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# Religion, administration & public goods: Experimental evidence from Russia

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## ABSTRACT

In this paper, I argue that religion matters for the provision of public goods. I identify three normative foundations of Eastern Orthodox monasticism with strong economic implications: 1. solidarity, 2. obedience, and 3. universal discipline. I propose a public goods game with a three-tier hierarchy, where these norms are modeled as treatments. Obedience and universal discipline facilitate the provision of threshold public goods in equilibrium, whereas solidarity does not. Empirical evidence is drawn from public goods experiments run with regional bureaucrats in Tomsk and Novosibirsk, Russia. The introduction of the same three norms as experimental treatments produces different results. I find that only universal discipline leads to the provision of threshold public goods, whereas solidarity and obedience do not. Unlike in Protestant societies, in Eastern Orthodox societies free-riding occurs at lower than at higher hierarchical levels. Successful economic reforms in Eastern Orthodox countries start with the restructuring of the middle- and lower-ranked public sector. Authoritarian persistence is defined by the commitment of the dictator to overprovide public goods.

## 1. Introduction

Religion can be conducive to economic growth (Barro and McCleary, 2003; Guiso et al., 2003). Moreover, religion and rationality are not mutually antithetical (Stark et al., 1996). Based on World Values Survey data from 1995–97, Torgler (2006) argues that different proxies of religiosity induce higher tax morale and that this finding justifies the use of non-economic factors in the study of economic behavior. Gill and Lundsgaarde (2004) treat the welfare state as a substitute to social services provided by local churches. They suggest that a strong welfare state is conducive to higher levels of secularization and thus modernization (ibid.: 399).

This is the first paper to test the effects of Eastern Orthodoxy on the administrative provision of public goods in Russia. The Eastern Orthodox norms of solidarity, obedience and universal discipline are modeled as treatments in the generalized public goods game with a three-tier hierarchy. The study of post-Soviet Russian bureaucracies

has followed two contradictory lines of development. The first has focused on bureaucrats as one of the main factors for Russia's economic stagnation and institutional backwardness (Gurieff and Rachinsky, 2005; Shleifer and Vishny, 1993). Extensive corruption, lack of technical skills, hoarding of state resources under both socialism and post-socialism may be only a few of the negative aspects of the Russian civil service. A second line of research has focused on regional bureaucracies as key elements in policy implementation (Rochlitz et al., 2015; Slinko et al., 2005). Despite financial constraints and deficiencies in vocational training, these bureaucracies perform a series of duties and services that link the federal government to domestic and multinational businesses, international donors, and the lower half of the population's income distribution. They are components of a hierarchical monitoring structure, connecting the presidential administration with municipalities and city districts. Measuring the degree of bureaucratic adherence to Eastern Orthodox norms, I suggest that Eastern Orthodoxy is an inherent part of Russian state culture.

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Empirical evidence is drawn from public goods experiments with bureaucrats in the regional administrations of Tomsk and Novosibirsk, Russia. As equilibrium solutions of the public goods game suggest, the threshold public good is not delivered under solidarity, whereas it is delivered under obedience and universal discipline. Based on OLS estimations with experimental data, universal discipline induces higher contributions toward the public good at both group and rank levels. Universal discipline facilitates the provision of the threshold public goods, whereas solidarity and obedience do not. This set of observations leads to the definition of an Eastern Orthodox collective that advances individual welfare in the presence of universal disciplinary sanctions. The threat of universal punishment and the ensuing learning process induce voluntary investment in the provision of public goods. I find that the principal contributes more toward the public good than bureaucrats of lower ranks. This suggests that Eastern Orthodox norms induce higher levels of sacrifice by higher rather than lower administrative ranks. Thus, authoritarianism, which is often observed in countries with an Eastern Orthodox majority, is likely to endure only if the political, administrative, and economic elites are inclined to provide public goods above the citizens' overcontribution threshold. The normative prerequisite for an efficient contribution toward the public good increases discontinuously with rank.

The paper is structured as follows. In Section 2, I provide an overview of the literature. In Section 3, I set up and solve a public goods game in its static and dynamic forms as they correspond to solidarity, obedience, and universal discipline. The results of the model are tested empirically in Section 4, which presents the experimental design. Results are reported and discussed in Section 5. Section 6 concludes.

