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Theocracy

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THEOCRACY

by

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Abstract: Throughout history, religious and political authorities have had a mysterious attraction to each other. Rulers have established state religions and adopted laws with religious origins, sometimes even claiming to have divine powers. We propose a political economy approach to theocracy, centered on the legitimizing relationship between religious and political authorities. Making standard assumptions about the motivations of these authorities, we identify the factors favoring the emergence of theocracy, such as the organization of the religion market, monotheism vs. polytheism, and strength of the ruler. We use two sets of data to test the implications of the model. We first use a unique data set that includes information on over three hundred polities that have been observed throughout history. We also use recently available cross-country data on the relationship between religious and political authorities to examine these issues in current societies. The results provide strong empirical support for our arguments about why in some states religious and political authorities have maintained independence, while in others they have integrated into a single entity.

JEL codes: H10, P5, N4, Z12

Key words: theocracy, state, politics, religion, church, legitimacy, loyalty, monotheism, polytheism, democracy, power

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Theocracy

I. Introduction

Religious and political authorities have historically had a mysterious attraction to each other, often joining forces to rule populations. Ancient rulers typically had religious titles, close affiliations with religious figures, or even divine powers, a trend that has been persistent over time. The tendency towards theocracy has continued in modern societies, despite the ideals promoted by the Enlightenment. The collusion between religious and political authorities has been at the core of numerous political and economic events and conflicts of the twenty-first century, including wars, banking, women's rights, school curriculum, and public finance.

Although there exists a large and growing literature on the economics of religion in general,¹ economists have paid little attention to theocracy. Notable exceptions include Ferrero (2013) and Allen (2009).² Ferrero (2013) develops a principal-agent model in which the church (or religious authority) is the principal and a secular ruler is the agent. The church chooses between a theocratic regime wherein it provides government services itself, or a secular regime wherein it contracts out government services to a ruler. The trade-off is between corruption/incompetence under a theocracy (because the theocrat does not have specialized knowledge required for governing) and agency costs under secular rule. Allen (2009) takes a different approach by interpreting theocracy as an institutional screening mechanism that facilitates cooperation when people's willingness to cheat on one another is unobservable.

¹ See, for example, Iannaccone (1991, 1998), Finke and Stark (1992), Barro and McCleary (2005, 2006), Hébert and Tollison (2006), and Stark (2007).

² Also see the edited volume by Ferrero and Wintrobe (2009), which includes other economic perspectives on theocracy.

In contrast to these theories, we propose a political economy approach to theocracy that centers on the legitimizing relationship between religious and political authorities (Coşgel and Miceli, 2009; Coşgel, Miceli, and Ahmed, 2009; Coşgel, Miceli, and Rubin, 2012). Using standard assumptions about the motivations of actors, we develop a simple model of the emergence of theocracy—more specifically, of the difference between the regimes of complete independence between religious and political authorities and the integration of these authorities into a single entity. The possible benefits from such integration are that the theocrat can choose the level of religious goods to serve its own ends, and under the alliance it can receive legitimacy from the religious leaders. We use the model to identify the factors favoring the emergence of theocracy, such as the organization of the religion market, and whether the dominant religion is monotheistic or polytheistic.

For an empirical analysis of our arguments, we constructed a unique data set that includes information on over three hundred polities that have been observed throughout history, ranging from about 3,700 BCE up to the twentieth century. For each polity, the dataset includes information on its geographic and temporal location, land and population peak, characteristics of the religion market, and various other variables describing the relationship between religious and political authorities. After constructing indices to approximate the degrees of theocracy and religious legitimacy in the polity, we use regression analysis to determine the relationship between these variables.

To examine the applicability of our arguments to current conditions, we constructed contemporary cross-country data by combining traditional economic variables with recently available data on the relationship between religious and political authorities.³ Using the abundant

³ For example, see the Religion and State (RAS) dataset assembled by Fox and Sandler (2005) and Fox (2008).

detail on the state-religion relationship contained in this data, we construct suitable proxies for variables of interest, such as the levels of theocracy, religious legitimacy, and competition in the religion market. We again use regression analysis to identify factors affecting the emergence of theocracy.

II. The Political Economy of Theocracy

We consider theocracy as a distinct form of government marked by the integration of political and religious authorities. Such a unified entity can be described in various ways based on the specific characteristics of these authorities and the nature of their relationship. According to *Encyclopaedia Britannica*, theocracy is “government by divine guidance or by officials who are regarded as divinely guided. In many theocracies, government leaders are members of the clergy, and the state's legal system is based on religious law.” Similarly, *Webster's New Lexicon Dictionary* defines theocracy as “government by priests or men claiming to know the will of God; a state thus governed.” In the purest form of theocracy, the political authority and the religious authority are one and the same, unified in the persona of someone with a direct connection to god. In other integrations of religious and political authorities, a council with varying degrees of representation from each authority could rule a state, or certain powers could be delegated to earthly professionals.

Although pure theocracies, like pure democracies or pure monarchies, have historically been rare, elements of theocracy have always been present. Indeed, in early civilizations theocratic rule was typical. The largest and best known historical examples of theocracy include Ancient Egypt and Israel, the Umayyad and early Abbasid Caliphates, the Papal States, and Tibet. Despite the influence of the Enlightenment, more recent examples of theocracy can be

found in Mormonism, Iran, Saudi Arabia, and the Vatican. Even many democratic societies today have political parties with predominantly religious agendas.

Theocracy is clearly a complex phenomenon that can elude systematic analysis unless one employs a simple but flexible framework. To explain the emergence and varieties of theocracy, we adopt a political economy approach that defines it simply as the integration (or merger) of religious and political authorities. In other words, a theocracy arises when these two authorities choose to act as one rather than acting independently. In this simple setting, we do not distinguish between the cases of the political authority taking over the religious authority or vice versa. In other words, we do not try to open the “black box” describing the actual emergence or internal operation of a theocratic regime, focusing instead on the behavior of the merged entity once it is under the control of a single decision-maker. Although the inner workings and other characteristics of theocratic alliances may be important, we believe that the model developed below is simple enough to derive testable predictions, while being sufficiently flexible to explain the basic varieties of theocratic regimes observed throughout history.

III. Theoretical Framework

The model, which is based on the framework of Coşgel and Miceli (2009), consists of three economic agents or sectors: the political authority (the head of state, or ruler), the religious sector (the church, or the religion market), and a representative citizen. The citizen has a utility function that depends on a religious good, q ,⁴ and a composite consumption good, x (the numeraire):

⁴ We do not specify the exact nature of this good. Generally, it is meant to reflect those goods and services that a church provides to its followers, whether material (worship, charity) or non-material (forgiveness of sins, promise of salvation).

$$U = x + v(q), \quad (1)$$

where $v' > 0$ and $v'' < 0$. We assume that the citizen is endowed with wealth of E , which he or she spends on x , taxes, and, in the case of an independent church, the religious good. Taxes are assessed by the ruler as a lump sum T . In the case of an independent (self-financing) church, the citizen's budget constraint is given by

$$E = x + pq + T, \quad (2)$$

where p is the price of the religious good, which the citizen takes as given. The citizen's demand for q in this case is found by maximizing (1) subject to (2). The resulting the first-order condition is

$$v'(q) = p, \quad (3)$$

which defines the inverse demand function. Alternatively, if the church and state are merged—the case of a theocracy—we assume that the religious good is financed out of tax revenue, so the citizen's budget constraint is simply

$$E = x + T, \quad (4)$$

and the level of q is chosen by the ruler qua religious leader (i.e., the theocrat).

A. Independent Church

We first consider the case of an *independent church*. The outcome in this case depends on whether the “religion market” is monopolistic or competitive.⁵ Assume initially that market is monopolistic; that is, there is a single, dominant religion that supplies the religious good so as to maximize its profit. Stark (2007, pp. 120-122) notes that this has been the usual state of religious markets throughout history.

The single church's profit in this case is given by

⁵ See, generally, Iannoccone (1991) for a thorough discussion.

$$\pi = pq - c(q), \quad (5)$$

where the cost function, $c(q)$, satisfies the conditions $c' > 0$ and $c'' \geq 0$. Since the church is a monopolist, it views the price as depending on q according to the demand function as defined by (3), which, given diminishing marginal utility, is downward sloping. (Note that it is independent of T given the lump sum nature of taxes.) Thus, using (3) to substitute for p in (5) and differentiating with respect to q yields the first-order condition

$$v' + qv'' = c', \quad (6)$$

which is the usual marginal-revenue-equals-marginal-cost condition for a monopolist. Let q_M denote the resulting level of the religious good, and let p_M denote the resulting price as defined by (3) with $q = q_M$. The realized profit for the church is therefore

$$\pi_M = p_M q_M - c(q_M). \quad (7)$$

The only decision of the ruler in this case is to set the amount of the tax, T . We assume that he does so in order to extract as much wealth as possible, as limited by the citizen's reservation utility, \bar{U} . This could represent the level of utility associated with subsistence, or the level that just avoids a popular revolt.⁶ Setting $U = \bar{U}$ in (1) and using (2) to substitute for x , we obtain the tax function

$$T_M = E + v(q_M) - p_M q_M - \bar{U}. \quad (8)$$

Expression (8) represents the maximum willingness to pay of a citizen, but it does not necessarily represent the revenue that the ruler will receive because we assume that there is a cost of collecting taxes, reflecting citizen resistance to taxation, agency problems in collection, or the deadweight loss from taxation. We capture this by assuming that for each dollar of taxes

⁶ We assume that $E > \bar{U}$, for otherwise, the citizen's endowment would not be sufficient to cover subsistence.

assessed, a fraction δ is lost. Thus, at the optimum the net tax revenue actually *collected* by the ruler is

$$T_M(1-\delta) = [E + v(q_M) - p_M q_M - \bar{U}](1-\delta). \quad (9)$$

Notice that the citizen's purchase of the religious good actually increases the taxes that the ruler can extract by the amount of the consumer surplus, $v(q_M) - p_M q_M > 0$.

