Religious Origins of Democracy & Dictatorship

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Abstract: Weber considered the Protestant work ethic the foundation of modern capitalism. I extend Weber’s theory by arguing that states with predominantly Roman Catholic, Eastern Orthodox, and Muslim populations have had a stronger inclination toward underdevelopment and dictatorship than states with Protestant or Jewish majorities. This is the case because their respective religious collectives (monastery, tariqa) promote the hierarchical provision of common goods at the expense of market incentives. I define the aforementioned three religions as collectivist, in contrast to Protestantism and Judaism, which I define as individualist. I provide a historical overview that designates the Jewish kibbutz as the collective of democracy and the Eastern Orthodox monastery as the collective of dictatorship. Focusing on collectivist economies, I find that modernization, as a credible commitment to the improved future provision of public goods, occurs when the threat of a radical government is imminent and when the leader has high extraction of rents from the economy. The emergence of radical governments is more likely in collectivist than in individualist economies. Historical illustrations from collectivist economies include the Russian Revolution, the Islamic Revolution in Iran, and the postwar welfare state in Western Europe.

Keywords: religion, modernization, radical government, collectivism, individualism, democracy, dictatorship

JEL Codes: P21, P26, P32, P51, Z12

I. Introduction

Weber’s Protestant Ethic suggests that capitalism has its origins in the rational organization of free labor and the regularized investment of capital (2002). Weber observes that these conditions are met much more fully in Protestant than in Catholic regions and that the Protestant work ethic

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leads to higher degrees of productivity and economic growth (2002). I build on this theory to explain modernization, centralization, and underdevelopment as differential levels in the provision of public goods. Modernization as the “high” equilibrium in the provision of public goods is treated as a core element of democracy. Underdevelopment as the “low” equilibrium is a core element of dictatorship. Centralization is the “intermediate” equilibrium, where elites finance a higher provision of public goods than is the case with underdevelopment but are also compensated by the extraction of rents due to the hierarchical control that centralization implies.

In my theory, religion has a two-fold significance for economic transition and political change: it influences both the demand of citizens for public goods and the administrative organization of the provision of public goods. The organization of the Eastern Orthodox monastery, the Roman Catholic monastery, and the Muslim tariqa as economic systems reveals the relationship between religion and the hierarchical provision of public goods as it relies on central planning in resource distribution, immediate supervision of individual performance, and the absence of a right to exit the religious collective. The economic organization of the Jewish kibbutz and the Protestant parish, in contrast, suggests that the distribution of common goods can be combined with market incentives, a competitive insurance scheme, and a right to exit.

Putnam argues that hierarchical religions such as Roman Catholicism, Eastern Orthodoxy, and Islam undermine the development of horizontal ties between people and thus trust in society; states with Roman Catholic, Eastern Orthodox, and Muslim majorities reproduce the vertical structures of the respective predominant religion in administration (1993). I define these three religions as collectivist: not only do they produce a more complex and Byzantine administrative structure in the provision of public goods, they also lead to a higher reservation utility from the imposition of radical government (communism, fascism, populism) and the subsequent abolition
of formal politics. This is why modernization has been more widespread in economies with predominantly individualist religions such as Protestantism and Judaism. This is the second, and probably most important, effect of religion on state capacity and regime formation.

I focus on the comparative analysis of the Eastern Orthodox monastery and the Jewish kibbutz as economic systems. They constitute two diametrically different economic systems in the collectivism-individualism dimension. The kibbutz leadership sets the threshold for individual contributions toward the common good but, at the same time, it is held accountable for its decisions through the direct democratic procedures of its assembly. The Eastern Orthodox abbot, in contrast, can never be held accountable by lower-ranked members of the collective. His administrative status depends solely on the approval and support of the local bishop or patriarch. While abstinence from property rights is a common feature of both the monastery and the kibbutz, in the monastery there is no compensatory mechanism that incentivizes its more productive members to stay. Prospective monks are required to transfer all their property to the monastery \textit{ex-ante} in order to be ordained. The charismatic authority of the abbot and the vertical monitoring of effort across administrative ranks reveal the institutional roots of a state structure that tends toward authoritarianism, corruption, and asymmetries in public goods contributions. Nevertheless, arbitrariness in the management of common goods can lead to the dissolution of the collective \textit{per se} more quickly rather than to the replacement of its dissident members.

The Eastern Orthodox monastery and the Jewish kibbutz are analyzed as proto-state institutions whose distributive norms have influenced both the degree of hierarchical control of government in society and the citizen demand for public goods. The core of this comparison suggests that administrative hierarchies and the level of dependence on state provisions have religious roots. This is the reason for the comparison of the distributive norms of 16th century
Russian monasteries with those of 20th century Jewish kibbutzim: these are the respective starting points for the formation of Russia and Israel as states. While the Russian monastery facilitates hierarchical monitoring and an economic system that is centrally planned by the abbot, the Jewish kibbutz achieves a compromise between centralization and market incentives. The historical entanglement between state and religious institutions and differentiated institutional incentives across religious collectives explain why bureaucratic structures and citizen preferences have been more inclined toward dictatorship in Russia while they tend toward democracy in Israel.

Woodberry (2012) suggests that Protestant missions are robustly associated with democracy. In the process of disseminating faith, they fostered mass education and printing, and reinforced civil society while constraining colonial abuses and elite power. Gorodnichenko and Roland (2013) argue that while collectivist societies do develop economically, they do not become more inclined toward democracy in the presence of a non-predatory autocracy. Their panel data analysis offers less conclusive results given the slow-moving nature of culture, but even then, the effect of individualism on democratization remains positive and in most cases significant. Kuran (2012) argues that the Islamic tax system, the political weakness of Islamic trusts (waqfs), and a problematic private sector development has undermined the emergence of democratic political institutions in the Middle East. Individualist religions can be described as more inclined toward democracy because states in which these religions are predominant provide more public goods to their citizens and do so at lower levels of hierarchical control. In contrast, collectivist religions can be described as having a higher propensity toward dictatorship because they impose higher levels of hierarchical control while providing fewer public goods to their citizens.

I analyze Markov perfect equilibria in which players make their decisions based on the value of the state variable only, that is, without taking into account the history of previous actions.
This restriction simplifies the analysis because it excludes more complex history-dependent punishment strategies. Moreover, Markovian solutions resonate with the restrictive focus on religion as a factor of state capacity and political change. Memorylessness is not only a frequent but also a consistent condition in long-term political processes and institutional arrangements. For completeness, I also offer some non-Markovian solutions in which the leader provides more public goods than necessary today when the threat of a radical government is low; if he does not do so now, he knows that the citizen may retaliate later in the game when the state variable again becomes high.

In the next section, I discuss the literature on religion, political regimes, and public goods. Section III compares the Jewish kibbutz and the Eastern Orthodox monastery as economic systems. Section IV introduces and solves the radical government and modernization games. There I state and prove the existence of Markovian and non-Markovian solutions to my model. Section V discusses the resonance of my equilibrium solutions with the Russian and Iranian Revolutions, and the postwar welfare state in Western Europe. Section VI concludes.

II. Religion, Political Regimes, and Public Goods

Religion has provided a new intellectual forum for theories of collective action, state formation, and public goods provision (Iannaccone, 1998). The theory of religion as a club good assumes positive returns to “participatory crowding”: stringent norms, enforced through stigma and sacrifice, increase participation rates and the utility of participants themselves (Iannaccone, 1992). Suicide attacks by radical religious rebel groups, modeled as clubs, are effective when these groups are efficient providers of local public goods and when they demand such a high level of
sacrifice \textit{ex-ante} that potential defectors are prevented from joining the club (Berman and Laitin, 2008). The Weberian thesis on Protestantism and economic growth is confirmed with Prussian data from the late 19th century, with the channels mapping the positive effects of Protestantism on economic growth being human capital and, more specifically, literacy (Becker and Woessmann, 2009).

