provision of religious goods. Some may disagree with our interpretation of the evidence, categorization of examples, or explanation of the relationship between church and state in specific cases. Although the examples we have chosen illustrate the explanatory power

---

[30] For the history and importance of religion in Turkey, see Mardin (2006) and Çarkoğlu and Rubin (2004).
[31] For a history of the varied political experiences of Islamic countries, see Demerath (2001: Chapter 3), Hourani, Khoury, and Wilson (2004).

of our argument, they are not meant to be exhaustive of all possibilities. Numerous other examples can be found corresponding to other current and historical possibilities within each paradigmatic case. Similarly, there may be other examples that would seem to be inconsistent with our argument, most likely because of circumstances that fall outside of the model. While acknowledging these possibilities, we nevertheless maintain that the parameters identified by our model explain a great deal of the temporal evolution and spatial differences of the relationship between church and state throughout history.

7. CONCLUSION

Church and state are perhaps the two most important social institutions created by humankind. Not surprisingly, therefore, the history of their relationship has been stormy, ranging from cooperation to conflict. In this paper, we have taken some tentative steps towards explaining that relationship from an economic perspective. The argument was developed to answer a very simple question—namely, what role does the church play in supporting the ability of the sovereign to extract resources from the people through taxation? The idea that the church, through its teachings (or doctrine) can facilitate this function of the state is an old one, dating at least to ancient civilizations when the sovereign declared himself divine, or at least divinely inspired. Our model highlights two avenues by which an alliance with the church benefits the state. The first is the Marxian notion that religious goods pacify the populous, thus allowing the state to extract more resources before citizens are incited to revolt. The second is the fact that citizens pay taxes more willingly (i.e., tax evasion declines) when the state is seen as more legitimate.

Importantly, we show that it is this second avenue that potentially makes state *control* of religion—i.e., establishment of a state-funded church, or repression of the church—desirable. The reason is that an independent church serves the pacifying function without the need for distortionary tax financing. Thus, if this were the church's only function vis-à-vis the state, an independent church would be optimal. However, an independent church will not provide the sovereign's ideal level of legitimacy. As a result, it may pay the sovereign to seize control of the church, even at the cost of having to finance it out of taxes, in order to maximize his net gain. A crucial factor in this decision is the nature of church doctrine—that is, how favorable or unfavorable is church teaching toward the state? The more favorable is the church's doctrine, the more likely it is that the state will benefit by taking control of the church. In contrast, when church teaching is antithetical to the state, the sovereign may act to suppress the church, though we show that, owing to its pacifying function, the state will endure some opposition from the church before taking that extreme step.

Because of its importance to our theory, a useful extension to the model would be to endogenize the nature of church doctrine. This, of course, would necessitate a deeper inquiry in to the objective function of the church, and a fuller characterization of the nature and purpose of religion. This poses a significant challenge, since religion and church are complex, and distinct institutions, the former being a collection of "teachings" aimed at explaining the mysteries of the universe and humankind's place in it, and the latter being the organizational structure supposedly established to inculcate and spread those teachings. Church doctrine therefore is generally comprised of a constellation of rules and ideas that reflect an amalgam of practical considerations and genuine

“revelations,” and any attempt to explain them as originating from a single decision maker or as the product of a single objective function may be asking too much. We leave this formidable task for future work.

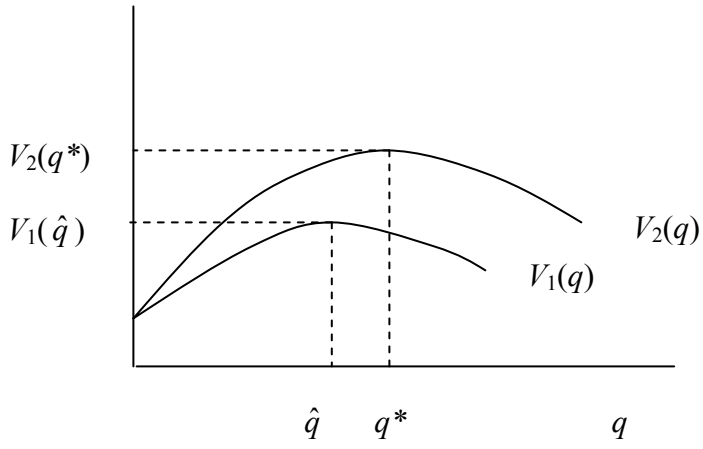

Figure 1. (a) $\lambda = 0$, Independent church dominates.

