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## **WHO NEEDS STRONG LEADERS?**

BY

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## Abstract<sup>\*</sup>

This paper's model suggests that a strong leader, sometimes with little legislative oversight, may nevertheless benefit from public support. The argument is that this support is induced as an attempt by the poor to counter the subversion of public protection of property rights by the rich, and to achieve this goal they are often willing to pay the price of the leader's diversion of tax revenues for private use. The paper then examines survey data on individual attitudes toward strong leadership and finds their pattern to be consistent with the model's predictions; specifically, support for strong leadership is inversely related to individual income and to countrywide income inequality.

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## 1. Introduction

At the end of 1990s, Russia's economy was in transition to the market system, crony capitalism on the rise, the oligarchs wielding ever larger influence on the media and the politics, and corruption and crime all pervasive. Whereas the debate as to whether the power of the oligarchs could be channeled into productive use is still ongoing (see Guriev and Rachinsky, 2005), they remained highly unpopular. Vladimir Putin won the 2000 presidential election by pledging an uncompromising law and order stance. He subsequently prosecuted several key oligarchs and strengthened the military and the police force, centralizing presidential power and curbing dissent along the way. In 2004, he was easily reelected with the support of 71 percent of the voters, and his recent approval rate exceeded 80 percent, almost unprecedented for a leader of a democratic country.

This episode reflects an empirically relevant aspect of political reality but one that is neglected in the literature: popular support for strong leaders, often with limited accountability to and control by the legislature.<sup>1</sup> Comprehensive survey data studied in detail below suggest a great deal of support for such leadership, apparently as a response to perceived indecisiveness and instability of democracies and their inability to enforce law and order. Specifically, the correlation between the preference for a strong leader and the opinion that democracies are not good in maintaining order is 0.24; the correlation between the former and the preference for having a democratic political system is -0.21. Furthermore, an interesting regularity in the data is the robust positive relationship between income and support for democracy, and an inverse relationship between income and preference for a strong leader. Powerful leaders are often perceived as effective anti-corruption reformers and as strongmen capable of countering the power of established vested interests and empowering the poor masses.<sup>2</sup> In other cases, however, popular leaders who successfully did so were kept in line by the legislature; the US leadership during the Progressive era is one such prominent episode, which illustrates that lax legislative control is not an unavoidable response to domineering wealthy interests.

This paper's objective is to study the factors behind popular support for strong leaders. To do so, the paper's stylized model stipulates that, when the leader is subject to tight oversight and

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<sup>1</sup> That this example is far from being unique is shown by mass support of populist leaders in Latin America, such as Juan Perón and Hugo Chávez, and in East Asia.

<sup>2</sup> Cf., "...a tyrant is chosen from the people to be their protector against the notables, and in order to prevent them from being injured" (Aristotle, *Politics*, Book V, Part X).

consequently is unable to appropriate a large enough share of tax revenues, she may not find it in her best interests to incur the cost of public enforcement of property rights. This in turn implies that rich individuals are able to appropriate the poor through rent seeking. It follows that the poor favor endowing the leader with sufficiently strong powers to divert a large share of tax revenues so as to provide her with incentives to impose legal enforcement, thus eliminating appropriation by the rich. We then use rich survey data to statistically document empirical regularities consistent with some of the model's results, finding that strong leadership is favored by the poor. This income effect is significant and is independent of a similar effect of education on democracy. Also in line with the model's implications, we find that support for strong leadership increases with a country's income inequality.

The interaction between political systems and economic outcomes has long been a subject of intense interest for economists. In particular, an emerging body of the literature investigates to what extent democracy promotes growth.<sup>3</sup> Whereas the focus there is on outcomes of various political systems, the related literature reviewed below attempts to understand their roots. Neither of these literatures, however, addresses a rationale behind mass support for strong leadership.

The rest of the paper proceeds as follows. The next section provides a literature overview. Section 3 then presents a simple theoretical framework, whose analysis is carried out in Section 4. Section 5 validates some of the analytical insights using a comprehensive individual survey dataset, and Section 6 concludes.