A study of Indonesian households suggests that religious intensity grows in response to financial distress. Religious institutions provide an \textit{ex-post} social insurance mechanism that fills the gap of credit availability (Chen, 2010). Households harder hit by financial crisis are more likely to increase their religious intensity (Koran study and Islamic schooling) than those that have suffered less, and powerful social sanctions prevent households that benefit from consumption smoothing from participating in religious education (ibid.). The distinction between hierarchical and horizontal religions explains why countries with predominantly Catholic, Orthodox, or Muslim populations have less accountable judiciaries, more corrupt bureaucracies, higher tax evasion, and a less developed civil society (LaPorta, Lopez-de-Silanes, Shleifer, and Vishny, 1997). Empirical studies and historical research have shown that there is no robustly negative effect of Islam on economic growth (Noland, 2005; Platteau, 2008). Nevertheless, there is a path-dependent institutional trap in the Muslim world. The strict interpretation of Islamic law has been impeding the reform of family and inheritance law as well as key social institutions such as innovation and political representation (Platteau, 2008). Similarly, while religion in general is found to have a positive effect on economic growth, Christianity in all its different branches appears to be more positively linked to economic growth than Islam (Guiso, Sapienza and Zingales, 2003). Todd (1983; 1990a; 1990b) argues that family structure affects the diffusion of religion and political institutions. Hofstede (2001) classifies countries according to both dimensions and explores the consequences
of different national cultures. Fischer (1989) explores how different religious groups that migrated to the U.S. established institutions that matched their beliefs and ideals. A wide body of empirical literature discusses the interaction of culture with institutions and their effects on economic performance (Alesina and Giuliano, 2010a; 2010b; 2014).

The connection between religious collectives and governments is facilitated through the channel of social norms, which formulate shared understandings about the distribution of resources, including the provision of public goods (Ostrom, 2000). Distributive norms produced at the level of the religious collective are imposed on bureaucratic institutions and define citizen dependence on state provisions. Their transformation into institutional arrangements and cultural preferences takes place in the form of long-run learning processes and strategic (cooperative and non-cooperative) interactions between religious institutions, governments, and people. Putnam (1993) has been the first to identify the abstention of Roman Catholicism, Eastern Orthodoxy and Islam from social capital development. What I do in this paper is to extend Putnam’s dichotomy between hierarchical and horizontal religions and suggest that this dichotomy is rather a distinction between collectivist and individualist religions. The key criterion is the presence or absence of market incentives in joining, exiting and surviving within the boundaries of the religious collective.

This dichotomy between individualist and collectivist religions is central for the emergence of democracy and dictatorship. The framework provided in the Economic Origins of Dictatorship and Democracy (Acemoglu and Robinson, 2001; 2006) serves as an analytical foundation for deciphering the effects of religion on economic transition and political change. Acemoglu and Robinson argue that elites choose one of the following three approaches to prevent revolution: repression, democratization, or compromised redistribution. Furthermore, to ensure regime longevity, elites
must establish an efficient social contract between the rich and the poor. They can preserve the status quo as long as they tax themselves enough to meet the reservation utility of the poor. The Latin American model of patronage is prevalent in such societies. Democratic consolidation occurs when distributive policies are effective and when there is no religious or ethnic polarization in society (Acemoglu and Robinson, 2007).

Similarly, Lipset compares the United States with Canada, arguing that government is larger in predominantly Roman Catholic Canada than in the predominantly Protestant United States (1993). Desai, Olofsgard, and Yousef (2009) suggest that because autocrats care about maintaining popular support for their policies, they offer the least costly combination of welfare and political benefits to citizens — real political liberalization is always costlier. They argue that authoritarian leaders strike a bargain with their citizens, but offer no explanation — cultural, social, or political — of why legitimacy is decisive for authoritarian survival.

Collectivist religions impose an extractive Byzantine bureaucracy that provides fewer public goods while giving rise to a state-dependent electorate that demands more public goods whereas individualist religions induce lower levels of hierarchical control and thus increased provision of public goods by the bureaucracy. This explains why limited state capacity and dictatorship have been observed more consistently in Eastern Orthodox, Roman Catholic, and Muslim economies and why regions with Protestant or Jewish majorities always tend to be more developed. The “high” equilibrium of modernization refers to democracy, the “low” equilibrium of underdevelopment to dictatorship, and the “intermediate” equilibrium of centralization to semi-authoritarianism, most commonly observed in post-socialist countries and political regimes in the Middle East and Africa that combine elements of democracy and dictatorship.
Modeling religious collectives as economic systems with differential levels of vertical resource distribution is essential for introducing a new agenda into the economics of religion. Hierarchy, discipline, monitoring, and solidarity at the level of the collective define the reservation utilities of citizens and the enforcement capacity of the state. The existence of collectivist and individualist religions can consistently explain correspondences between religious traditions and political regimes. This accounts for the authoritarian stability in collectivist rather than individualist economies: collectivist economies are more likely to be confronted with the imminent threat of a radical government. A radical government is also ex-ante more attractive to citizens in a collectivist economy. Thus, the leader of a collectivist economy will opt for underdevelopment and thus dictatorship when there is high level of hierarchical control in the administration and when the threat of radical government is imminent. When hierarchical control is low and there is a threat of being overthrown, the leader will choose modernization and thus democracy. Collectivist economies are therefore more likely to be authoritarian or semi-authoritarian because collectivist religions produce intermediate to high levels of hierarchical control by elites against citizens. In the following, I focus on a comparison of the Jewish kibbutz and the Eastern Orthodox monastery as economic systems, and explain why Judaism and Eastern Orthodoxy represent models of economic organization that can be analyzed as the institutional prototypes of democracy and dictatorship.

III. Collectives of Democracy and Dictatorship

i. Community of Incentives in the Jewish Kibbutz

In Helman’s (1992) analysis of the kibbutz as a model of socialist economic organization, the author argues that there are two significant elements that differentiate the kibbutz from a
centrally planned economic system: first, the voluntary character of its membership, and second, the democratic nature of collective procedures, which are regulated by a general assembly formed by all adult kibbutz members (ibid.: 169-170). Exit from the kibbutz, particularly by younger people, is treated as proof of the flawed system of incentives that defines its function (ibid.: 177-178). Hierarchical monitoring and control, complementarity of individual and collective interests, and information-sharing allow kibbutz productivity to be modeled as a moral hazard problem that can be used to eliminate central planning elements that force some of its most competent members to exit (ibid.: 180).

In his model of the kibbutz, Abramitzky (2008) describes the tradeoff between redistribution and voluntary participation: more productive individuals have lower incentives to stay than less productive ones. And the higher level of equality provided by the kibbutz tends to insure all kibbutz members at the expense of the more productive ones (ibid.). Nevertheless, wealthier kibbutzim offer their more productive members higher incentives to stay rather than exit. As Abramitzky notes, the wealthier the kibbutz, the more equality among its members, and the more likely it is to retain its hardest-working individuals (ibid.: 1126-1127). Thus, kibbutzim can offer optimal insurance and reduce their members’ opportunity costs when participation in communal structures includes an exit option (ibid.: 1149-1152). While the allocation of resources in the kibbutz is centralized, the exit option can make it the best of both worlds, with both very high levels of equality and a competitive incentive scheme for its more productive individuals.

The absence of private property is compensated for with the right to exit. Moreover, there is no central authority that sets a common baseline for resource distribution and monitoring across kibbutzim, despite the efforts in Israel to create such a body at the national level (Weisman, 1996). A kibbutz member’s opportunity cost is defined as the cost of kibbutz membership, which should
be less than the social benefits incurred at the individual level in order to allow the kibbutz to exist for more than one period. Furthermore, the incentive to work is inherently linked to the valuation of work as a self-fulfilling process (Puterman, 1983: 157-188). This work ethic is what motivates individuals to optimize their utility in terms of community contributions (ibid.: 173-177). Individual responsibility is not constrained by collective property, and freedom of expression is not undermined by egalitarian distribution (Schwartz, 1957: 147). This is why the Jewish kibbutz can be defined as the religious collective of democracy and an institutional prototype designed to mutually reinforce community formation and market incentives.

Ruffle and Sosis (2006) provide interesting experimental evidence on cooperative behavior and in-group—out-group bias between kibbutz members and city residents. They argue that kibbutz members are willing to sacrifice more and thus are more cooperative when they are paired with other kibbutz members, whereas the opposite holds when they are paired with city residents (ibid.: 154). They also find that newer kibbutz members are more cooperative than older kibbutz members and that kibbutz members become much less cooperative per se when they are paired with city residents (2006: 157-158). Therefore, kibbutzim rely on the cooperative behavior of their newer members and can thus afford the more individualist approach of their more senior members. Similarly, egalitarian distribution has not always been stable or successful. Evidence from the 1980s shows that, while the equality in terms of living standards remained relatively low, wealth and income inequality increased significantly (Amiel et al., 1996: 80).

At this point, it is important to stress the distinction between secular and Orthodox Judaism and their respective relationships to economic success. Fishman observes that the kibbutzim that are part of the Religious Kibbutz Federation—only 6 percent of the total kibbutz
population—perform much better than those belonging to secular federations. Continuing this line of thought, Fishman and Goldschmidt (1990: 506-507) argue that Max Weber and Werner Sombart were correct when they identified Judaism’s interaction with economic success in capitalism. Their metrics of comparative economic performance are drawn from financial data including short- and long-run output and returns to capital and labor (ibid.: 508). They conclude that the Judaic principles of self-control and rational spending, combined with solidarity and individual responsibility, can account for the economic success of Orthodox kibbutzim (ibid.: 511).