Suppose alternatively that the religion market is competitive in the sense that there is free entry of religions (Stark, 2007, pp. 119-120). In that case, the price of religious goods will fall to the point where $p = c'(q)$, and religious output will increase to the point where $v'(q) = c'(q)$. The resulting output of the religious good, q^* , is also the efficient level, and consumer surplus is therefore maximized. Net tax revenue in this case is

$$T^*(1-\delta) = [E + v(q^*) - c(q^*) - \bar{U}](1-\delta), \quad (10)$$

which is larger than (9), reflecting the fact that $v(q^*) - c(q^*) > v(q_M) - p_M q_M$, or that the consumer surplus is larger compared to the case of a monopolistic church. This result immediately implies the following:

Proposition 1: When the church is independent of the state, the ruler prefers a competitive rather than a monopolistic religion market.

A further consequence of the analysis in this section is

Corollary: The ruler benefits from the existence of a religion market, no matter how it is organized.

This is due to the fact that $v(q^*) - c(q^*) > v(q_M) - p_M q_M > v(0) = 0$. Intuitively, citizens would suffer a net loss in well-being due to suppression of the church, which would reduce the maximum taxes they are willing to pay. The results in this section generally reflect the pacifying function that

religion has on citizens, as recognized by Marx's dictum that religion is "the opiate of the masses." Thus, even if the state cannot control the church, it still benefits from its presence.⁷

B. Theocracy

We now turn to the case of theocracy, which we define to mean a merged church and state. As noted, we do not distinguish here between a state that takes over the church and a church that takes over the state, focusing instead on the behavior of the merged entity once it is under the control of a single decision-maker, whom we shall refer to as a "theocrat." We will argue that there are two possible benefits from such a merger. The first, implied by the preceding discussion of the pacifying function of religion, is that the theocrat can now choose the level of q to serve its own ends. Specifically, it can choose q to maximize net taxes rather than church profits or consumer welfare. Second, we assume that the religious leaders, now allied with the state, can possibly confer legitimacy on the theocrat and thereby lower the cost of collecting taxes. To capture this, we assume that the cost of tax collection under a theocracy is $\delta_t \leq \delta$. In other words, citizens will be less resistant to paying taxes if the religious leaders have conferred their "blessing" on the theocrat, or possibly have declared him to be divine.⁸ (Some collection costs may still remain, however, due to agency problems, so $\delta_t \geq 0$.)

There is an offsetting cost of theocracy compared to the independent church, however, that arises because the state takes on the role of financing the church. Under a theocracy, revenues needed to cover the cost of providing q are now subject to tax collection costs, in

⁷ In a more general version of the model, Cosgel and Miceli (2009) examine the conditions under which the state would benefit from suppressing the church. This possibility might arise, for example, if the church actively opposes the state.

⁸ As Adam Smith observed, "When the authorized teachers of religion propagate ... doctrines subversive of the authority of the sovereign, it is by violence only, or by the force of a standing army, the he can maintain authority" (Smith [1776] 1965, p. 749).

contrast to the case under the independent church where they were voluntarily paid.⁹ (The technology of providing q will be the same, however, as reflected by the cost function $c(q)$.) We will see that if this effect is large enough it can offset the above gains from theocracy.

Under a theocracy, we substitute (4) into (1) and set $U=\bar{U}$ to obtain the tax function

$$T = E + v(q) - \bar{U} . \quad (11)$$

The problem for the theocratic state is to choose q to maximize its net taxes less the cost of producing q ,¹⁰ or

$$\max [E + v(q) - \bar{U}](1-\delta_t) - c(q) . \quad (12)$$

The resulting first-order condition is

$$v'(1-\delta_t) = c' , \quad (13)$$

which defines q_t . A comparison of (13) and (6) shows that q_t may be larger or smaller than q_M , though both are less than the efficient level, q^* . Note, however, that q_t approaches q^* as δ_t approaches zero. Thus, a theocracy that attains a high level of legitimacy will provide a (nearly) efficient level of the religious good, but it will also be able to extract all of the resulting surplus (like a perfectly discriminating monopolist). The net return to the theocracy is the maximized value of (12):

$$R_t = [E + v(q_t) - \bar{U}](1-\delta_t) - c(q_t) , \quad (14)$$

where, recall, $\delta_t \in [0, \delta]$.

C. Factors Favoring the Emergence of Theocracy

We now use the preceding analysis to study the factors that favor the emergence of a theocracy. In doing so, we will assume a theocracy emerges whenever the aggregate (joint) return to the

⁹ Of course, it is possible that the revenue collectors for the church could have skimmed some of the proceeds, but the point is that the citizens freely paid the revenues, however they were used.

¹⁰ We assume the merger is cooperative, so the division of the surplus is determined by the internal governance structure of the resulting theocratic state. The specific nature of that structure is not relevant for our purposes.

ruler and church is increased by such an action. In reality, of course, this criterion may be either overinclusive (i.e., a sufficiently powerful church or state might force a merger even if the joint return is thereby reduced) or underinclusive (i.e., a merger might fail to occur even if it would increase the joint return). Thus, we focus solely on “economic” factors that would be most favorable for the emergence of theocracy.

1. Legitimization by religious leaders

The first factor we examine is the ability of the religious leaders with whom the ruler has allied to confer legitimacy on him. Differentiating (15) with respect to δ_t (and employing the Envelope Theorem) reveals that

$$\frac{\partial R_t}{\partial \delta_t} = -[E + v(q_t) - \bar{U}] < 0. \quad (15)$$

Thus, the outcome under theocracy becomes less favorable, all else equal, as the church is less able to confer legitimacy on the state (i.e., as δ_t rises). This immediately implies:

Proposition 2: Theocracy becomes more likely as religion is able to confer greater legitimacy on the ruler, all else equal.

2. Organization of the religion market

The second factor we examine is the organization of the religion market—that is, whether it is monopolistic or competitive. In the case of a monopolistic church, the joint return for the state and church, when they are independent, is given by the sum of (7) and (9):

$$\begin{aligned} R_M &= [E + v(q_M) - p_M q_M - \bar{U}] (1 - \delta) + p_M q_M - c(q_M), \\ &= [E + v(q_M) - \bar{U}] (1 - \delta) + \delta p_M q_M - c(q_M) \end{aligned} \quad (16)$$

whereas under a theocracy, the joint return is given by (14). To compare these two expressions, note first that when $\delta_t=0$, theocracy yields the first-best outcome and so it must dominate.

However, comparison of (14) and (16) shows that at the other extreme, where $\delta_t=\delta$ (i.e., the

church confers no legitimacy), if $q_t=q_M$, the joint return is strictly higher under the independent church (i.e., $R_M > R_t$). It follows that in the neighborhood of $q_t=q_M$, an independent church dominates a theocracy when $\delta_t=\delta$. The reason is the savings in tax collection costs for church revenues under the independent church regime. Generally, this advantage of the independent church will be greater the larger is δ , the deadweight loss from taxation.

Figure 1 shows the relationship between R_M and R_t as a function of δ_t for the case where the independent church dominates at $\delta_t=\delta$. As shown in the graph, theocracy dominates for $\delta_t < \delta_t^M$ (large legitimacy benefit), and an independent church dominates for $\delta_t > \delta_t^M$ (small legitimacy benefit), where the critical value δ_t^M is defined by the equation $R_t(\delta_t^M) = R_M$.

Suppose instead that the religion market is competitive. We have already seen that a competitive religion market results in the efficient level of the religious good being provided, creating a larger surplus as compared to monopoly. (Recall that this reflects the greater strength of the Marx pacification effect in a competitive religion market.) And since the citizen gets none of the surplus under either market structure, it must be true that the joint return to the state and church is higher under competition. This is also shown in Figure 1, where the line labeled R_C represents the joint return under competition. As a result, the critical value of δ_t falls to δ_t^C in Figure 1, and the range over which theocracy is preferred to an independent church is correspondingly smaller.

To this point we have assumed that the legitimizing function of religion is independent of the structure of the religion market; that is, δ_t is the same whether the market was monopolistic or competitive. The preceding advantage to the secular ruler of a competitive market therefore came entirely from the Marx effect (the higher consumer surplus under competition), thus representing a pure “demand-side” effect. But consider the case of a competitive market where

multiple religions (or sects) compete for the loyalty of citizens, as in the case of Protestantism. It seems likely that a larger number of religions will also reduce the ability of an independent religion to legitimize the state. In particular, because there are multiple providers, the populace will be divided in their loyalties, thereby diluting the power of any one provider to confer legitimacy. Merging with one religion will therefore only serve to legitimize the state with the devotees of that religion, while efforts to ally with multiple religions will entail costly negotiation and also may serve to alienate followers of rival religions. In contrast, a monopolized religion market will command the entire populace, and the single provider will therefore be able to offer much broader and more easily obtained support for the state.