## 2. Literature

Modern social science has defined religions as institutional entities that complement or substitute state functions in the provision of social welfare. It has also treated religiosity as verbal adherence to the existence of God or membership in a religious community.<sup>2</sup> The historical variables of control, respect, and obedience, which are invoked by Tabellini (2010) in his effort to explain regional variation in economic performance across Europe, offer an interesting, yet limited set of analytical conclusions. Tabellini stresses the significance of culture for economic behavior and suggests that personal independence and social capital are crucial factors in economic development (ibid.). At the same time, according to Hechter (1978: 315–316), the cultural division of labor constitutes a necessary but not sufficient condition for class struggle; as long as a nondemocratic government is able to maintain the welfare of stratified workers at an acceptable minimum, the probability of revolution or loss of legitimacy of the incumbent government is low. The expansion of access to bank accounts within the framework of a field experiment in rural Kenya advanced community development and interpersonal linkages at the village level, while it reduced external dependence on long-distance relative networks (Dupas et al., 2015). Voter education in the form of an informational campaign decreases the effectiveness of vote buying in pre-electoral periods (Vincente, 2014). In their study on public goods provision in rural India, Banerjee and Somanathan (2007) argue that if compared to other minority groups such as Muslims or Christians, Scheduled Castes received more public goods in 1991 than in 1971. They contend that independence from the politics of the Congress Party and the emergence of local representative institutions increased this provision to Scheduled Castes, which explains the relative asymmetries with respect to Scheduled Tribes. They also argue that compared to

British or local landlord domination in rural India, social salience has a positive effect on public goods distribution. Mahadevan and Suardi (2013) suggest that caste and religion matter for food security in Indian regions, while Elgin et al. (2013) indicate that religiosity leads to higher levels of income inequality, drawing evidence from a cross-section of countries.

Threshold public goods experiments include provision point mechanisms (PPM), which are sensitive to the level of disseminated information and the institutional elements of the experimental design (Croson and Marks, 1998). Furthermore, incomplete information about the valuations of others in a threshold public goods experiment does not generate significant differences in contributions toward the public good (Marks and Croson, 1999). Nevertheless, convergence over time occurs when decision groups are only informed about their private valuations (ibid.). Higher contributions can facilitate the sustainable provision of a public good through decentralized mechanisms of policy implementation (Marks and Croson, 1998; Bagnoli and McKee, 1991).

This learning process becomes more effective when there is a concrete threshold to be achieved. The reason is that there is a binary dilemma imposed on experiment participants: that of either over- or undercontributing to collective welfare. This is in line with Andreoni (1988), who presents arguments for the significance of social norms with respect to levels of cooperation. Social norms may sustain a high level of cooperation in repetitive public goods games with a finite horizon, and thus induce learning *ex-ante* rather than *ex-post*.

Introducing individual social capital measures in a public goods experiment increases voluntary contributions; however, the treatment of inequality has a persistent negative effect on group cooperation (Anderson et al., 2004). Endogenous group formation can also facilitate public good contributions, when experimental subjects believe that they will interact with cooperative players or be regarded as cooperative by other experimental participants (Page et al., 2005). Group size matters positively for public goods provision (Isaac et al., 1994), while single- rather than multi-period contributions in a public goods experiment enhance effectiveness of cooperation (Isaac et al., 1985).

Sanctions appear to matter more than rewards towards the provision of public goods; sanctioning is necessary for initial levels of cooperation, but for its sustainability only the threat of sanctions is sufficient (Sefton et al., 2007). When students are randomly assigned to the roles of public officials and private citizens in an experimental setting, it is possible to observe the emergence of an accountability system by combining bottom-up monitoring with top-down auditing (Serra, 2011). Verbal communication can compensate for the potential negative effects of imperfect monitoring and advance voluntary public goods contributions (Cason and Khan, 1999). Citizens legitimize and therefore cooperate with salaried public officials, only if they publicly observe elements of fair conduct (Dickson et al., 2015). In a series of Common Pool Resource (CPR) games, with Baseline, Reward, Sanction and Vote treatments, police subjects contribute more toward the public good than non-police subjects, and they are more inclined to enforce norms, particularly with sanctions or a majority vote (Dickinson et al., 2015). Grossman and Baldassari (2012) draw evidence from a lab-in-the-field experiment in Uganda and argue that centralized-sanctioning systems are efficient in facilitating public goods provision, only if they are elected by the subjects they monitor. Evidence from a natural field experiment using normative messages to induce pro-social preferences and therefore reduce residential water demand suggests that norm-based appeals on conservation are more effective on highest-user groups (Ferraro and Price, 2013). Increased willingness to contribute toward the public good occurs when experiment participants explicitly label their contributions for education purposes (De Arcangelis et al., 2015). Moreover, social information about others' contributions toward the public good has a positive effect for one's own contributions (Shang and Croson, 2009).

Linking religion with the provision of public goods, Berman (2000) focuses on Judaism and argues that the structure of the ultra-Orthodox

<sup>2</sup> Scheve and Stasavage (2006) propose that social insurance and religiosity are substitute mechanisms that insure people against life's adverse events, and create opposing preferences with regard to welfare state provisions. Following this argument, more religious people are inclined to be less dependent on social insurance.

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