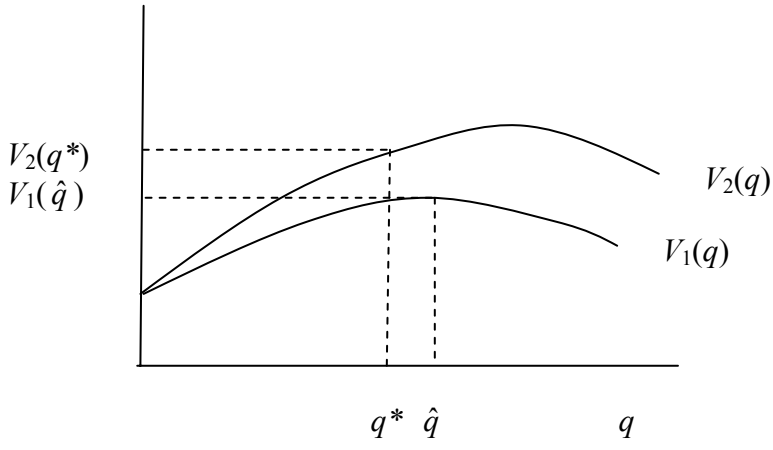

Figure 1. (b) $\lambda > 0$, Independent church dominates.

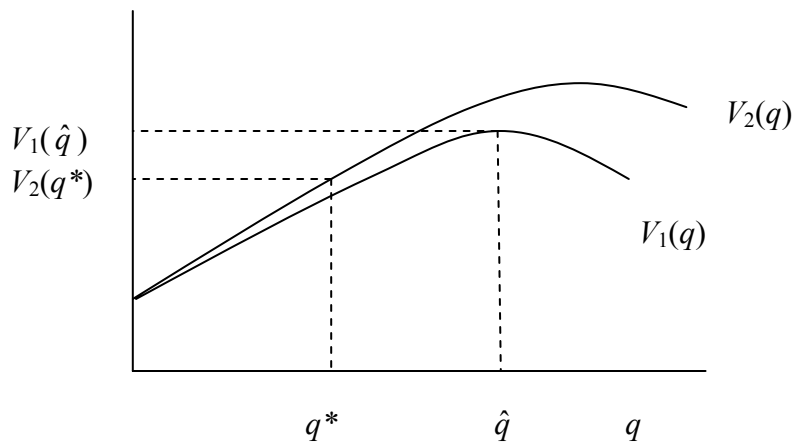

Figure 1. (c) $\lambda > 0$, State-run church dominates.