## **2. Related Literature**

Several pieces of literature are related to this research. One strand empirically compares economic performance under different political systems, such as between democratic and non-democratic regimes. An early historical study, DeLong and Shleifer (1993), finds that medieval cities with strong absolutist rulers tended to grow less than cities with a more diffuse distribution of political power. More recent work (for example, Barro, 1996, Papaioannou and Siourounis, 2004, Przeworski and Limongi, 1993, Persson and Tabellini, 2007, Rodrik and Wacziarg, 2005) has generated somewhat inconclusive results, some authors finding a robust beneficial growth

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<sup>3</sup> See Persson and Tabellini (2007), and references therein for recent contributions. An additional branch in this literature, exemplified in Jones and Olken (2005, 2007) addresses the importance of a political leader's identity for economic outcomes. This work finds that leaders matter, especially in non-democratic settings.

effect of democracy, while others fail to uncover any such effect. Also related is the more recent literature on the economic importance of strong leaders (e.g., Besley and Kudamatsu, 2007, and Jones and Olken, 2005 and 2007). This work indicates that leadership matters for economic performance, and more so under autocracies than under democracies (for example, Almeida and Ferreira, 2002, find that growth performance is more volatile under autocracies than under democracies).

Theoretical underpinnings that examine the considerations behind selecting strong leaders from different but related perspectives have been provided in several recent contributions, such as Olson (1993), Grossman (2002), Konrad and Skaperdas (2005), and Guriev and Sonin (2007). This work points out at some basic tradeoffs involving strong but not necessarily benevolent leadership. More specifically related is Paltseva (2007), where these tradeoffs are illustrated in a growth framework in which an autocrat decides on the devolution of her power, as a commitment device to promote investment. Here, in contrast, the electorate determines the preferred strength of the policymaking executive in order to possibly motivate the latter to effectively engage in enforcement. The literature on politicians' selection focuses on the supply side, and its insights help understand the heterogeneity among strong leaders (the paper Meissner and Polborn, 2004, is particularly relevant).

Also relevant is the issue of the determinants of preferences for democratic governance. For example, Glaeser, Ponzetto and Shleifer (2007) emphasize education as a major democratization force; in contrast, Acemoglu et al. (2007), argue that the causal link is flawed and that, instead, omitted variables from past history affect the evolution of educational achievements, economic prosperity, and democratic institutions. Much of this research has been conducted in the context of cross-country data, which confounds the interpretation of causality (see Bobba and Coviello, 2007, and references cited therein for a discussion of methodological difficulties). In this paper, we take a different route and investigate the less confounded causality between personal characteristics and democratic attitudes, using individual survey data.

### **3. Conceptual Framework**

We illustrate the basic forces at play by considering a simple model of an economy with a continuum of households of a unit measure indexed by  $i$ , each consisting of a parent and child,

that operates in time periods  $t$ .<sup>4</sup> In each period, there is also a leader whose potential role is to provide legal enforcement. The initial level of household  $i$ 's income is exogenously given at  $y_{i0}$ , and the income level in period  $t$ ,  $y_{it}$  is endogenously determined.  $F_t$  denotes the distribution of income in period  $t$ . In each period, the household's income is allocated among consumption,  $c_{it}$ , productive investment,  $k_{it}$ , and unproductive investment in rent seeking,  $r_{it}$ . Normalizing all prices to one, the budget constraint then is

$$y_{it} = c_{it} + k_{it} + r_{it} \quad (1)$$

It is assumed that this constraint is binding and that, because of capital market imperfections, it is impossible to borrow.