The identification of an equilibrium point between communal and individual interests sets an upper limit on individual initiative and optimization of personal rents. Similarly, voluntary participation sets an upper limit on managerial control and corrects for hierarchical inefficiencies. The kibbutz as a political and economic system suggests a prototype institution for Israel, whose democratic polity is explicitly defined by Judaic norms and rabbinical traditions. Ben-Ner observes that consumption in the kibbutz can serve both collective and private objectives, and each kibbutz member faces a two-level optimization problem at communal and individual levels (1987). Kibbutzim leaders optimize overall economic performance by treating members’ individual rents as a system of external constraints. Hence, the kibbutz represents a set of institutional and economic arrangements that forms the basis on which Israel is modeled as a political and economic system.

ii. Authoritarian Welfare in the Orthodox Monastery

The Jewish kibbutz is designated as the collective of democracy because it offers competitive insurance schemes to its members to incentivize their participation in collective work

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and to facilitate the distribution of common resources in the absence of individual property rights. The Orthodox monastery is designated as the collective of dictatorship because it offers no real exit option and gives the abbot absolute authority over the distribution of common resources and the enforcement of contribution standards.

Rather than treating religion as a critique of the secular state, Byzantine monks became the conscience of the empire itself. The inseparability between the basic functions of the church and the legitimacy of the state does not qualify middle Byzantium either as a theocracy or a caesaropapist state, with the latter being argued extensively by Max Weber.³ On the contrary, the spiritual influence of monastic theology on domestic politics and the ability of the church to contest the legitimacy of executive authority in a non-democratic political environment show that Byzantine rulers had to take into account a constraint imposed on them by monks and patriarchs. This constraint was both ethical and economic. The Byzantine emperor was accountable for the welfare of his people to the Orthodox Church, which set the standard of ethical administrative behavior. Thus, the Orthodox Church became the intermediary institution between the feudal elites and the middle and lower classes. It delegated the interests of the people to the elites while using state subsidies as the source of its own financial survival.

Similar patterns of entanglement between religious and state institutions have also been observed in Kievan Rus and Muscovy. The emergence of the Trinity-Sergius Monastery on the outskirts of Moscow during the second half of the fourteenth century and its transformation into the leading spiritual center of Russian Orthodoxy attracted the interest of the Kremlin court and local landed elites. Sergius of Radonezh, founder of the monastery and saint, embodies many of

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the diachronic elements of Russian Orthodox theology: abstention from wealth, prayer as a form of service to nation’s military victories (battle of Kulikovo against Tatar Mamai), and the holiness of the community as a reflection of the Divine Kingdom onto Russian society (Miller, 2010).

The Trinity Monastery was defined by an internal administrative hierarchy that reflected the social origins of monks since by the middle of the sixteenth century 38 percent had been born into landowning families (ibid.: 145-153). The hierarchy of the monastery was set up as follows, starting at the top: first, abbot; second, cellarer; third, treasurer; and fourth, bailiffs and fiscal officers (ibid.). The Trinity Monastery may be seen as the prototype of an economic system in which the abbot has the absolute managerial authority over monastic property while he himself and his hierarchical inferiors are stripped of their formal property rights. Direct supervision between hierarchical ranks, managerial control, familial and economic ties with nobility and landed elites, bargaining for privileges with the Moscow executive authority, and provision of minimum subsistence to the brotherhood members form the set of definitive economic principles of the Eastern Orthodox collective.

These economic principles shaped Russian Orthodoxy in the early modern stages of its development. While the Orthodox monk and theologian Nil Sorsky treated monastic property and the communal provision of goods financed by the monastery as contradictory to the wisdom of the early church fathers, his main opponent Joseph Volotsky understood the monastic community as a worldly institution that could perform state or quasi-state functions (Rock, 2006: 270-271). Under the Romanov dynasty and with the spread of Protestant influences through Prussia and Holland, Russian Orthodox monasticism was seen increasingly as a source of financial arbitrariness and potential insubordination (Dixon, 2006: 339-340). The transformation of the Church into an administrative agency subject to the authority of the Tsar during the Petrine reforms of 1721 and
the major secularization initiatives by Catherine the Great in the second part of the eighteenth century would eliminate the influence of the Orthodox Church as an autonomous actor in Russian politics.

Eastern Orthodoxy is a system of beliefs that transcend the functions of the religious institutions that created them in the first place. Orthodox monastic values in Byzantium and medieval Russia developed at the expense of executive authority as a result of an alliance between the church and the aristocracy or landed elites. The subsequent competition between church and state either led to the formal victory of the church and a religiously defined bureaucratic imperialism or an unstable equilibrium in which the autocrat and the church were interdependent: the church depended on the continuity of economic privileges granted by the autocrat, and the autocrat in return needed the support of the church as a source of legitimacy in the eyes of both the landed elites and aristocracy as well as the people.

The protestantization of the Russian public space would progressively become the main challenge faced by Russian rulers en route to their integration into the community of Western powers. The Russian Orthodox world would perpetuate its existence in the villages and towns of the Russian Empire as well as at the lower ranks of the Russian clergy. The transition from Muscovy to the Russian Empire deepened the divide between the higher and the lower strata of Russian society and transformed Russian Orthodoxy into a social and political identity with strong class elements. This distinction between protestantized economic and military elites that were nominally Orthodox and the lower middle class and the peasants that represented the core of Eastern Orthodox values would culminate in the Russian Revolution and the consolidation of the Soviet state.
IV. The Model

The symmetrical comparison, as proposed by Greif (1994), between individualist economic systems and developed economies, on the one hand, and collectivist economic systems and developing economies, on the other, is based on the idea that cultural values matter for economic development, state organization, and state capacity. Their importance is reflected not only in differing forms of contract enforcement and market development, but also in different administrative institutions and social norms for the provision of collective goods. For this reason, religion, more than any other aspect of culture, is essential in analyzing state capacity and the resulting emergence of political regimes. The transition from resource distribution at the level of the religious collective to the provision of public goods by governments occurs in the form of long-run learning, path-dependent institutional environments, and shared beliefs about state-society relations.

I consider an infinitely repeated game with two players: a leader S and a citizen P. My focus is on Markov strategies, which depend only on payoff-relevant behavior, and therefore a partition of the total history of play (Maskin and Tirole, 2001). I concentrate on collectivist economic systems, that is, economies with Roman Catholic, Eastern Orthodox, and Islamic majorities as these have been historically more inclined toward revolutionary activity and abrupt political change. Later on, I discuss the existence of subgame perfect equilibria, that is, without excluding non-Markovian solutions and their possible value added to my theory of religion and political regimes.

i. The Radical Government Game

Religion is defined as demand for public goods and is denoted by $\alpha_t^i$. Collectivist religions induce a high demand for public goods whereas individualist religions induce a low demand for
public goods. The leader cares about maximizing his income while staying in office. His static optimization problem has the following form: \( \max w^s - \tau^j \omega \text{ s.t. } \tau^j \in [0,1], \) where \( w^s \) denotes his income from staying in office such that \( w^s = e^\tau w. \) In an infinitely repeated game, his net present value payoff is \( U^s = \sum_{t=0}^{\infty} \delta^t \left[ w^s - \tau^j \omega \right]. \) Similarly, the citizen’s net present value payoff is \( U^p = \sum_{t=0}^{\infty} \delta^t \left[ w^p + \tau^j \omega \right] \) such that \( w^p = w, \) where \( w \) is exogenous and denotes wage, \( \tau^j \) denotes the provision level of the public good, \( \omega \) denotes the public good such that \( \omega = \frac{w^s}{\pi}, \) t indexes time, and \( j \) indexes the provision level of the public good (high or low). Hierarchical control is exogenous and denoted by \( \pi, \) where \( \pi \in (0,1). \) Moreover, I assume that

\[ w^s - \tau^j \omega \geq 0 \Rightarrow w^s \geq \tau^j \omega \Rightarrow w^s \geq \tau^j \frac{w^s}{\pi} \Rightarrow e^\tau w \geq \tau^j \frac{e^\tau w}{\pi} \Rightarrow \pi \geq \tau^j. \]

This implies that hierarchical control should be higher or equal to the provision level of the public good with the result that so that the static payoff of the leader is always at least zero. The public good \( \omega \) is decreasing in the degree of hierarchical control of its provision.