In terms of the model, we are suggesting that $\delta_t = \delta_t(n)$, where n is the number of religions (or sects), and $\delta_t' > 0$. In other words, existence of competing providers reduces the ability of religion to lower tax collection costs, thereby reducing the benefits of theocracy. Note that this conclusion reinforces the above demand-side advantage of a monopolized religion market for the emergence of theocracy because the increase in δ_t as the market becomes competitive is accompanied by the leftward shift of the threshold from δ_t^M to δ_t^C for the case of an independent religion. Thus, the demand and supply side effects both work in the direction of making theocracy more likely under monopoly.

The combined effects are simultaneously illustrated in Figure 2, where the lower panel graphs $\delta_t(n)$. Note that, as drawn, theocracy is preferred to an independent religion when the religion market is monopolized (i.e., $\delta_t(1) < \delta_t^M$), but the reverse is true when the market is competitive (i.e., $\delta_t(n') > \delta_t^C$). The results of this section are summarized as follows:

Proposition 3: A monopolistic religion market is more conducive to theocracy than is a competitive religion market, all else equal.

3. Monotheism versus polytheism

We next turn to the question of whether theocracy is more compatible with a monotheistic (single god) or a polytheistic (multiple god) religion.¹¹ The preceding discussion of a competitive versus monopolized religion market sheds light on this question in the following way. An increase in the number of gods (a move toward polytheism) is like entry of religious providers in the sense that it will reduce the ability of religion to legitimize the state. Specifically, because a polytheistic religion has multiple gods, the populace will be divided in their loyalties (as they were with multiple religions), thereby diluting the power of any one god (and by extension, that god's secular representatives) to confer legitimacy on the state. In contrast, a monotheistic religion requires worship of a single god whose power to legitimize the ruler is necessarily more concentrated.

Based on the above reasoning, we can write $\delta_t = \delta_t(g)$, where g is the number of gods and $\delta_t' > 0$. Thus, more gods reduces the ability of religion to lower tax collection costs in the same way that entry of religions did above. We therefore state:

Proposition 4: A monotheistic religion is more conducive to theocracy than is a polytheistic religion, all else equal.

4. Strength of the ruler

So far our discussion has focused on how aspects of the religion market, on both the demand and supply side, affect the possible emergence of theocracy. Another relevant factor may be the strength of the ruler, where a ruler's strength reflects, for example, the ease with which he could be overthrown. One simple way to measure a ruler's strength is by the size of δ , the cost of tax collection. Stronger rulers, by virtue of their charisma, strong military support, loyalty of the

¹¹ For a socio-political and economic analysis of monotheism, see Iyigün (2010).

nobility, etc., will have an easier time collecting taxes, meaning that δ will tend to be lower, all else equal. Weaker rulers, in contrast, will have higher δ . While this logic suggests that strong rulers might expect to derive less benefits from forming a theocracy, those same characteristics would likely carry over to the merged regime, thus possibly lowering the tax collection costs of the theocracy as well. Based on this logic, we conclude that a ruler's strength will have an ambiguous effect on the likelihood of theocracy.

D. Summary and Qualifications

The preceding analysis has produced the following predictions regarding the emergence of theocracy: A theocracy is more likely to emerge, all else equal, as (i) religion is better able to confer legitimacy on the ruler, (ii) the religion market becomes more monopolized, and (iii) religion becomes more monotheistic. Some qualifications of these hypotheses are in order, however.

First, the number of religions and the number of gods may not be independent variables. Though there are examples in history of all possible combinations, some are more prevalent than others, suggesting that some constraints may be operating on the supply side. Second, which outcome arises in a given society is not necessarily exogenous with respect to the preferences of the would-be theocrat. Indeed, if the latter has sufficient power, he may perceive a benefit from limiting religious competition, both in terms of the number of gods and the number of religions, because such a policy would presumably make it easier for him to pursue a policy of allying with the “favored” religion/god in order to enhance his legitimacy.¹² Thus, in those cases where an aspiring theocrat has control over such matters, the decision to establish a theocracy may be made simultaneously with the decision to consolidate religious authority into a single state

¹² For example, Adam Smith notes that the clergy of a particular sect that has allied with a victorious political party will have an incentive to call on the sovereign to “subdue all of their adversaries” (Smith [1776] 1965, p. 744).

religion, especially one that promotes the worship of a single god. Despite these factors, in our empirical analysis we will treat the organization of the religion market and the number of gods as exogenous with respect to theocracy under the presumption that few rulers would have been sufficiently powerful to exert such influence on the underlying religious beliefs or institutions.¹³

Given these caveats, we propose to test the above propositions using two types of data: historical polity-level data, and contemporary cross-national data on state-religion relationships.

IV. Empirical Analysis

A. *Quantitative Analysis with Historical Data*

For our first empirical investigation, we constructed a new and unique dataset which we are calling “Historical Polities Data” (HPD). Rather than restrict the dataset to polities of certain size, duration, or type, we included all polities for which we could find complete information. The final set includes information on over 300 polities that existed over the period between about 3,700 BCE and the twentieth century CE. Appendix A shows the list of polities in our dataset.

A team of research assistants combed through a wide variety of sources to gather information about the basic characteristics of these polities and the relationship between state and religion. We started with polities that are included in readily available datasets constructed by other researchers, such as the anthropological database called the Standard Cross-Cultural Sample (Murdock and White, 1969) and the Ethnographic Atlas (Murdock, 1967).¹⁴ We resorted

¹³ Two apparent exceptions to this claim are the pharaoh Akhenaten (formerly Amenhotep IV), who imposed monotheism on Egypt during his reign, though this was immediately reversed by Tutankhamen when Akhenaten died (suggesting that monotheism was never really embraced) (Stark, 2007, pp. 157-161); and Constantine, who instituted Christianity as the state religion of Rome, though Stark (2007, p. 327) notes that “Constantine was not responsible for the triumph of Christianity. Rather, Christianity played a leading role in the triumph of Constantine...” These “exceptions” therefore actually support our treatment of the religion market as causal.

¹⁴ See Turchin et al (2012: 286-89) for a discussion of the contents and limitations of these data. See also Iyigün (2010) for a similar dataset.

to other sources as necessary to expand on the list of polities and to code variables that were not available in these sources. In cases of conflicting information about a particular variable, we gave priority to sources with comprehensive coverage, such as *Encyclopædia Britannica* and the book series “Cambridge Histories Online,” to maintain consistency in coding. The final dataset includes 343 polities and 45 variables.

For each polity, the HPD includes four groups of variables: its basic characteristics, religion market, theocratic elements, and religious legitimacy of political leaders. In addition to the usual information such as name and dates of a polity’s existence, the basic characteristics of a polity also include its type, peak land mass, historical period, and the name of the polity that preceded it in the same geographic location. We identified four types of polities, depending on their relationship to other polities. A polity is classified as an *empire* if it “rules (through coercion) over populations who are culturally and ethnically distinct from the ruler”; a *principality* if it is “clearly subordinated to another polity”; a *confederacy* if it “is a permanent union of political units for common action in relation to other units, usually by compact or treaty”; and *unitary* if it is “an independent polity that is not in an imperial or confederacy relationship with others.” To distinguish between major periods of history, we also identified whether the polity was in the ancient (pre-sixth century CE), medieval (sixth to fifteenth century), or modern period (post-fifteenth century).

Information about the religion market includes the names of the majority and minority religions, basic characteristics of these religions and their organization. As noted above, the most important characteristic of the majority religion to us is whether it is monotheistic. To further differentiate among polytheistic religions, we noted whether such a religion had a “high god”

and whether the ruler was also considered a god. To note the presence of monopoly power in the religion market, we simply asked “whether the polity had a dominant religious authority.”

There are three variables in HPD to establish the presence of theocratic rule: (1) “whether the state’s laws were based on religion,” (2) “whether there was an official government dealing with religious affairs”, and (3) “whether the religious authority was also a political authority.”

Whereas the latter two variables have binary values, the first variable allows multiple possibilities (0=none, 1=some, 2=most, 3=all). Rescaling the first variable to vary between zero and one, we use the simple average of the legal, official, and associational measures as our index of theocracy.

Finally, we have entered four variables in HPD to construct an index of the legitimacy relationship between religious and political authorities. These are “whether the political authority was divinely inspired or himself divine” (=1 if yes), “whether he carried a religious title” (=1 if yes), “whether the religious authority explicitly endorsed the political authority” (=1 if yes), and “whether the religious authority required tax payments to the political authority on religious grounds” (0=none, 1=some, 2=most, 3=all). Similar to the procedure used in constructing an index of theocracy, we rescale the last variable to vary between zero and one and use the simple average of these variables to serve as our index of religious legitimacy.