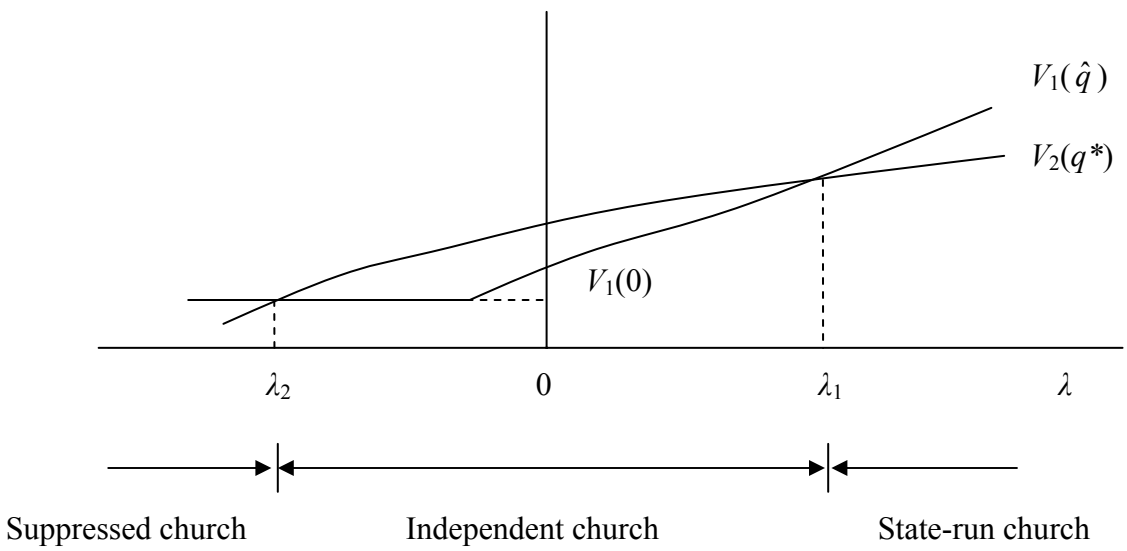

Figure 2. Ranges over which independent and state-run churches dominate.

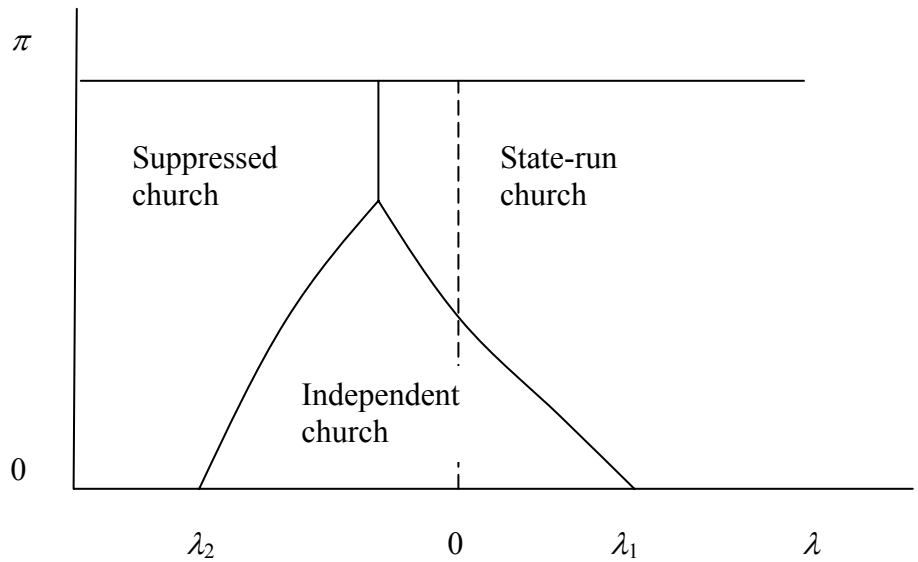

Figure 3. Regions where various regimes dominate as a function of church doctrine (λ) and church power (π).

TABLE 1

STATE FUNDING OF RELIGION

Region	***Number of Countries***	***Proportion Funding Religion***
Africa	48	0.69
East Asia and Pacific	34	0.65
Europe and Eurasia	53	0.94
Near East and North Africa	20	1.00
South Asia	8	1.00
Western Hemisphere	33	0.79
TOTAL	196	0.81

Source: U.S. State Department, *Report on International Religious Freedom* for the years 2001, 2003, and 2005, as coded by the Association of Religious Data Archives (thearda.com).

TABLE 2

SUMMARY STATISTICS

Variable	***Mean***	***Standard Deviation***
State Funding (Index)	0.22	0.20
Church Doctrine (Index)	0.16	0.14
Are Religious Organizations Taxed? (Dummy)	0.54	0.64
Are Donations Tax Deductible? (Dummy)	0.17	0.45
Church Power (Herfindahl Index of Religion Shares)	0.55	0.23
Democracy (Index)	0.82	0.27
Population (Log)	15.51	2.12
Land Area (Million Square Kilometers)	0.71	1.94
Income (Log of Per Capita GDP)	8.60	1.20
Life Expectancy at Birth	66.40	12.29
Proportion of Population Using the Internet	0.13	0.17

Sources: The variables labeled "State Funding," "Church Doctrine," "Are Religious Organizations Taxed," "Are Donations Tax Deductible?", and "Church Power" are based on the U.S. State Department's *Report International Religious Freedom* for the years 2001, 2003, and 2005, as coded by the Association of Religious Data Archives (thearda.com). "Democracy" is the (reversed and rescaled) "2000 Political Typology" index based on the Freedom House's "Democracy's Century" report. "Population," "Land Area," Income," "Life Expectancy at Birth," and "Proportion of Population Using the Internet" are from the U.S. Central Intelligence Agency's *World Factbook* for the year 2005.