The radical government game is therefore defined in the following form:

1. **Players:** a leader \( S \) and a citizen \( P \) such that \( N = \{S, P\}. \)

2. **States:** \( \alpha_i^I \in \{\alpha_L^I = \epsilon, \alpha_H^I = \alpha - \epsilon\} \) for an individualist economy and \( \alpha_i^C \in \{\alpha_L^C = 1 - \epsilon, \alpha_H^C = \alpha + \epsilon\} \) for a collectivist economy, where \( I \) denotes an individualist economy and \( C \) a collectivist economy. \( H \) denotes the high state and \( L \) denotes the low state such that \( \epsilon < \frac{1}{2} \) and \( \alpha > \frac{1}{2} \Rightarrow \frac{1-\alpha}{2} < \epsilon < \alpha < 1 \Rightarrow \alpha_H^C > \alpha_H^I \) and \( \alpha_L^C > \alpha_L^I. \)
3. Payoffs: for the citizen and for the leader, such that 
\[ u^s = w^s - \tau^s \omega \] and 
\[ u^p = w^p + \tau^p \omega . \]

4. Strategies: \( \Theta^s = \{ \tau^H, \tau^L \} \) denotes the strategy set of the leader, where H stands for a high level of public goods provision and L stands for a low level of public goods provision such that \( \tau^L < \tau^H \). The probability of citizen protest in the high state is binary and is denoted by \( \eta \in \{0,1\} \).

5. Constant probabilities of switching between states H and L such that \( P = \{k, 1-k\} \).

6. Discount rate \( \delta \) s.t. \( \delta \in (0,1) \).

Because religion is fixed, there is no likelihood that a collectivist majority will become an individualist majority or vice versa. I concentrate on collectivist economies in the high state because they have been historically more prone to the emergence of radical government, which in my model is equivalent to dictatorship from below. The high state implies that the citizen is willing to protest against the leader and immediately impose a radical government. \( V^p(A, \alpha_{H}^C, \tau^H) \) is the recursive Bellman payoff for the citizen when the leader’s authority is preserved and \( V^p(R, \alpha_{H}^C) \) his recursive Bellman payoff when a radical government is imposed. If the citizen protests, the leader is toppled and the citizen provides the public good to himself (radical government). In the high collectivist payoff-dependent state, the recursive payoffs of regime stability have the following form:

\[
V^p(A, \alpha_{H}^C, \tau^H) = w^p + \tau^H \omega + \delta \left[ kV^p(A, \alpha_{H}^C, \tau^H) + (1-k)V^p(A, \alpha_{L}^C) \right]
\]

\[
V^s(A, \alpha_{H}^C, \tau^H) = w^s - \tau^H \omega + \delta \left[ kV^s(A, \alpha_{H}^C, \tau^H) + (1-k)V^s(A, \alpha_{L}^C) \right]
\]

where \( k \) is the probability of high state H. The leader S sets \( \tau^i = \tau^H \), if \( \alpha_i = \alpha_{H}^C \) and \( \tau^j = \tau^L \), if \( \alpha_i = \alpha_{L}^C \). The citizen is more likely to impose a radical government when the demand
for public goods rises and it is therefore more difficult for the leader to constrain the citizen’s revolutionary activity. If radical government is imposed, then the payoffs of the leader and the citizens have the following form:

\[ V^p(R, \alpha^C_H = \alpha + \varepsilon) = \frac{\alpha + \varepsilon}{1 - \delta} \]
\[ V^s(R, \alpha^C_H = \alpha + \varepsilon) = 0 \]

The timing of the collectivist economy game therefore has the following structure:

1. \( \alpha^C_i \in \{\alpha^C_L, \alpha^C_H\} \) is revealed.
2. The leader sets \( \tau^j \in \{\tau^L, \tau^H\} \).
3. The citizen decides whether to protest or not: \( \eta \in \{0,1\} \).

If \( \eta = 1 \), radical government is installed.

If \( \eta = 0 \), the leader stays in power.

**Proposition 1**

There is a unique Markov perfect equilibrium of the collectivist economy game that has the following form:

1. If \( \alpha < \pi \), then the leader preserves his authority.
2. If \( \alpha \geq \pi \), then the imposition of a radical government is likely and the following equilibria come into play:
   a. If \( \alpha \leq \alpha^* \), then in the low state, \( \alpha^C_L \), the leader delivers the public good at \( \tau^j = \tau^L \) and in the high state, \( \alpha^C_H \), the leader delivers the public good at \( \tau^j = \tau^H \).
   b. If \( \alpha > \alpha^* \), then in the low state, \( \alpha^C_L \), the leader delivers the public good at \( \tau^j = \tau^L \) and in the high state, \( \alpha^C_H \), a radical government is imposed.

**Proof of Proposition 1:** See the appendix.
Corollary 1a

The emergence of a radical government (dictatorship from below) is more likely in a collectivist rather than in an individualist economy.

Proof of Corollary 1a: See the appendix.

When the demand for the public good is lower than hierarchical control, the leader has no incentive to provide the public good in order to stay in power. However, when the demand for the public good is higher than or equal to hierarchical control, then the radical government constraint is binding and the leader needs to take action in order not to lose office. The credibility of his commitment depends on the probability of a high state in the future. If this is low, then radical government becomes attractive to citizens and the leader cannot prevent its occurrence. Furthermore, if the demand for the public good is lower than or equal to the threshold, this makes the citizen indifferent between the leader’s authority preservation and the imposition of a radical government, and the leader delivers fewer public goods in the low state and more public goods in the high state. If, in contrast, the citizen is determined to initiate protests and overthrow the leader, then in the low state the leader delivers the public good again at $\tau^l = \tau^L$, but in the high state the imposition of a radical government occurs anyway and the leader is overthrown. In the low state when the radical government constraint is binding, the leader always delivers less. If the state is high and the citizen is determined to protest, then the leader can do nothing to prevent his overthrow. If the state is high and the citizen is not determined to protest, then the leader can keep office by delivering the public good at $\tau^l = \tau^H$.

The dichotomy collectivist and individualist economies implies corresponding differences in regime stability. Corollary 1 suggests that the imposition of a radical government is more likely in a collectivist than in an individualist economy such that $\alpha^c < \alpha^i$. This is why it is much easier
for a leader of a collectivist economy to lose power. The critical threshold $\alpha''$ indicates that if the binding demand for public goods is higher, then in an individualist economy the imposition of a radical government is more difficult.

Historical and sociological evidence have shown that regime change has been more frequent in states with Eastern Orthodox, Muslim, and Roman Catholic majorities. The Russian Revolution as the first major transition of the twentieth century can be explained as a failure of the Imperial Russian government to acknowledge the existence of a binding radical government constraint and to credibly commit to the provision of more public goods to its subjects. Similarly, the endurance of the current regime in Russia can be explained as a story of credible commitment to the increased provision of public goods in the form of the underdevelopment (“low” equilibrium) or centralization (“intermediate” equilibrium). The future of this policy still remains to be seen.

The recent uprisings in the Middle East can be explained through Muslim distributive norms and their influence both on hierarchical control and the demand for public goods. Authoritarian security regimes in Egypt, Tunisia, Yemen, and Syria ignored the radical government constraint and persistently strove to maintain higher levels of hierarchical control. Democratic consolidation in the Arab world will only occur if the governments that have emerged

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4 In Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World (1966), Moore suggests that that an alliance between strong landlords and the bourgeoisie against the peasants leads to fascism, between a strong bourgeoisie and the peasants against the landed elites to democracy, and between strong peasants and the bourgeoisie against the landed elites to communism. His neo-Marxian approach indicates that class alliances, conflict, and historical processes matter for regime outcomes. In Liberalism, Fascism, or Social Democracy (1991), Luebbert analyzes the origins of the three regime types that emerged in Western Europe during the interwar period: liberal democracy, social democracy, and fascism. These regime types form different responses to demands articulated by the working class. My analysis expands his argument in the direction of religion. The government is cognizant of the religious norms that the majority approves and provides public goods to preserve its tenure horizon.
from the riots and popular uprisings succeed where their predecessors failed: in the decentralized provision of more public goods.

**Subgame Perfect Equilibria**

The focus on Markov perfect equilibria in this paper parallels the focus on religion as a key factor in economic transition and political change. The memorylessness of Markovian solutions as an equilibrium concept excludes harsher strategies used by citizens to punish a leader when the imposition of a radical government becomes likely in the future. Since the history of actions chosen by both players now matters, the leader needs to preemptively offer more when the state is low so that the citizen does not punish him with the imposition of a radical government when the state becomes high again.