Tables 1 and 2 show the mean values for all of the variables, organized by continents (Table 1) and by time periods (Table 2). Geographically the majority, or 54%, of the sample is from Asia, while 25% come from Europe, 12% come from Africa, 7% come from the Americas, and 2% come from Oceania. Historically, 47% come from the Medieval period, 34% from the ancient period, and 18% from the modern period. In terms of the key variables, the average theocracy index is greater than .50 in all regions, with the highest being in Oceania (.78) and the

lowest in Europe (.51). The trend over time has been for theocracy to decrease, as conventional wisdom suggests, though the decline has not been steep. The index of religious legitimacy is also above .50 for all regions, ranging from .54 in Oceania to .75 in Africa. Over time, however, it has remained remarkably stable, at .63 or .64. The religion market has been highly monopolized, both across regions (ranging from .82 to 1.00) and over time (ranging .84 and .89). In contrast, the monotheism index varies widely. Geographically, it ranges from .09 in the Americas to .76 in Europe, while over time, it displays the expected increase, rising from .08 in ancient times, to .53 in the Medieval era, and finally to .76 in the modern era.

We use regression analysis of these variables to determine the factors favoring the emergence of theocracy. Although we believe that most of the explanatory variables discussed above can be safely treated as exogenous with respect to theocracy, we suspect (based on arguments made above) that theocracy could be jointly determined with religious legitimacy (though note that the raw data do not seem to display a correlation). To consider this possibility, we allow for two way causation between these variables and use two instrumental variables that are (arguably) uncorrelated with theocracy but can be used to predict religious legitimacy. A standard solution to the simultaneity bias faced in similar contexts is to use the long lag of a variable. For each polity included in our database, we have therefore identified the polity that preceded it and used the legitimacy relationship in the preceding polity as an instrument for religious legitimacy in it. We also included the length of a polity's tenure as an additional instrument. Our confidence in the two instruments is strengthened by the highly significant correlation between them and the religious legitimacy variable. (Specifically, the *t*-statistics are

7.57 and 2.3 for the “religious legitimacy in preceding polity” and “duration” variables, respectively, with a reasonably high R^2 of 0.39 for the regression.)¹⁵

Table 3 shows the results of regression analysis of factors favoring the emergence of theocracy. To see how the simultaneity bias affects these results, we report both the seemingly unrelated regression (SURE) estimation results and those derived from a three stage least squares (3SLS) method for the full equation. To see the robustness of our results to model specification, we run the 3SLS method under different combinations of explanatory variables.

The results are consistent and remarkably similar between the SURE and 3SLS models, as seen in the first two equations of Table 3. The results of key variables are also consistent across the four alternative specifications of the model (equations 4-7). The effect of religious legitimacy is consistently positive and highly significant in all specifications, indicating that the empirical relationship between these variables is in the direction that we hypothesized. The presence of monopoly power in the religion market is also significant and in the expected (positive) direction. Clearly, the signs and significance of the coefficients of religious legitimacy and monopoly power in the religion market provide solid empirical support for our main arguments about the factors affecting the emergence of theocracy.

The results provide mixed support, however, for our arguments regarding the number and status of gods in a polity’s main religion. The monotheistic nature of the main religion generally has a positive effect in all but one specifications, but the coefficients are not significant. In the same vein, the presence of a “high god” in polytheistic religions has a positive effect in all but one specification, but again it is not significant. In contrast, the variable indicating whether the

¹⁵ To consider the possibility of simultaneity bias involving the “monopoly in the religion market” variable, we tested alternative specifications of the system of equations by including a third equation and using “monopoly in the religion market of preceding polity” as a proxy. The results of the 3SLS estimation were weaker than, but generally consistent with, those reported in Table 3.

ruler is also considered a god has a positive and highly significant effect on whether a polity is theocratic.

One possible reason that the monotheism variable is not significant is that monotheistic religions scarcely existed in the ancient period of our sample (representing only a fraction .08 of polities in that subsample), having not been “invented” until the time of Abraham, around 2,100 to 1,500 BCE. The significance of the variable indicating that the ruler was a god, however, may be capturing the same effect that we had attributed to monotheism—namely, the ease with which the ruler could ally with religion for purposes of appearing more legitimate.

We entered each major religion as a separate variable in the analysis to determine its individual relationship with theocracy. Since Sunni Muslim polities constitute the largest proportion of all polities in our sample, we dropped the variable “The Dominant Religion: Sunni Islam” from the regression equation, so the coefficients of other religions show the differential effect from Sunni Islam. The results are interesting and remarkably consistent across equations. Whereas Shia Islam has a positive effect on the rise of theocracy as compared to Sunni Islam, the likelihood of theocracy is lower among the polities subscribing to other Abrahamic religions. Similarly, theocracy is more likely among polities dominated by the traditional African, Aztec or Mayan, Andean, North American, Japanese, and Chinese folk religions; and less likely among Tengrist, Hindu, and Ancient religions.

The results are also interesting for the various other characteristics of polities included in the analysis. Specifically, polities in Oceania are more theocratic than those in Asia (the omitted category). Although the coefficient of “Peak Land Mass” is positive in all equations, the effect is not significant. The establishment date of a polity is negative and significant, indicating that the incidence of theocracy fell over time, all else equal, which is what we would have expected.

There seem to be no consistent difference, however, between polity types in their tendency towards theocracy.

B. Quantitative Analysis with Contemporary Data

Going beyond historical conditions, we also test the applicability of our arguments in current nations by using recent cross-national data on the relationship between state and religion. More specifically, we use the Religion and State (RAS) dataset assembled by Fox and Sandler (2005), Barro's "Religion Adherence Data" (Barro and McCleary, 2005), and the annual International Religious Freedom (IRF) Reports prepared by the U.S. State Department since the passage of the International Religious Freedom Act in 1998.¹⁶ Although we relied primarily on these datasets for variables directly related to the religion-state relationship, we also include variables from other sources of cross-national data to control for the various social, political, demographic, and economic factors that might have influenced this relationship.¹⁷

Similar to the procedure we used for historical data, we use these data to construct proxies for theocracy and religious legitimacy. To differentiate between the various legislative and administrative areas in which the merger between the religious and political authorities can be observed, we construct three sub-indices of theocracy, namely "Religious Legislation," "Religious Officials," and "Religio-Political Association". These indices are parallel to those

¹⁶ Researchers from the American Religious Data Archive (ARDA) have recently assigned quantitative measures to the information contained in the IRF reports, systematically coding the information for 196 nations and making the data available to other researchers on their website. 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. See also Grim and Finke (2006) for a description of the data, indexes constructed from it, and a list of included countries. Barro's "Religion Adherence Data" is available on the Web: http://www.economics.harvard.edu/faculty/barro/data_sets_barro.

¹⁷ See Coşgel and Miceli (2009: 410-11) for recent sources of cross-national data on economic variables and the political economy of religion.

used in constructing the theocracy index used in historical analysis, but we have much more detailed information on contemporary polities.

The “Religious Legislation” sub-index is constructed from a subset of the variables included in the RAS data, each coded on a binary scale, taking the value of 1 if a nation has the following:

- Dietary laws (restrictions on the production, import, selling, or consumption of specific foods).
- Personal status defined by religion or clergy (i.e. marriage, divorce, and/or burial can only occur under religious auspices.)
- Restrictions on interfaith marriages (including cases where marriages are performed only by clergy).
- Laws of inheritance defined by religion.
- Religious precepts used to define crimes or set punishment for crimes.
- Bans or restrictions on the charging of interest.
- Censorship of press or other publications on grounds of being antireligious.
- Mandatory closing of some or all businesses during religious holidays including the Sabbath or its equivalent.

Similarly, the “Religious Officials” sub-index is constructed from the presence or absence of the following items available in the RAS dataset:

- Official government positions, salaries or other funding for clergy other than salaries for teachers of religious courses.
- Granting to some religious leaders diplomatic status, diplomatic passports, or immunity from prosecution by virtue of their religious office.

- Presence of an official government ministry or department dealing with religious affairs.
- Presence of a police force or other government agency that exists solely to enforce religious laws.
- Naming of certain religious officials as government officials by virtue of their religious position.
- Existence of certain religious requirements for some or all government officials as a prerequisite to hold office.
- Presence of religious courts that have jurisdiction over matters of family law and inheritance.
- Presence of religious courts that have jurisdiction over some matters of law other than family law and matters of inheritance.
- Granting of seats in the Legislative branch and/or Cabinet by law or custom, at least in part, along religious lines.

As a third sub-index of theocracy, we focus on the direct merger between the religious and political authorities. Although in contemporary societies the merger between these authorities is never a simple binary outcome, two of the dummy variables coded in the RAS data allow us to approximate the degree to which certain authorities act in both religious and political capacities. These are the items that indicate whether “certain government officials are also given an official position in the state church by virtue of their political office (i.e., the Queen of England is also head of Anglican Church)”, and whether “certain religious officials become government officials by virtue of their religious position (i.e., as in Iran).” The index thus constructed, labeled “Religio-Political Association,” will serve as a measure of the third dimension of theocracy.

To see the combined effect of legislative and administrative features of theocracy, we construct a composite index of theocracy by taking the simple average of the three sub-indices. For each of these indices, we gave components equal weight and rescaled the sum so that the index ranges between zero and one.