Note: See the text for the contents of indexes and description of variables.

TABLE 3

REGRESSION ANALYSES OF INFLUENCES ON STATE FUNDING OF RELIGION

Explanatory Variable	*OLS*		*ORDERED PROBIT*		*THREE STAGE LEAST SQUARES*	
	Coefficient	*P-value*	*Coefficient*	*P-value*	*Coefficient*	*P-value*
Church Doctrine	0.42	<0.001	2.92	<0.001	0.46	<0.001
Are Religious Organizations Taxed?	0.01	0.80	0.07	0.61	-0.02	0.22
Are Donations Tax Deductible?	0.05	0.10	0.27	0.15	0.04	0.08
Church Power	0.22	0.001	1.22	0.003	0.25	0.03
Democracy	-0.11	0.02	-0.82	0.01	-0.06	0.07
Log of Population	0.02	0.001	0.17	<0.001	0.02	<0.001
Land Area	-0.01	0.23	-0.07	0.12	-0.01	0.20
Log of GDP per Capita	0.03	0.10	0.23	0.07	0.03	0.07
Life Expectancy at Birth	0.00	0.90	-0.001	0.92	-0.001	0.71
Proportion Using the Internet	0.11	0.34	0.91	0.25	0.11	0.35
Constant	-0.50	0.01			-0.57	0.001
N	184		184		184	
R^2	0.43				0.42	
Log likelihood			-520.93			

Note: The dependent variable is "State Funding," an index of state funding of religion. See Table 2 for sources.

WORKS CITED

Barrett, David, Tom Kurian, and Todd Johnson, eds. 2001. *World Christian Encyclopedia*. 2nd ed. New York: Oxford University Press.

Barro, Robert J. and Rachel M. McCleary. 2005 "Which Countries Have State Religions?" *Quarterly Journal of Economics* 120(4): 1331-70.

Barro, Robert J. and Rachel M. McCleary. 2006a. "Religion and Economy," *Journal of Economic Perspectives* 20(2): 49-72.

Barro, Robert J. and Rachel M. McCleary. 2006b. "Religion and Political Economy in an International Panel," *Journal for the Scientific Study of Religion* 45(2):149–175.

Berry, John A. and Carol Pott Berry, eds. 1999. *Genocide in Rwanda: A Collective Memory*. Washington, D.C.: Howard University Press.

Brennan, Geoffrey and James Buchanan. 1980. *The Power to Tax*. Cambridge: Cambridge Univ. Press.

Burleigh, Michael. 2007. *Sacred Causes: The Clash of Religion and Politics, from the Great War to the War on Terror*. NY: Harper Collins.

Coşgel, Metin, Rasha Ahmed and Thomas J. Miceli, 2007. "Law, State Power, and Taxation in Islamic History," University of Connecticut working paper.

Çarkoğlu, Ali and Barry M. Rubin. 2004. *Religion and Politics in Turkey*. London: Routledge.

Demerath, N. J.. III. 2001. *Crossing the Gods: World Religions and Worldly Politics*. Rutgers, NJ: Rutgers University Press.

de Tocqueville, Alexis, [1835] 2000. *Democracy in America*. Chicago: Univ. of Chicago Press.

Ekelund, Robert B., Robert F. Hébert, Robert D. Tollison, Gary M. Anderson, and Audrey B. Davidson. 1996. *Sacred Trust: The Medieval Church as an Economic Firm*. New York, NY: Oxford University Press.

Finke, Roger and Rodney Stark. *The Churching of America, 1776-1990: Winners and Losers in Our Religious Economy*. New Brunswick, NJ: Rutgers University Press, 1992.