To derive the maximum credible provision level of public goods that the leader is willing to offer when the Markovian assumption is dropped, I introduce the following condition:

$$V^S(A, \alpha^C_L, \tau^D) = V^S(A, \alpha^C_L), \quad \text{where } V^S(A, \alpha^C_L, \tau^D) \text{ is the recursive payoff from providing the public good in the low state at the provision level } \tau^D \text{ such that } \tau^D > \tau^L = 0 \text{ and } V^S(A, \alpha^C_L) \text{ is the recursive payoff from deviation when } \tau^L = 0. \text{ The deviation payoff is derived as follows:}$$

$$V^S(A, \alpha^C_L) = e^\sigma w + \delta[kV^S(R, \alpha^C_H) + (1-k)V^S(A, \alpha^C_L)] \Rightarrow (1-\delta)V^S(A, \alpha^C_L) = e^\sigma w + \delta kV^S(A, \alpha^C_L) \Rightarrow (1-\delta)V^S(A, \alpha^C_L) + \delta kV^S(A, \alpha^C_L) = e^\sigma w \Rightarrow$$

$$[1-\delta(1-k)]V^S(A, \alpha^C_L) = e^\sigma w \Rightarrow V^S(A, \alpha^C_H, \tau^H) = \frac{e^\sigma w}{1-\delta(1-k)}$$

Similarly, the recursive payoff from providing the public good at $\tau^D > \tau^L = 0$ is derived as follows:
\[ V^S(A, \alpha^c_L, \tau^D) = e^w \tau - \tau^D e^w + \delta[kV^S(A, \alpha^c_H, \tau^H) + (1-k)V^S(A, \alpha^c_L, \tau^D)] \]
\[ V^S(A, \alpha^c_H, \tau^H) = e^w \tau - \tau^H e^w + \delta[kV^S(A, \alpha^c_H, \tau^H) + (1-k)V^S(A, \alpha^c_L, \tau^D)] \]
\[ V^S(A, \alpha^c_H, \tau^H) - V^S(A, \alpha^c_L, \tau^D) = -\frac{e^w}{\pi}(\tau^H - \tau^D) \Rightarrow \]
\[ (1-\delta)V^S(A, \alpha^c_L, \tau^D) = e^w \tau - \tau^D e^w - \delta k e^w (\tau^H - \tau^D) \Rightarrow \]
\[ V^S(A, \alpha^c_L, \tau^D) = e^w \left( 1 - \frac{\tau^D + \delta k (\tau^H - \tau^D)}{1-\delta} \right) \]

Therefore, the provision level \( \tau^D \) in the low state \( \alpha^c_L \) is obtained in the following way:

\[ \frac{e^w}{1-\delta} \left( 1 - \frac{\tau^D + \delta k (\tau^H - \tau^D)}{1-\delta} \right) = \frac{e^w}{1-\delta} \Rightarrow 1 - \delta \frac{\tau^D + \delta k (\tau^H - \tau^D)}{1-\delta} = \frac{1-\delta}{1-\delta(1-k)} \Rightarrow \]
\[ \tau^D + \delta k (\tau^H - \tau^D) = 1 - \delta \Rightarrow \tau^D + \delta k (\tau^H - \tau^D) = \pi \frac{1-\delta}{1-\delta(1-k)} \Rightarrow \]
\[ \tau^D (1-\delta k) = \pi \frac{1-\delta}{1-\delta(1-k)} - \delta k \tau^H \Rightarrow \tau^D = \frac{\pi}{1-\delta(1-k)} \frac{1-\delta(1-k)}{1-\delta(k)\tau^H} \]

The provision level \( \tau^D \) is shown to be a decreasing function of the provision level \( \tau^H \).

The recursive payoff of the citizen in the high state is derived similarly:

\[ V^P(A, \alpha^c_L, \tau^D) = \tau^D e^w + w + \delta[kV^P(A, \alpha^c_H, \tau^H) + (1-k)V^P(A, \alpha^c_L, \tau^D)] \Rightarrow \]
\[ V^P(A, \alpha^c_H, \tau^H) = \tau^H e^w + w + \delta[kV^P(A, \alpha^c_H, \tau^H) + (1-k)V^P(A, \alpha^c_L, \tau^D)] \Rightarrow \]
\[ V^P(A, \alpha^c_H, \tau^H) - V^P(A, \alpha^c_L, \tau^D) = \frac{e^w}{\pi}(\tau^H - \tau^D) \Rightarrow \]
\[ (1-\delta)V^P(A, \alpha^c_L, \tau^D) = \tau^H e^w + w + \delta k e^w (\tau^H - \tau^D) - \delta e^w (\tau^H - \tau^D) \Rightarrow \]
\[ V^P(A, \alpha^c_L, \tau^D) = e^w \left( 1 + \frac{\tau^H + \delta (k-1)(\tau^H - \tau^D)}{1-\delta} \right) \]
Therefore, the condition that makes the citizen indifferent between the provision of public goods and the imposition of a radical government in the high state has the following form:

\[
V^p(A, \alpha_H^C, \tau^H) = \frac{w \left(1 + \frac{e^s}{\rho} \left[\tau^H + \delta(k-1)(\tau^H - \tau^D)\right]\right)}{1 - \delta} \geq V^p(R, \alpha_H^C) = \frac{\alpha + \epsilon}{1 - \delta} \Rightarrow
\]

\[
\bar{\alpha}^* = w \left(1 + \frac{e^s}{\rho} \left[\tau^H + \delta(k-1)(\tau^H - \tau^D)\right]\right) - \epsilon \Rightarrow \bar{\alpha}^* \leq \bar{\alpha}^*
\]

This result is also in line with that of Acemoglu and Robinson (2006: 143-144): the promised provision level of public goods in the low state is monotonically increasing with the discount rate \(\delta\). The more the leader gains from staying in power in the future, the less likely it becomes that he will renege on his promise and therefore the higher the proposed provision level of public goods will be when the imposition of a radical government is not imminent. The threshold value \(\bar{\alpha}^*\) is less than \(\alpha^*\), which suggests that the imposition of a radical government is more likely when the Markovian restriction of memorylessness is dropped and the citizen can punish the leader in subsequent time periods when the state becomes high again (ibid.: 143-147). Hence, religion facilitates a stronger commitment to public goods provision than the imposition of a radical government when the Markovian assumption does not hold. Religion can form the basis for the leader’s provision of incentive-compatible promises to the citizen and can raise the standards of efficient governance. This is particularly true for collectivist religions such as Orthodoxy, Catholicism, and Islam, where the citizen’s reservation utility from the imposition of radical government is higher.

ii. The Modernization Game

In the radical government game, we have three possible equilibrium solutions: radical government, authority preservation with \(\tau^j = \tau^H\), and authority preservation with \(\tau^j = \tau^L = 0\). It
is now useful to refine the stage game – which I now call the modernization game – in terms of alternatives to radical government in collectivist societies. Underdevelopment is defined as the lowest possible level of public goods provision such that \( \tau^j = \tau^U \). Modernization is defined as the highest possible level of public goods provision such that \( \tau^j = \tau^M \). Centralization is defined as an intermediate level of public goods provision between modernization and underdevelopment, 

\[
\tau^j = \tau^Z = \frac{\tau^U}{1 - \lambda} \quad \text{and} \quad \lambda \in (0, 1 - \frac{\tau^U}{\tau^M}).
\]

\( \lambda \) denotes the leader’s rate of rent extraction from the economy. Thus, the inequality \( \tau^M > \tau^Z > \tau^U \) holds. It is also important to mention here that the citizen prefers the public goods provision level under modernization such that

\[
\tau^M = \arg \max \ w^p + \tau^j \omega.
\]

To prevent the likely imposition of a radical government, the leader now has three options: first, underdevelopment; second, modernization; and third, centralization.

The stage game of the collectivist economy game now has the following form:

1. \( \alpha^C_t \in \{ \alpha^C_L, \alpha^C_H \} \) is revealed.

2. The leader decides for or against underdevelopment: \( \psi \in \{0, 1\} \). Underdevelopment: \( \psi = 1 \).

3. If \( \psi = 0 \), the leader decides between modernization and centralization: \( \zeta \in \{0, 1\} \).

   Modernization: \( \zeta = 1 \) and centralization: \( \zeta = 0 \).

4. The citizen decides whether to protest or not against the government: \( \eta \in \{0, 1\} \).

   If \( \eta = 1 \), a radical government is installed.

   If \( \eta = 0 \), the leader stays in power and the provision level of public goods is his choice from the set \( H^\Gamma = \{ \tau^U, \tau^Z, \tau^M \} \).