Once again, the explanatory variable of central interest in the model is the ability of religious authorities to confer legitimacy on the political authority. Several items in the RAS and IRF datasets speak directly to the legitimacy relationship between religion and state, which we can use to construct a proxy index of religious legitimacy. More specifically, the index includes variables on whether:

- religious education is present in public schools
- public schools have official prayer sessions
- government collects taxes on behalf of religious organizations
- the state's flag includes religious symbols
- the state has a Concordat with the Vatican
- the state has a relationship to the Vatican or other such international religious authorities (Anglican, Orthodox, Dalai Lama, etc.)
- there exist agreements or special arrangements with religions (including with religious institutions such as hospitals)
- whether there are any holy sites (e.g., shrines or places of pilgrimage)
- whether there is some sort of historical religion(s)

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

We also examine the effects of the organization of the religion market, and whether a religion is monotheistic or polytheistic. To include a measure of the presence or absence of competition in the religion market, we use a variable available from the IRF database on whether there is an established religion. We also include a dummy variable on whether the main religion is monotheistic.

In addition to differentiating between monotheistic and polytheistic religions, we enter each major religion as a separate dummy variable that takes the value of 1 if it is the (simple) majority religion. The variable titled “Majority Religion is Sunni Islam,” the category with the highest proportion of total, has been omitted to avoid multicollinearity, so the coefficients of other majority religions show the differential effect from the omitted one.

To include a measure of the ruler’s power, we look at differences in political structure and use the “2000 Political Typology” index based on the Freedom House’s “Democracy’s Century” report. We have reversed and rescaled the index to range between zero and one, such that higher numbers represent greater levels of democracy (on a coding consisting of the following types of regimes: protectorate, totalitarian, authoritarian, monarchy, restricted democratic practice, and democracy).

To isolate the effects of variables representing religious legitimacy and the religion market, we include variables that control for other characteristics of countries that could also influence the emergence of theocracy. To control for some of the well-known and consistently measured differences in geographic, demographic, and socio-economic factors, we include population, land area, and income (per capita GDP). Income and population generally fit the model better (with consistent results) in non-linear form, so we include these variables in logs. Table 4 shows the means of all variables included in the analysis, organized by regions of the

world. Note that the theocracy index is substantially lower throughout the world here as compared to the historical data (a maximum value of .21 in Asia here as compared to a minimum value of .51 in Europe for the historical data). Religious legitimacy is also lower, as is monopoly in the religion market (presumably reflecting greater religious tolerance in modern societies). Finally, monotheism is fairly high, especially in the Americas and Europe where Christianity is prevalent.

For reasons explained in the previous section, we obtain results from both the SURE and the three stage least squares (3SLS) methods to consider the possibility that theocracy could be jointly determined with religious legitimacy. As before, we allow for two way causation between these variables and use the presence of a historical religion (a variable available from the IRF dataset) and majority religion dummies to predict religious legitimacy. Once again, our confidence in using the presence of historical religion as an instruments is strengthened by the high significance of this variable (*t-statistic*: 4.99) and the reasonably high R^2 of 0.42 for the overall equation.

Table 5 shows our analysis of factors favoring the emergence of theocracy in current societies. To facilitate the comparison of results obtained from data on historical polities and current societies, we ran the same set of regression equations as reported in Table 3. More specifically, we obtained the results of SURE and 3SLS estimates for the full equation and several alternative specifications of these variables. Although the significance of variables varies somewhat among these equations, the signs are generally consistent and in expected directions. Religious legitimacy has a positive and significant effect on theocracy in most equations, underscoring the same positive relationship hypothesized by the model and confirmed by the empirical analysis of theocracy in historical polities. In addition, the presence of monopoly

power, either because there is an established religion in the market or because the majority religion is monotheistic, raises the likelihood of theocracy. Notably, the effect of monotheism emerges more clearly and consistently in these results than in those obtained for historical polities.

The effects of variables that control for differences among religions are interesting. As in the preceding analysis, Sunni Muslim polities constitute the largest proportion among current societies, so we drop the variable “The Majority Religion is Sunni Islam” from the regression equation, and the coefficients of other religions simply represent the differential effects from Sunni Islam. Similar to the outcome of religious differences among historical polities, our results indicate that having an Abrahamic religion other than Sunni Islam (with the exception of Shia Islam) has a negative and significant effect on the emergence of theocracy in today’s societies. Finally, those countries with democratic regimes are less likely to be theocratic, as expected, and the effect is significant in all specifications.

V. Conclusion

Our goals in this paper have been, first, to provide a theoretical framework for understanding the economic factors that lead to the emergence of theocracy, and second, to test the predictions of the theory using data on the political and religious characteristics of different societies and civilizations. Using a simple political economy model, we showed that theocracy is more likely to emerge in those polities where (i) religion is able to serve a legitimizing function vis-à-vis the state, (ii) the religion market is monopolized, and (iii) the dominant religion is monotheistic.

To test these predictions, we used two datasets, both of which include information on the characteristics of the political authority and the religion “market.” One is a unique (and largely original) dataset consisting of information on over 300 historical polities that have existed throughout history, and the other is a cross-country dataset on contemporary societies. The results of our regression analysis are largely supportive of our theory.

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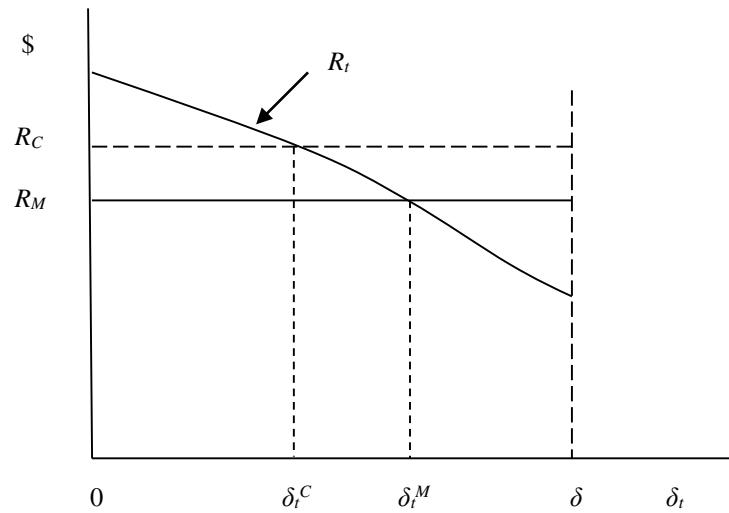


Figure 1. Ranges over which theocracy and an independent religion dominate.

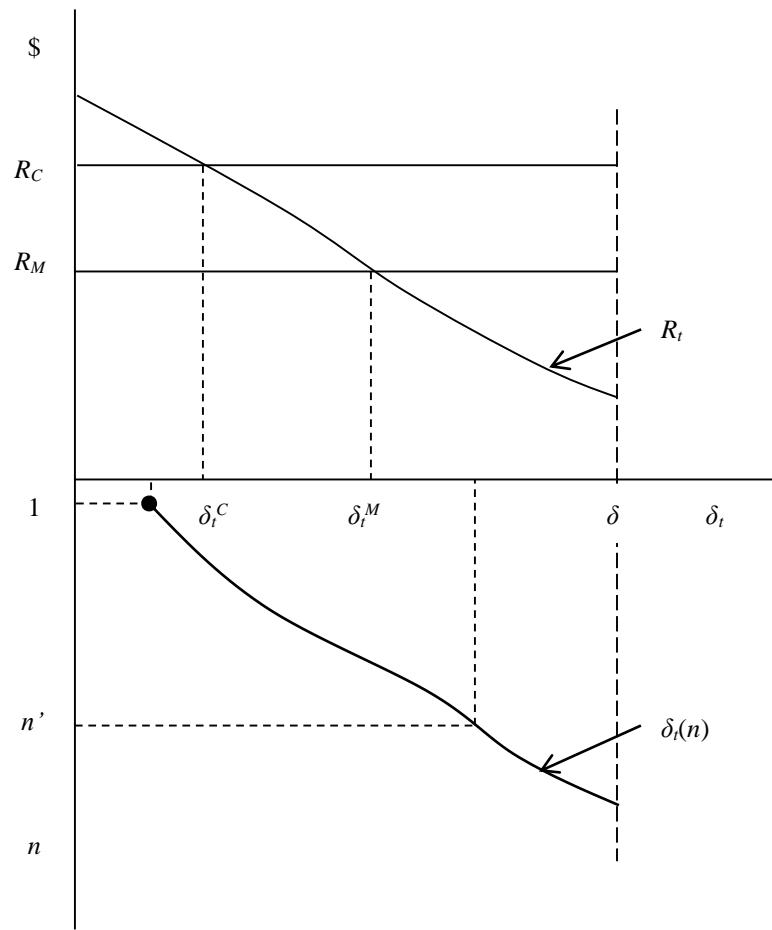


Figure 2. Effect of the religion market on the desirability of theocracy.