Fox, Jonathan and Shmuel Sandler. 2005. "Separation of Religion and State in the 21st Century: Comparing the Middle East and Western Democracies," *Comparative Politics*, 37(3).

Gill, Anthony, 2005. “The Political Origins of Religious Liberty: Initial Sketch of a Theory,” *Interdisciplinary Journal of Research on Religion* 1(1): 1-33.

Grim, Brian J. and Roger Finke. 2006. "International Religion Indexes: Government Regulation, Government Favoritism, and Social Regulation of Religion," *Interdisciplinary Journal of Research on Religion*. 2(1):1-40.

Goldman, Merle. 1986. “Religion in Post-Mao China,” *The Annals of The American Academy of Political and Social Science* 483(1): 146-56.

Hamburger, Philip. 2002. *Separation of Church and State*. Cambridge, MA: Harvard University Press.

Haynes, Jeff. 1998. *Religion in Global Politics*. New York: Longman.

Herlihy, David. 1961. “Church Property on the European Continent, 701-1200,” *Speculum* 36: 81-105.

Hourani, Albert, Philip S. Khoury, and Mary C. Wilson. 2004. *The Modern Middle East: A Reader*. New York : I.B. Tauris.

Iannaccone, Laurence. 1991. “The Consequences of Religious Market Structure: Adam Smith and the Economics of Religion.” *Rationality and Society* 3(2): 156-177.

Iannaccone, Laurence R. 1998. "Introduction to the Economics of Religion," *Journal of Economic Literature* 36(3): 1465-1495.

Johnston, Sarah Iles, ed. 2004. *Religions of the Ancient World: A Guide*. Cambridge, MA: Harvard University Press.

Kivelson, Valerie A. and Robert H. Greene, eds. 2003. *Orthodox Russia: Belief and Practice under the Tsars.* University Park, PA: Pennsylvania State University Press.

Kuran, Timur. 2001. The Provision of Public Goods under Islamic Law: Origins, Impact, and Limitations of the Waqf System ," *Law and Society Review*, 35(4): 841-897.

Lapidus, Ira. 2002. *A History of Islamic Societies*. 2nd. edition, New York: Cambridge University Press.

Mardin, Şerif. 2006. *Religion, Society and Modernity in Turkey*. Syracuse, N.Y.: Syracuse University Press.

Norris, Pippa and Ronald Inglehart. 2004. *Sacred and Secular: Religion and Politics Worldwide*. Cambridge: Cambridge University Press.

O'Connor, David and David Silverman, eds. 1995. *Ancient Egyptian Kingship: New Investigations*. New York: Leiden.

Powell, David E. 1978. *Antireligious Propoganda in the Soviet Union: A Study of Mass Persuasion*. Cambridge, MA: MIT Press.

Prunier, Gérard. 1995. *The Rwanda Crisis: History of a Genocide*. New York: Columbia University Press.

Ramet, Sabrina. 1991. "Politics and Religion in Eastern Europe and the Soviet Union," in George Moyser, ed. *Politics and Religion in the Modern World*. New York: Routledge.

Ramet, Sabrina Petra and Donald W. Treadgold. 1995. *Render unto Caesar: The Religious Sphere in World Politics*. Washington, DC: American University Press.

Shmelyov, Nikolay. 2005. "Russia and Present-Day Europe: A View from Both Sides," *Social Sciences* 36 (4): 3-16.

Smith, Adam. [1776] 1965. *The Weatlh of Nations*. New York: The Modern Library.

Stark, Rodney. 2007. *Discovering God*. New York: Harper Collins.

Stark, Rodney. 1999. "Secularization, RIP," *Sociology of Religion* 60(3): 249-73.

Walters, Philip. 1986. "The Russian Orthodox Church and the Soviet State," *The Annals of The American Academy of Political and Social Science* 483(1): 135-145.

Weingast, Barry R. and Donald Wittman. 2006. *The Oxford Handbook of Political Economy*. NY: Oxford University Press.

Wintrobe, Ronald. 1998. *The Political Economy of Dictatorship*. Cambridge: Cambridge Univ. Press.

Yang, Fenggang and Joseph B. Tamney, eds. 2005. *State, Markets, and Religions in Chinese Societies*. Leiden: Brill.