As in the previous section, prevention of a radical government in a collectivist society relies on the ability of the leader to convince the citizen that he will credibly commit to the provision of
public goods in the future. The difference from the previous section is that here the leader additionally has a third option, centralization, which depends on his rate of rent extraction from the economy. This means that the leader may be interested in providing more public goods than in the case of underdevelopment, but not as many as he would under modernization. In many authoritarian regimes, the leader’s ability to collect personal rents from the public and the private sector of the economy defines his tenure horizon. A leader who is successful in maintaining a high rate of rent extraction may be more inclined to provide more public goods to citizens in order to stay in power, when credibly threatened. However, the leader may also have to resort to the lowest possible provision level of public goods in order to discipline the citizen and that way avoid a radical government threat in the future.

The dynamic payoffs for underdevelopment, centralization, and modernization in collectivist societies therefore have the following form:

**Underdevelopment**

\[
V^S(U, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^U) = w^S - \tau^U \omega + \delta[kV^S(U, \alpha^C_H, \tau^U) + (1 - k)V^S(N, \alpha^C_L)]
\]

\[
V^P(U, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^U) = w^P + \tau^U \omega + \delta[kV^P(U, \alpha^C_H, \tau^U) + (1 - k)V^P(N, \alpha^C_L)]
\]

**Centralization**

\[
V^S(Z, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^Z) = (1 + \pi)(w^S - \tau^Z \omega) + \delta V^S(Z, \alpha^C_H, \tau^Z) = \frac{(1 + \pi)(w^S - \tau^Z \omega)}{1 - \delta}
\]

\[
V^P(Z, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^Z) = (1 - \pi)(w^P + \tau^Z \omega) + \delta V^P(Z, \alpha^C_H, \tau^Z) = \frac{(1 - \pi)(w^P + \tau^Z \omega)}{1 - \delta}
\]

**Modernization**

\[
V^S(M, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^M) = \frac{w^S - \tau^M \omega}{1 - \delta}
\]

\[
V^P(M, \alpha^C_H = \alpha + \epsilon, \tau^I = \tau^M) = \frac{w^P + \tau^M \omega}{1 - \delta}
\]
I assume that modernization persists in the future once it has been initiated. This commitment device is the only effective means for the leader to prevent a dictatorship from below when the citizen is determined to protest against him and thus replace him. Modernization represents a credible promise by the leader that he will continue to deliver the highest possible quantity of public goods in the future. In contrast, underdevelopment does not offer any guarantee of continued provision of public goods in the future. The leader can either continue with the provision of the public good at \( \tau' = \tau^U \) or stop delivering the public good to the citizen. For the citizen, underdevelopment includes the reverse threat of return to the state of backwardness in which no public good is provided. For this reason, the citizen will always prefer modernization to underdevelopment and, in this case, will not stage a protest to undermine the leader’s power. The leader will always try to avert a radical government with the lowest possible level of public goods provision. Because this may not always be the case with underdevelopment, I introduce the intermediate level in the provision of public goods, centralization. An interesting aspect in modeling centralization is that it also repeats itself infinitely once chosen by the leader. As is the case with modernization, the leader promises that he will not revert to a prior underdeveloped state after centralization has been chosen. This is the case because it allows the leader to reduce the probability of radical government without having to resort to the costlier solution of modernization. Post-Soviet Russia under Putin and China under the Communist Party are useful paradigms that justify the design of centralization as a public goods commitment device.

**Proposition 2**

*There is a unique Markov perfect equilibrium of the collectivist economy game that has the following form:*

1. If \( \alpha < \pi \), then the leader remains unchallenged. Backwardness persists.
2. If $\alpha \geq \pi$, then the radical government constraint is binding and the following equilibria are observed:

   a. If $\alpha \leq \alpha^{**}$ and $\lambda^{*} \leq \lambda$ or $\alpha > \alpha^{**}$ and $\lambda^{*} > \lambda$, then the leader chooses underdevelopment:
   
   $\tau^{i} = \tau^{U}$.

   b. If $\alpha \leq \alpha^{**}$ and $\lambda^{*} > \lambda$, then the leader chooses centralization:
   
   $\tau^{i} = \tau^{Z}$.

   c. If $\alpha > \alpha^{**}$ and $\lambda^{*} \leq \lambda$, then the leader chooses modernization:
   
   $\tau^{i} = \tau^{M}$.

Proof of Proposition 2: See the appendix.

In a collectivist society, when the citizen is not likely to protest against the leader and thus install a radical government that will oust him, the leader chooses between his two most favorable provision levels: underdevelopment and centralization. His choice depends on the value of the exogenously defined $\lambda$ and whether it lies above or below his indifference threshold $\lambda^{*}$. Nevertheless, when the citizen considers the imposition of a radical government attractive, the leader is obliged to follow one of the two corner choices of his strategy set in order to stay in power: underdevelopment or modernization. Under the threat of a radical government and a below-threshold rate of rent extraction, the leader chooses underdevelopment because centralization conveys the wrong message to the citizen and thus encourages radical government. Knowing this, the leader will offer the citizen the lowest possible provision level (underdevelopment) such that $\lim_{\lambda \to 0} \tau^{Z} = \tau^{U}$ as a form of punishment. Similarly, when a radical government is imminent and the leader has an above-threshold rate of rent extraction, the citizen will not even be willing to accept the provision level of the public good under centralization. The provision level of the public good under centralization is costly and likely to further encourage
radical government. Knowing this, the leader will choose modernization such that 
\[ \lim_{\lambda \to 1} \tau^\varepsilon = \tau^M \]
in order to preserve his authority.

Subgame Perfect Equilibria

When the Markovian restriction is not taken into account, the leader needs to consider the punishment strategies available to the citizen in order to stay in power. The results here are similar to those in the radical government game. Because the citizen receives a lower payoff from modernization than from authority preservation such that \( \tau^M \geq \tau^H \), the provision level of public goods in the low state also becomes lower such that \( \tau^D = \frac{\pi - \frac{\pi(1 - \delta)}{1 - \delta(1 - k)} - \delta k \tau^M}{1 - \delta k} \). Since the citizen is better off with modernization than with authority preservation, the leader now has a higher incentive to deviate from equilibrium than in the radical government game. This is why he is willing to offer a lower provision level of public goods in the low state such that \( \tau^D < \tau^D \), when the Markov assumption is dropped. Similarly, the threshold value that makes the citizen indifferent between modernization and the imposition of a radical government is given by the following condition:

\[ V^P(N, \alpha_H^C, \tau^M) = w \left( 1 + \frac{\varepsilon}{\pi} \left[ \tau^M + \delta (k - 1)(\tau^M - \tau^D) \right] \right) = V^P(R, \alpha_H^C) = \frac{\alpha + \varepsilon}{1 - \delta} \Rightarrow \]
\[ \overline{\alpha}^* = w \left( 1 + \frac{\varepsilon}{\pi} \left[ \tau^M + \delta (k - 1)(\tau^M - \tau^D) \right] \right) - \varepsilon \Rightarrow \overline{\alpha}^* > \overline{\alpha}^* \]

The leader has a higher incentive to deviate from the equilibrium path when his punishment is modernization rather than the imposition of a radical government by the citizen. The threshold
value $\alpha^*$ suggests that the imposition of a radical government is less likely in the modernization game than in the radical government game, where the threshold value is $\alpha^*$. Nevertheless, a common underpinning of the best equilibrium solutions for the leader in both games is that he needs to make incentive-compatible promises in the low state that generate a higher provision level of public goods compared to the Markovian solutions presented above. This is in line with the results of Acemoglu and Robinson (2006: 175-177) and provides a solid explanatory foundation for the effect of religion on political regimes. Collectivist religions such as Eastern Orthodoxy, Roman Catholicism, and Islam induce an even higher level of commitment to the provision of public goods when the citizen can punish the leader’s deviation from the equilibrium path in subsequent time periods.

**Comparative Statics**

In the analysis of equilibrium comparative statics, I explore the relationship between hierarchical control and the threshold that defines the citizen’s decision to impose a radical government or not. For high levels of hierarchical control, authority preservation occurs because the threat of radical government is not binding. I take the derivative of $\alpha^*$, setting 

$$\frac{\partial \alpha^*}{\partial \pi} = e^\pi w \left( 1 + \frac{\tau^H (\pi - 1)}{\pi^2} \right) < 0,$$

where $\pi^*$ denotes a critical threshold of hierarchical control. If $\pi^* \geq \pi$, authority preservation occurs.