TABLE 1
HISTORICAL POLITIES ACROSS CONTINENTS

		Europe	Africa	Asia	Oceania	America	All
Polity	Number of Polities	86	42	185	7	23	343
	Year Established	846.48	182.57	403.37	1082.86	294.26	493.99
	Duration (years)	305.71	413.45	272.18	153.29	776.43	329.27
	Peak Land Mass (sq. km)	2,006,377	850,842	2,031,686	236,571	762,848	1,759,030
Type	Empire	0.34	0.50	0.52	0.29	0.39	0.46
	Unitary	0.49	0.48	0.32	0.71	0.30	0.39
	Confederacy	0.14		0.13		0.30	0.13
	Principality	0.03	0.02	0.03			0.03
Key variables	Theocracy	0.51	0.64	0.55	0.78	0.70	0.56
	Religious Legitimacy	0.60	0.75	0.62	0.54	0.67	0.64
	Monopoly in Religion Market	0.87	0.95	0.82	1.00	1.00	0.87
	Monotheistic Religion	0.76	0.52	0.29	0.29	0.09	0.42
	Polytheistic Religion with a High God	0.16	0.29	0.28		0.22	0.24
	Ruler a God	0.01	0.19	0.04		0.13	0.06
Religion	Traditional African		0.17				0.02
	Aztec or Mayan					0.35	0.02
	Andean					0.26	0.02
	Western Hemisphere (North)					0.30	0.02
	Ancient Mesopotamian	0.01	0.02	0.11			0.06
	Ancient Egyptian		0.26				0.03
	Ancient Greek or Roman	0.13	0.02	0.04			0.06
	Japanese			0.03			0.01
	Ancient Iranian			0.04			0.02
	Hindu			0.17	0.29		0.10
	Buddhist			0.22	0.43		0.13
	Chinese Folk Religion			0.06			0.03
	Tengrist	0.06		0.04			0.04
	Jewish	0.01		0.01			0.01
	Catholic	0.40	0.02	0.01		0.09	0.11
	Orthodox	0.13	0.07	0.01			0.05
	Protestant	0.16	0.02	0.01			0.05
	Shia		0.02	0.04			0.02
	Sunni	0.07	0.33	0.17	0.29		0.16
	Other	0.03	0.05	0.05			0.04

Note: Figures are the averages for the continent. See the text for the contents of indexes and descriptions of variables.

TABLE 2
HISTORICAL POLITIES OVER TIME PERIODS

		Ancient	Medieval	Modern	All
Polity	Number of Polities	116	164	63	343
	Year Established	-680.97	923.39	1539.59	493.99
	Duration (years)	453.19	264.52	267.79	329.27
	Peak Land Mass (sq. km)	1,096,419.22	1,618,798.87	3,344,120.64	1,759,030
Type	Empire	0.35	0.48	0.60	0.46
	Unitary	0.49	0.37	0.24	0.39
	Confederacy	0.16	0.12	0.10	0.13
	Principality	0.04	0.06	0.03	
Key variables	Theocracy	0.59	0.57	0.50	0.56
	Religious Legitimacy	0.63	0.64	0.64	0.64
	Monopoly in Religion Market	0.89	0.84	0.89	0.87
	Monotheistic Religion	0.08	0.53	0.76	0.42
	Polytheistic Religion with a High God	0.52	0.14		0.24
	Ruler a God	0.11	0.04	0.02	0.06
Religion	Traditional African	0.01	0.02	0.03	0.02
	Aztec or Mayan	0.04	0.02		0.02
	Andean	0.03	0.02		0.02
	Western Hemisphere (North)	0.04	0.01		0.02
	Ancient Mesopotamian	0.19			0.06
	Ancient Egyptian	0.09			0.03
	Ancient Greek or Roman	0.17			0.06
	Japanese		0.01	0.05	0.01
	Ancient Iranian	0.06			0.02
	Hindu	0.10	0.12	0.02	0.09
	Buddhist	0.09	0.15	0.11	0.13
	Chinese Folk Religion	0.04	0.03	0.02	0.03
	Tengrist	0.03	0.05		0.04
	Jewish	0.02	0.01		0.01
	Catholic	0.01	0.12	0.29	0.11
	Orthodox		0.07	0.06	0.05
	Protestant	0.01	0.03	0.16	0.05
	Shia		0.03	0.06	0.02
	Sunni		0.26	0.19	0.16
	Other	0.05	0.04	0.02	0.04

Note: Figures are the averages for the period. See the text for the contents of indexes and descriptions of variables.

TABLE 3
DETERMINANTS OF THEOCRACY IN HISTORICAL POLITIES

	SURE		THREE STAGE LEAST SQUARES				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Religious Legitimacy	0.357 (0.039)***	0.419 (0.107)***		0.456 (0.103)***	0.449 (0.104)***	0.534 (0.071)***	0.365 (0.096)***
Monopoly in Religion Market	0.062 (0.031)**	0.063 (0.034)*			0.071 (0.034)**	0.079 (0.032)**	0.074 (0.034)**
Monotheistic Religion	0.037 (0.078)	0.041 (0.079)				-0.043 (0.028)	0.016 (0.080)
Polytheistic Religion with a High God	0.029 (0.035)	0.027 (0.036)				-0.034 (0.027)	0.010 (0.037)
Ruler a God	0.157 (0.047)***	0.156 (0.048)***				0.150 (0.044)***	0.155 (0.049)***
Jewish	-0.128 (0.101)	-0.132 (0.101)	-0.114 (0.116)	-0.137 (0.104)	-0.135 (0.103)		-0.132 (0.103)
Catholic	-0.077 (0.044)*	-0.075 (0.045)*	-0.094 (0.051)*	-0.078 (0.046)*	-0.076 (0.046)*		-0.077 (0.036)**
Orthodox	-0.021 (0.052)	-0.023 (0.053)	-0.016 (0.060)	-0.029 (0.054)	-0.026 (0.054)		-0.021 (0.050)
Protestant	-0.020 (0.054)	-0.016 (0.054)	-0.056 (0.062)	-0.025 (0.056)	-0.016 (0.055)		-0.019 (0.049)
Shia	0.077 (0.061)	0.061 (0.066)	0.180 (0.069)***	0.059 (0.068)	0.053 (0.067)		0.060 (0.065)
Traditional African	0.183 (0.109)*	0.199 (0.111)*	0.058 (0.083)	0.140 (0.076)*	0.164 (0.076)**		0.146 (0.104)
Aztec or Mayan	0.244 (0.158)	0.220 (0.164)	0.408 (0.161)**	0.194 (0.153)	0.210 (0.153)		0.193 (0.102)*
Andean	0.060 (0.162)	0.040 (0.165)	0.194 (0.165)	0.013 (0.154)	0.027 (0.154)		0.008 (0.108)
Western Hemisphere (North)	0.186 (0.162)	0.155 (0.170)	0.357 (0.166)**	0.103 (0.159)	0.109 (0.159)		0.131 (0.109)
Ancient Mesopotamian	-0.001 (0.093)	0.011 (0.096)	-0.069 (0.065)	-0.018 (0.059)	-0.007 (0.059)		-0.007 (0.098)
Ancient Egyptian	-0.040 (0.114)	-0.030 (0.117)	0.030 (0.084)	0.057 (0.075)	0.069 (0.075)		-0.048 (0.110)
Ancient Greek or Roman	-0.025 (0.095)	-0.005 (0.104)	-0.115 (0.060)*	-0.007 (0.059)	-0.006 (0.058)		-0.020 (0.103)
Japanese	0.278 (0.113)**	0.248 (0.120)**	0.491 (0.093)***	0.242 (0.100)**	0.231 (0.099)**		0.242 (0.121)**
Ancient Iranian	-0.096	-0.086	-0.146	-0.077	-0.068		-0.096

	(0.073)	(0.075)	(0.081)*	(0.074)	(0.073)	(0.077)
Hindu	-0.030	-0.028	-0.037	-0.057	-0.047	-0.023
	(0.087)	(0.087)	(0.047)	(0.042)	(0.043)	(0.089)
Buddhist	0.027	0.033	-0.019	0.000	0.008	0.020
	(0.084)	(0.085)	(0.042)	(0.038)	(0.038)	(0.087)
Chinese Folk	0.093	0.105	0.008	0.064	0.091	0.078
	(0.095)	(0.096)	(0.067)	(0.062)	(0.062)	(0.098)
Tengrist	-0.091	-0.078	-0.186	-0.127	-0.082	-0.082
	(0.096)	(0.099)	(0.064)***	(0.059)**	(0.061)	(0.100)
Other	0.056	0.058	0.025	0.014	0.028	0.040
	(0.078)	(0.078)	(0.059)	(0.053)	(0.053)	(0.080)
Europe	0.019	0.015	0.046	0.018	0.014	-0.013
	(0.035)	(0.035)	(0.040)	(0.036)	(0.036)	(0.026)
Africa	-0.011	-0.018	0.038	-0.016	-0.022	0.006
	(0.040)	(0.042)	(0.045)	(0.043)	(0.042)	(0.032)
Oceania	0.293	0.298	0.262	0.298	0.287	0.276
	(0.065)***	(0.066)***	(0.075)***	(0.067)***	(0.067)***	(0.070)***
America	-0.031	-0.009	-0.146	0.016	0.000	0.070
	(0.124)	(0.131)	(0.142)	(0.133)	(0.133)	(0.040)*
Peak Land Mass (100,000 sq. km)	0.002	0.002	0.002	0.001	0.002	0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Year Established (1,000 years)	-0.034	-0.031	-0.058	-0.034	-0.030	-0.019
	(0.015)**	(0.015)**	(0.017)***	(0.017)**	(0.016)*	(0.012)
Unitary	0.010	0.015	-0.023	0.014	0.014	0.026
	(0.023)	(0.023)	(0.026)	(0.024)	(0.024)	(0.023)
Confederacy	0.009	0.030	-0.135	0.018	0.026	0.083
	(0.038)	(0.047)	(0.041)***	(0.049)	(0.048)	(0.036)**
Principality	0.006	0.015	-0.058	0.006	0.018	0.057
	(0.057)	(0.058)	(0.065)	(0.059)	(0.059)	(0.059)
Constant	0.248	0.198	0.613	0.279	0.211	0.151
	(0.087)***	(0.108)*	(0.039)***	(0.082)***	(0.075)***	(0.050)***
R ²	0.46	0.46	0.28	0.43	0.43	0.38
N	343	343	343	343	343	343

Notes: See the text for sources and the description of variables. Figures in parentheses are standard errors. Omitted categories are “Polytheistic Religion with No High God,” “Medieval Polity,” “Polity is in Europe,” “Polity is an Empire,” and “Dominant Religion is Sunni Islam.” * p<0.1; ** p<0.05; *** p<0.01.

TABLE 4
RELIGION AND POLITICS IN CURRENT SOCIETIES

	Africa	North America	South America	Asia	Europe	Oceania	All States in Sample
Theocracy	0.08	0.02	0.03	0.21	0.07	0.03	0.10
Religious Legitimacy	0.14	0.21	0.21	0.25	0.29	0.14	0.22
Monopoly in Religion Market	0.42	0.47	0.42	0.65	0.51	0.17	0.50
Historical Religion	0.46	0.71	0.75	0.85	0.79	0.50	0.69
Monotheistic Religion	0.44	0.76	0.83	0.58	0.77	0.50	0.61
Majority Religion is	Catholicism	0.12	0.59	0.83	0.02	0.44	0.25
	Judaism				0.02		0.01
	Shia				0.08		0.02
	Sunni	0.56	0.06	0.08	0.56	0.15	0.17
	Orthodox Christianity				0.06	0.15	0.05
	Protestant Christianity	0.00	0.12			0.15	0.50
	Buddhism				0.13		0.03
	Hinduism				0.04		0.01
	Other Christianity	0.02	0.06				0.01
	Other Religion	0.04					0.01
	No Majority Religion	0.52	0.24	0.17	0.23	0.23	0.50
Democratic State		0.52	0.94	0.92	0.46	0.95	1
Population (logs)		15.80	15.49	16.21	16.45	15.60	14.45
Land Area		0.58	1.31	1.48	0.69	0.59	1.41
GDP (Log)		7.59	8.92	8.74	8.56	9.80	8.73
Number of States		52	17	12	48	39	6
							175

Note: Figures are the averages for the continent or overall sample for the year 2000. See the text for the contents of indexes and descriptions of variables.

TABLE 5
DETERMINANTS OF THEOCRACY IN CURRENT SOCIETIES

		THREE STAGE LEAST SQUARES						
		SURE						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Religious Legitimacy		0.374 (0.063)***	0.395 (0.326)		0.636 (0.163)***	0.403 (0.333)	-0.055 (0.267)	0.453 (0.233)*
Monopoly in Religion Market		0.037 (0.017)**	0.044 (0.045)			0.049 (0.046)	0.060 (0.038)	0.037 (0.034)
Monotheistic Religion		0.148 (0.066)**	0.144 (0.067)**				0.073 (0.027)***	0.105 (0.069)
Majority Religion is Judaism		-0.129 (0.091)	-0.136 (0.117)	-0.012 (0.108)	-0.175 (0.105)*	-0.127 (0.120)		-0.110 (0.107)
Shia		-0.008 (0.047)	-0.008 (0.048)	0.000 (0.056)	0.002 (0.050)	-0.001 (0.049)		0.020 (0.049)
Orthodox		-0.189 (0.036)***	-0.188 (0.037)***	-0.187 (0.043)***	-0.176 (0.038)***	-0.178 (0.038)***		-0.205 (0.037)***
Catholic		-0.161 (0.027)***	-0.158 (0.030)***	-0.173 (0.031)***	-0.167 (0.028)***	-0.150 (0.031)***		-0.198 (0.025)***
Protestant		-0.131 (0.037)***	-0.131 (0.039)***	-0.118 (0.044)***	-0.136 (0.040)***	-0.127 (0.040)***		-0.171 (0.036)***
Buddhism		-0.068 (0.072)	-0.073 (0.073)	-0.193 (0.047)***	-0.204 (0.042)***	-0.203 (0.041)***		-0.077 (0.076)
Other Christian		-0.168 (0.066)**	-0.162 (0.071)**	-0.202 (0.078)***	-0.189 (0.070)***	-0.157 (0.073)**		-0.201 (0.069)***
Other Eastern Religion		0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)		0.000 (0.000)
No Majority Religion		0.040 (0.066)	0.042 (0.068)	-0.160 (0.024)***	-0.089 (0.028)***	-0.092 (0.028)***		-0.016 (0.069)
Other Religion		0.073 (0.090)	0.075 (0.101)	-0.141 (0.078)*	-0.029 (0.075)	-0.057 (0.082)		0.017 (0.100)
Country is in	Asia	0.086 (0.028)***	0.087 (0.030)***	0.063 (0.033)*	0.089 (0.030)***	0.082 (0.031)***	0.134 (0.032)***	
	Africa	0.013 (0.029)	0.015 (0.038)	-0.021 (0.034)	0.035 (0.033)	0.018 (0.039)	0.034 (0.041)	
	America	0.009 (0.025)	0.011 (0.034)	-0.015 (0.030)	0.029 (0.029)	0.013 (0.034)	-0.029 (0.034)	
	Oceania	0.016 (0.043)	0.021 (0.047)	-0.037 (0.051)	0.030 (0.048)	0.025 (0.048)	0.016 (0.056)	
Democratic		-0.034 (0.018)*	-0.034 (0.020)*	-0.045 (0.021)**	-0.033 (0.019)*	-0.041 (0.021)**	-0.068 (0.023)***	-0.045 (0.019)**
Population (log)		-0.000 (0.005)	-0.000 (0.006)	0.003 (0.006)	-0.004 (0.005)	-0.002 (0.006)	0.004 (0.007)	0.001 (0.006)
Area (log)		-0.001 (0.004)	-0.001 (0.004)	0.000 (0.005)	-0.002 (0.004)	-0.002 (0.004)	-0.000 (0.005)	-0.002 (0.004)
GDP (log)		0.009 (0.008)	0.009 (0.010)	0.017 (0.009)*	0.005 (0.009)	0.010 (0.010)	0.015 (0.012)	0.009 (0.010)
Constant		-0.122 (0.139)	-0.123 (0.146)	0.062 (0.142)	0.069 (0.126)	0.029 (0.129)	-0.149 (0.167)	-0.049 (0.148)
R ²		0.64	0.64	0.48	0.59	0.63	0.42	0.60
N		170	170	170	170	170	170	170

Notes: See the text for sources and the description of variables. Omitted categories are "Majority Religion is Sunni Islam" and "Country is in Europe." * p<0.1; ** p<0.05; *** p<0.01.

APPENDIX A
LIST OF ENTRIES IN THE HISTORICAL POLITIES DATASET
(NOVEMBER 1, 2013)

Western Roman Empire	Kgm of Poland (Piast Dynasty)
The Anglo-Saxon Heptarchy	Kgm of Poland (Jagiellon Dyns)
Merovingian Dy. (W. Frankish Kgm)	Habsburg Monarchy
Carolingian Dynasty (Frankish Empire)	Poland-Lithuania Commonwealth
Kingdom of Pamplona (Navarre)	Kingdom of Prussia
Kingdom of Scotland	Austrian Empire
Kingdom of Alba	Austro-Hungarian Empire
Kingdom of England	German Empire
Kingdom of Arles (Second Kingdom of Burgundy)	Nazi Germany
Holy Roman Empire	Kalmar Union
Capetian Dynasty (Kingdom of France)	Empire of Sweden
Plantagenet Dynasty (Angevin Empire)	Kingdom of Norway
British Empire (United Kingdom)	Kingdom of Denmark
First French Colonial Empire	Danish colonial empire
Dutch Republic (United Republics)	Kingdom of Colchis
Bourbon Dynasty (French Kingdom)	Spartocid Dynasty (Bosphorus Kingdom)
The Napoleonic Empire	Dacia Kingdom
Second French Colonial Empire	Hun Empire
Belgian Empire	Avars
Tartessian Kingdom	Khazaria
Visigoths	Kingdom of Abkhazia
Caliphate of Cordoba	Pechenegs
Kgm of Leon	Kievan Empire
Taifa of Valencia	Volga Bulgaria
Kingdom of Aragon	Kingdom of Georgia
Kingdom of Castille	Magyars
Kingdom of Portugal	Novgorod Republic
Kingdom of Granada (Nasrid Dyn.)	Kuman-Kipchak Confederation
Spanish Empire	Golden Horde
Etruscans	Kingdom of Lithuania
Roman Kingdom	Khanate of Kazan
Roman Republic	Khanate of Crimea
Roman Empire	Grand Duchy of Moscow, Rurikid Dynasty
Kingdom of Italy (Odoacer)	Russian Empire, Romanov Dynasty
Kingdom of Italy (Ostrogothic)	Minoan Civilization
Kingdom of Italy (Lombard)	Athenian Empire (Delian League)
Kingdom of Sicily	Greek City States
Kingdom of Naples	Macedonian Empire
Duchy of Savoy	Kingdom of Cassander (Antipatrid Dynasty)
Italian Empire	Krum Dynasty (Bulgarian Empire)
Unetice Culture	Asenid Dynasty (Bulgarian Empire)
Thuringian Kingdom	Latin Empire