For higher levels of hierarchical control, modernization does not occur, because the threat of radical government is not binding. I take the derivative of $\alpha^{**}$, setting

$$\frac{\partial \alpha^{**}}{\partial \pi^{**}} = \tau^w w \frac{e^{\pi} (\pi - 1)}{\pi^2} < 0.$$
It is obvious that if $\pi^{**} \geq \pi$, the leader selects modernization since he cannot use his mechanisms of surveillance and control to reduce the provision level of the public good in order to stay in power. He needs to offer a higher provision level to achieve that end. Furthermore, I also take the derivative of $\lambda^*$, setting

$$\frac{\partial \lambda^*}{\partial \pi} = \frac{\tau^u \left( \tau^u \left[ 1 + \delta(k - 1) \right] + \pi^2 + 2\pi \right)}{\left( \pi^2 + \tau^u \left[ 1 + \delta(k - 1) \right] \right)^2} > 0,$$

where $\bar{\pi}$ denotes a second critical threshold of hierarchical control such that $\pi^{**} < \bar{\pi}$. A higher capacity for hierarchical control reduces the provision level for underdevelopment and thus makes centralization a more attractive option for the leader who wants to extend his tenure horizon. Higher hierarchical control helps the leader to increase his extraction of rents from the economy and offer more public goods to the citizen without increasing the threat of radical government. Thus, centralization occurs if $\pi > \bar{\pi}$. Underdevelopment occurs at intermediate levels of hierarchical control. When hierarchical control is too high, the leader is better off choosing centralization. By providing the public good at the centralization rather than at the underdevelopment level, he minimizes the threat of a radical government in the future. When hierarchical control is too low, the leader chooses modernization because the demand threshold of the citizen is too high in this case and it is thus less costly to provide $\tau^M$.

**Lemma 1**

In the collectivist economy game, there is a negative monotonic relationship between hierarchical control and modernization. When $\pi^{**} \geq \pi$, the leader selects modernization. When $\pi > \bar{\pi}$, the leader opts for centralization. Underdevelopment occurs at intermediate levels of state enforcement such that $\pi^{**} < \pi \leq \bar{\pi}$.
Modernization occurs when the state credibly promises to provide a sufficient quantity of public goods to its citizens at lower levels of hierarchical control. Because the leader opts for modernization when $\lambda^* \leq \lambda$, modernization is more likely, the lower $\lambda^*$ is. The inverse holds for centralization: the higher $\lambda^*$ is, the more likely the leader is to opt for centralization. Underdevelopment reflects the choice of a leader who is not so weak as to give in to the citizens’ demands in order to prevent a radical government, but who is also not so strong as to prefer centralization over underdevelopment in order to maintain his authority.

V. Historical Illustrations of Collectivism

In the games of radical government and modernization analyzed above, religion defines the citizen’s reservation utility and therefore his decision to impose a radical government or not. The difference between the two equilibrium solutions is that in the modernization game, the leader avoids the imposition of a radical government because he can resort to the highest possible provision level of public goods. Nevertheless, radical governments arise when modernization is not an element of the ruling elites’ strategy set, and the citizen can punish the leader only by ousting him from power. Orthodox, Catholic, and Muslim majorities have provided numerous historical and contemporary paradigms of economic and political radicalization. Regime deviations to fascism, communism, and populism have been historically linked to Catholic, Orthodox and Muslim societies, where citizen dependence on public goods provision was much higher than in Protestant or Jewish societies.

The Russian Revolution provides a major example of economic transformation that occurred through the imposition of a radical government (dictatorship from below), the rule of the Soviets. Demonstrations due to food shortages, an alliance between the workers and the middle
class, and the subsequent defection of the army all facilitated the collapse of the government of the tsar, who returned to St. Petersburg only to abdicate on March 2/15 1917 (Bushkovitch, 2012: 298). Even before the February and October Revolutions, Russia’s exposure to the international gold standard and the subsequent industrialization undermined agrarian interests and the standing of peasants in the Russian economy (ibid.: 279). The organization of Marxists, Socialists-Revolutionaries, and Liberals into groups of activists, lobbies, and political movements revealed a baseline rejection of an increasing hierarchical control at the expense of public goods provision for multiple socio-economic groups in the Russian society.

The radical government consensus among these diverse ideological groups had already been reached before the turn of the century. Russia’s defeat against Japan in 1905 and Germany in 1917 made the demand for public goods by citizens progressively higher than the imperial government’s hierarchical control, resulting in the radical government constraint becoming binding. Rising inequality and the emergence of a new working class, composed of peasants that had come to urban centers as a result of industrialization, was indicative of the regime’s weakness in matching general economic progress with the alleviation of relative socio-economic differences (Service 2009b: 28-30). While the Russian Empire’s industrial output was expanding before 1914, its relative distance from the German and U.S. rates of industrial expansion suggests that the government was not in a position to capitalize its international competitiveness in order to improve the quality of its domestically delivered public goods (ibid.: 38-40). Poor climate conditions only compounded this problem. Arbitrary governance structures at the provincial level, administrative exiles of opponents by the Ministry of Internal Affairs, and expansion of martial law over increasing parts of the population provided a solid basis for strikes and demonstrations that exceeded the hierarchical control imposed by the central government (Service 2009a: 18-24).
What becomes evident is that that collectivist values, which are reflected in the economic organization of the Russian Orthodox monastery, exacerbated popular unrest due to lack of administrative capacity and repression. The industrialization of Russia’s community-based agricultural economy increased the already high dependence of peasants and newly recruited workers on public goods, thus offering powerful incentives for unionization and the formation of interest groups against the imperial government. This was the case when it became clear that the regime was not able to credibly commit to a high level of public goods provision, and the threat of a radical government was imminent.

The Iranian Revolution of 1979 shares many common elements with the Russian Revolution of 1917. In both cases, the normative priors of citizens were influenced by religious principles of economic organization as these are manifested in the centralized distribution of resources at the level of the monastery and the tariqa. Until the revolution that led to the installment of the Islamic government, the Shah regime was able to stay in power through a combination of high public expenditure and extended hierarchical control (Skocpol, 1982: 269). Similarly to Russia, urbanization in the 1960s-70s increased popular dissatisfaction with the regime, due to inflated housing prices for rural newcomers, and the institutional marginalization of Islamic clerics as a result of Shah’s reforms. Social justice as a cornerstone of Islam’s normative order provided the basis for the formation of a heterogeneous alliance that ousted the imperial government and founded a new state that derived its authority from the principles of Shi’ite jurisprudence.

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While the radical government game offers a stylized institutional framework for understanding the role of Orthodoxy and Islam in the outbreak and consolidation of the Russian and Iranian revolutions, the modernization game can similarly explain the effect of Catholicism on the emergence of the postwar welfare state in Western and Southern Europe. The importance of the Catholic social doctrine is reflected in the social policy strategies of Christian Democratic parties that ruled France, Italy, and Western Germany in the aftermath of World War II (Manow 2004). Chen and Lind (2005) suggest that low degrees of religiosity and church-state separation along with high welfare provision form the triad of the continental welfare state, informed by Catholic values. Social Protestantism, which is located in the normative core of the Scandinavian welfare state model, suggests a deviation from the liberal model of reformed Protestant economies, which relies on alternative non-state welfare provision systems common in the Anglo-Saxon world (Manow 2004; Chen and Lind 2005). The threat of central planning as a competing welfare state model, the existence of Eastern Germany on the borders of Western Europe with the socialist East, and the massive unionization of workers within the lines of communist parties in the 1950s-60s facilitated the emergence of modernization as equilibrium in the provision of public goods. Catholic norms on interventionist welfare and centralization in charity provision formed the institutional premise for a socially driven capitalism in Western Europe that would counter socialism and its relative successes in public welfare provision on the other side of the Iron Curtain.
VI. Conclusions

My theory suggests that distributive norms at the level of religious collectives define the demand for public goods by citizens and the institutional conditions for the provision of public goods. Since Islam, Eastern Orthodoxy, and Roman Catholicism induce a higher demand for public goods and higher levels of hierarchical control, I define these three religions as collectivist religions. Protestantism and Judaism, on the other hand, induce a lower demand for public goods and lower levels of hierarchical control by the government and I therefore define these as individualist religions. Modernization occurs as a commitment mechanism proposed by the leader to his citizens in order to stay in power. It is the economic equilibrium of democracy and takes place at lower levels of hierarchical control. Underdevelopment, occurring at intermediate levels of hierarchical control, is the economic equilibrium of dictatorship while centralization, which occurs at higher levels of hierarchical control, is the economic equilibrium of semi-authoritarianism.

Religion matters not only as a set of normative rules that define the human relationship to God, it is also crucial as a political and economic phenomenon. Because world religions have different socio-economic values and ideas about resource distribution and community organization, they lead to different types of economic systems and political regimes. The comparative study of the Eastern Orthodox monastery and the Jewish kibbutz as economic systems cannot easily be separated from the political and economic environments that led to their emergence and transformation. Nevertheless, it provides evidence of the distributive norms at work in religious collectives and the extent to which they shape individual and collective welfare.

State formation and economic transition have always relied on extractive governments and the strong opposition of a mobilized citizenry. This paper is one of the first studies to place religion at the epicenter of this stylized transformation process. The radical government and
modernization games that I propose for collectivist economic systems have a common foundation: the elaboration of conditions under which the leader manages to preserve his authority when the imposition of a radical government by the citizen is likely. In states with collectivist religious majorities, modernization occurs at levels of low state enforcement when the imposition of a radical government is imminent. Centralization is the leader’s choice when he can afford to provide more public goods to his citizens at high levels of state enforcement. That way, he manages to preserve his authority without having to make major concessions in the future.

Putin’s Russia and contemporary China are typical cases of centralization whereas the majority of states in the Middle East and the former Soviet Union provide examples of underdevelopment. Modernization was about to occur in Russia in the 1990s, but the effort collapsed when hierarchical control fell to nearly zero. This is also a useful lesson for the Muslim states of the Middle East that have recently begun paving the way to democracy and the rule of law. Hierarchical control needs to be low, but it does have to exist before modernization can take place.

References


Appendix

Proof of Proposition 1:

A radical government (dictatorship from below) can be prevented if and only if:

\[ V^P(A, \alpha_H^C, \tau^H) \geq V^P(R, \alpha_H^C) \Rightarrow w + \tau^H \omega + \delta \left[ kV^P(A, \alpha_H^C, \tau^H) + (1 - k)V^P(A, \alpha_L^C) \right] \geq \frac{\alpha + \epsilon}{1 - \delta} \Rightarrow \]

\[ w + \tau^H \omega + \delta k \left( V^P(A, \alpha_H^C, \tau^H) - V^P(A, \alpha_L^C) \right) + \delta V^P(A, \alpha_L^C) \geq \frac{\alpha + \epsilon}{1 - \delta} \]

It is important to note here that:

\[ V^P(A, \alpha_H^C, \tau^H) = w^p + \tau^H \omega + \delta \left[ kV^P(A, \alpha_H^C, \tau^H) + (1 - k)V^P(A, \alpha_L^C) \right] \]
\[ V^P(A, \alpha_L^C) = w^p + \delta \left[ kV^P(A, \alpha_H^C, \tau^H) + (1 - k)V^P(A, \alpha_L^C) \right] \]
\[ V^P(A, \alpha_H^C, \tau^H) - V^P(A, \alpha_L^C) = \frac{\tau^H e^\omega w}{\pi} \Rightarrow \]
\[ V^P(A, \alpha_H^C, \tau^H) = e^\omega w + \frac{\tau^H e^\omega w}{\pi} + \delta k \frac{\tau^H e^\omega w}{\pi} + \delta V^P(A, \alpha_H^C, \tau^H) - \delta \frac{\tau^H e^\omega w}{\pi} \Rightarrow \]
\[ (1 - \delta)V^P(A, \alpha_H^C, \tau^H) = e^\omega w + \frac{\tau^H e^\omega w}{\pi} + \delta k \frac{\tau^H e^\omega w}{\pi} - \delta \frac{\tau^H e^\omega w}{\pi} \Rightarrow \]
\[(1 - \delta)V^p(A, \alpha^C_H, \tau^H) = e^{\gamma}w + \frac{\tau^H}{\pi}e^{\gamma}w[1 + \delta(k - 1)] \Rightarrow\]

\[V^p(A, \alpha^C_H, \tau^H) = \frac{e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right)}{1 - \delta}.\]

Thus, the imposition of a radical government can be averted if and only if:

\[
\frac{e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right)}{1 - \delta} \geq \alpha + \varepsilon \Rightarrow e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right) \geq \alpha + \varepsilon \Rightarrow \\
\alpha \leq e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right) - \varepsilon.
\]

Therefore, the threshold that makes the citizen indifferent between the imposition of a radical government and the preservation of the leader’s authority is the following:

\[\alpha^* = e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right) - \varepsilon. \text{ QED}\]

**Proof of Corollary 1a:**

In a collectivist economy, the citizen is indifferent between modernization and radical government if and only if \(\alpha^C = e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right) - \varepsilon.\) Similarly, in an individualist economy, the citizen is indifferent between modernization and radical government if and only if \(\alpha^I = e^{\gamma}w\left(1 + \frac{\tau^H}{\pi}[1 + \delta(k - 1)]\right) + \varepsilon.\) It follows that \(\alpha^* > \alpha^C.\) QED
Proof of Proposition 2:

The leader always prefers underdevelopment to modernization. I set the threshold value for $\lambda$ that makes the leader indifferent between underdevelopment and centralization:

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) \geq V^S(Z, \alpha_H^C = \alpha + \varepsilon, \tau^Z | \lambda).$$

The recursive payoff of the leader in underdevelopment is derived as follows:

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) = w^S - \tau^U \frac{W^S}{\pi} + \delta[kV^S(U, \alpha_H^C, \tau^U) + (1-k)V^S(N, \alpha_L^C)]$$

$$V^S(N, \alpha_L^C = 1-\varepsilon) = w^S + \delta[kV^S(U, \alpha_H^C, \tau^U) + (1-k)V^S(N, \alpha_L^C)]$$

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) - V^S(N, \alpha_L^C = 1-\varepsilon) = -\frac{\tau^U e^\varepsilon w}{\pi}$$

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) = e^\varepsilon w - \frac{\tau^U e^\varepsilon w}{\pi} - \delta k \frac{\tau^U e^\varepsilon w}{\pi} + \delta V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) + \delta \frac{\tau^U e^\varepsilon w}{\pi} \Rightarrow$$

$$(1-\delta)V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) = e^\varepsilon w - \frac{\tau^U e^\varepsilon w}{\pi} - \delta k \frac{\tau^U e^\varepsilon w}{\pi} + \delta \frac{\tau^U e^\varepsilon w}{\pi} \Rightarrow$$

$$(1-\delta)\frac{\tau^U e^\varepsilon w}{\pi} [1+\delta(k-1)] \Rightarrow$$

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) = \frac{\tau^U e^\varepsilon w}{\pi(1-\delta)} [1+\delta(k-1)] = \frac{e^\varepsilon w \left(1 - \frac{\tau^U}{\pi} [1+\delta(k-1)] \right)}{1-\delta}.$$ 

Now it is straightforward to derive the threshold value of $\lambda$:

$$V^S(U, \alpha_H^C = \alpha + \varepsilon, \tau^U) \geq V^F(Z, \alpha_H^C = \alpha + \varepsilon, \tau^Z | \lambda) \Rightarrow$$

$$e^\varepsilon w \left(1 - \frac{\tau^U}{\pi} [1+\delta(k-1)] \right) \geq (1+\pi)\left(e^\varepsilon w - \frac{\tau^U e^\varepsilon w}{\pi(1-\lambda)\pi} \right) \Rightarrow$$

$$e^\varepsilon w \left(1 - \frac{\tau^U}{\pi} [1+\delta(k-1)] \right) \geq e^\varepsilon w(1+\pi)(1 - \frac{\tau^U}{\pi(1-\lambda)\pi})$$
This means that if \( \lambda \geq \lambda^* \), then the leader prefers underdevelopment to centralization, whereas the opposite holds if \( \lambda < \lambda^* \).

I now set the threshold value that makes the citizen indifferent between radical government and modernization, given that \( \tau^M = \arg \max (1 - \tau')w + \tau' \omega \):

\[
V^p(M, \alpha_C^n = \alpha + \nu, \tau^i = \tau^M) \geq V^p(R, \alpha_C^n = \alpha + \nu) \Rightarrow \frac{w + \tau^M \omega}{1 - \delta} \geq \frac{\alpha + \nu}{1 - \delta} \Rightarrow w + \tau^M \omega \geq \alpha + \nu \Rightarrow
\]

\[
w + \tau^M \frac{e^\nu w}{\pi} - \nu \geq \alpha \Rightarrow \alpha \leq w \left(1 + \frac{\tau^M e^\nu}{\pi}\right) - \nu.
\]

Thus, the threshold value for the demand of public goods has the following form:

\[
\alpha^* = w \left(1 + \frac{\tau^M e^\nu}{\pi}\right) - \nu. \quad \text{This means that if } \alpha \leq \alpha^*, \text{ then the citizen is not likely to impose a radical government and, if } \alpha > \alpha^*, \text{ then the radical government is likely to be imposed. QED}
\]