Serbian Empire	Hittite Empire
Moravians	Urartu
Carthaginian Empire	Luwians
Garamantes Kingdom	Phrygians
Hasding dynasty (Vandal Kingdom)	Lydia
Rustamids	Kingdom of Lysimachus
Idrisid Dynasty	Antigonid Dynasty (Macedonia)
Aghlabid Dynasty	Pontus Kingdom
Fatimids	Attalid Dynasty (Pergamon Kingdom)
Almoravids	Artaxiad Dynasty (Armenian Kingdom)
Almohads	Byzantine Empire
Hafsidis	Anatolian Beyliks
Zayyanids (Abd al-Wadid Dyn.)	Kingdom of Cyprus
Marinids (Banu Marin)	Ottoman Empire
Ghana Empire (Wagadu)	Ebla
Takrur	Akkadian Empire
Kanem Empire	Gutians
Abyssinia (Ethiopian Empire)	Ur III Empire (Third Dynasty)
Mali Empire	Amorite Dynasty (Old Babylonian)
Djolof Empire	Isin, Larsa, Mari Dyn
Sef Dynasty (Bornu Kingdom)	Kassites, Babylonian Empire
Kongo	Mittani Kingdom
Oyo Empire	Aramean Kingdom
Songhai	Kingdom of Israel (United Monarchy)
Early Dynasty, Egypt	Neo-Assyrian Empire
Old Kingdom	Kingdom of Israel (Samaria)
Kingdom of Kerma	Neo-Babylonian Empire
1st Intermediate Period Kingdom 1	Rashidun Empire
Middle Kingdom	Umayyads
2nd Intermediate Kingdom (15th dynasty)	Abbasids
New Kingdom	Tulunids
Kush Kingdom	Hamdanids
Third Intermediate Period	Qarmatians (Carmathians)
Kush Empire	Buyids
Later Period	Latin Kingdom of Jerusalem
Ptolemaic Empire	Zengid Dynasty
Axum Empire	Saba Kingdom
Alodia (Alwa)	Nabataean Kingdom
Nubian Kingdoms	Himyarite Kingdom
Ayyubids	Rasulid Dynasty (Yemen Kingdom)
Mamluks	Kingdom of Elam (Middle Elamite Kingdom)
Bahri Dynasty	Neo-Elamite Kingdom
Bunyoro-Kitara	Median Empire (Medes)
Great Zimbabwe	Persian Empire (Achaemenid)
Hittite Kingdom (Old and Middle)	Kingdom of Atropatene

Seleucid Empire	Mauryan Dynasty (Magadha Empire)
Parthian Empire (Arsacid Dynasty)	Shungas (Magadha Empire)
Sasanian Empire	Kanva Dynasty (Magadha Empire)
Saffarid Dynasty	Gupta Dynasty (Magadha Empire)
Ghaznavids	Harichandra Dynasty (Gurjara Pratihara Empire)
Seljuq Empire	Harsha Empire (Vardhana Empire)
Ghurids	Karkota Dynasty (Kashmir)
Ilkhanate Khanate	Pala Empire
Kara koyunlu	Nagabhata Dynasty (Gurjara-Pratihara Empire)
Akkoyunlu federation	Paramara Dynasty
Safavid Empire	Mamluk Dynasty (Delhi Sultanate)
Sur Dynasty	Khilji Dynasty (Delhi Sultanate)
Afsharid Dynasty	Tughlaq Dynasty (Delhi Sultanate)
Qajar Dynasty	Sharqi Dynasty (of Jaunpur)
Hephthalite Khanate	Sayyid Dynasty (Delhi Sultanate)
Karlukhs/Oghuz	Lodis (Lodhi) Dynasty (Delhi Sultanate)
Samanids	Mughal Empire
Tahirid Dynasty	Nizams Dynasty (Hyderabad State)
Khwarazmian Empire	Satavahanas Emp
Timurids	Mahameghavahana Dynasty (Kharavela Empire)
Western Turks Khanate	Western Satraps Dynasty
Kimek Confederation	Vakataka Empire
Kara-Khanid (Qarakhanids)	Badami Dynasty (Chalukya Empire)
Kara-Khitian Khanate	Vengi Dynasty (Eastern Chalukya Empire)
Chagatai Khanate	Rashtrakuta Dynasty
Rouran Khaganate (Ruan Ruan)	Kalyani Dynasty (Western Chalukya Empire)
Göktürk Khaganate	Hoysala Empire
Eastern Turks (Göktürk) Khanate	Kalachuri Dynasty (Chedi and Karnataka kingdoms)
Uighur Khanate	Yadava (Gauli) Kingdom
Uighur Kingdom of Kocho (Kara-Khoja)	Bahmani Sultanate
Naimans & Keraits	Adil Shahi Dynasty (Sultanate of Bijapur)
Mongol Empire	Qutb Shahi Dynasty (Golkonda Kingdom)
Sibir Khanate	Maratha Empire
Kocho (Gaochang) Kingdom, Ch'u (Qu)Dynasty	Anuradhapura Kingdom
Tufan (Tibet) Empire	Pallavas
Indo-Scythians (Sakas)	Ganga Dynasty (Western Gangas)
Kushan Empire	Chola Dynasty
Rai Dynasty	Kalinga Dynasty (Eastern Ganga)
Sikh Empire	Madura Dynasty (Pandyan Empire)
Brihadratha Dynasty (Magadha Empire)	Vijayanagar Kingdom
Kuru Kingdom	Funan
Pradyota Dynasty (Magadha Empire)	Dvaravati
Haryanka Dynasty (Magadha Empire)	Chenla
Shishunaga Dynasty (Magadha Empire)	Champa
Nanda Dynasty (Magadha Empire)	Khmer Empire

Bagan (Pagan) Dynasty	Mimana (Kaya/Gaya Confederacy)
Ayutthaya Kingdom	(United) Silla Kingdom
Lan Xang Kingdom	Balhae Kingdom
Toungoo Dynasty	Heian Civilization
Konbaung Dynasty	Koryo Dynasty (Goryeo Kingdom)
Thai Empire (Siam Empire)	Kamakura Period
Nanzhao	Ashikaga (Muromachi) Period
Kingdom of Dali	Chosōn Dynasty (Yi Kingdom)
Song Dynasty	Azuchi-Momoyama Period
Ming Dynasty	Tokugawa (Edo) Period
Xia Dynasty	Japanese Empire
Shang Dynasty	Sailendra Dynasty (Medang/Mataram Kingdom)
Zhou Dynasty	Sailendra Dynasty (Srivijaya Empire)
Qin Empire	Airlangga
Xiongnu	Kediri
Han Empire	Singhasari
Xin Dynasty	Majapahit
3 Kingdoms (Wei, Shu, Wu)	Sultanate of Melaka
Xian-bei	Adena
Sima Dynasty (Western Jin)	Hopewell
16 Kingdoms (Han Zhao, Later Zhao, Cheng Han, Former Liang, Later Liang, Southern Liang, Western Liáng, Southern Liang, Former Yan, Northern Yan, Southern Yan, Former Qin, Later Qin and Western Qin and Xia.)	Former Liang, Later Liang, Southern Liang, Western Liáng, Southern Liang, Former Yan, Northern Yan, Southern Yan, Former Qin, Later Qin and Western Qin and Xia.)
Eastern Jin	Mogollon Culture
Nothern Dynasties (N. Wei, E. Wei, W. Wei, N. Qi, S. Qi)	Patayan
Southern Dynasties (Liu Song, Southern Qi, Liang, Chen)	Mississippip Culture
Sui Dynasty	Mexican Empire
Tang Dynasty	Olmecs
Five Dynasties (Later Liang, Later Tang, Later Jin, Later Han)	Kaminaljuyu
The Ten Kingdoms (Wu (907-937), Wuyue (907-978), Min (902-945), Chu (907-951), Southern Han (917-971), Former Shu (907-925), Later Shu (934-965), Jingnan (924-963), Southern Tang (937-975), Northern Han (951-979))	Monte Albán (Zapotec)
Liao Dynasty (Khitan Empire)	Toltecs
Northern Song Dynasty	Mayapan
Western Xia Dynasty (Tangut Kingdom)	Aztecs
Jurchen Dynasty (Jin Empire)	Chavín
Yuan Dynasty	Nazca
Northern Yuan Dynasty	Mochica (Moche Culture)
Qing	Tiahuanaco (Tiwanaku)
Gherubu Dynasty (Goguryeo Kingdom), Paekche	Chimu
Byeonhan Confederacy	Inca
	Empire of Brazil