Two regimes of public property rights protection are considered. Under the regime of public enforcement of property rights (PR), the amount of actual individual investment,  $\kappa_{it}$ , coincides with the amount of income allocated for that purpose,  $\kappa_{it} = k_{it}$ . It is taxed by a proportional income tax with the rate of  $T$ , so that tax revenues are  $TK_t$ , where  $K_t = \int_0^1 k_{jt} dj$  is the amount of aggregate investment. A share  $d_t$ ,  $0 \leq d_t \leq 1$ , is then diverted by the leader for her private consumption, and the complementary share  $(1-d_t)$  is used to provide a productive public good,  $G_t$ ,

$$G_t = (1-d_t) TK_t \quad (2)$$

The production function uses the individual after-tax income and the public good to generate next-period income,

$$y_{it+1} = A k_{it} (1-T) G_t^\beta = A k_{it} (1-T) ((1-d_t) TK_t)^\beta, \quad 0 < \beta < 1, \quad A > 0 \quad (3)$$

Alternatively, under the rent seeking regime (RS) the state does not enforce property rights, implying that the distribution of the aggregate investment among households is determined through mutual appropriation. In particular, the share  $s_{it+1}$  that household  $i$  is able to retain is a function of both the amount of productive and appropriative investments made by the household,

$$s_{it} = \frac{k_{it} r_{it}}{\int_0^1 k_{jt} r_{jt} dj} \quad (4)$$

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<sup>4</sup> This will imply that aggregate and average values below are equivalent.

Then the net capital endowment,  $\kappa_{it}$ , is determined jointly by productive and unproductive rent seeking investments in asset claims as follows (see Sonin, 2003, and Gradstein, 2007):

$$\kappa_{it} = s_{it} \int_0^1 k_{jt} dj = \frac{k_{it} r_{it}}{\int_0^1 k_{jt} r_{jt} dj} \int_0^1 k_{jt} dj \quad (5)$$

Poorer households, whose opportunities of making such claims are more limited because of credit market imperfections, are at a disadvantage relative to richer households, which has direct implications for their preference for strong leadership, as will be shown below.

This description arguably fits well Russia's reality in the 1990s, prior to Putin's election in 2000. Thus, Glaeser, Scheinkman and Shleifer (2003; see also Guriev and Rachinsky, 2005) relate how the newly rich oligarchs were able to use their influence over the legal system and the Parliament to consolidate their grip on business groups, and how their acquired control over the media served as an essential element of political influence. This, in the view of these observers, resulted in the breakdown of legal institutions and the subversion of political institutions; further, it allowed the politically influential oligarchs to promote economic policies that were aimed not at enhancing economic growth, but to discriminate against smaller firms. Indeed, Putin's rise to power on the law and order platform is viewed as the public reaction to these excesses.<sup>5</sup>

The economy's production function under the rent seeking regime then is

$$y_{it+1} = A \kappa_{it} (1-T) G_t^\beta = A \left[ \frac{k_{it} r_{it}}{\int_0^1 k_{jt} r_{jt} dj} \int_0^1 k_{jt} dj \right] (1-T) ((1-d_t) TK_t)^\beta \quad (6)$$

It is assumed that, in each period, in the absence of a strong leader the status quo of the rent-seeking regime prevails.

Each parent's preferences are assumed to derive from consumption and from the child's income, which simplifies the analysis by making current policy choices independent of future expectations. With symmetric logarithmic preferences, we write the individual household's utility:

$$V(c_{it}, y_{it+1}) = \ln(c_{it}) + \ln(y_{it+1}) \quad (7)$$

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<sup>5</sup> As is argued in Glaeser, Scheinkman and Shleifer (2003), subversion of legal and political institutions was also rampant during the Gilded Age in the United States.

We assume that, in the absence of leadership, the rent-seeking regime prevails. Thus, the citizens themselves lack the ability to eliminate that regime, even if they decided that it would be beneficial to do so.<sup>6</sup> Hence, a leader is needed to enforce property rights, and doing so entails a cost of  $C_t \Delta_t$ , where  $\Delta_t=1$  if it is imposed and  $\Delta_t=0$  otherwise; it is assumed that the leader bears the cost.<sup>7</sup> Diversion of tax revenues for private gain is costly, and the cost associated with diverted the share of  $d_t$  of tax revenues is  $\alpha_t d_t^2/2$ , where  $0 \leq \alpha_t \leq 1$  determines the marginal cost of diversion for the leader. The parameter  $\alpha_t$  is interpreted as the strictness of the overseeing control by the public. For example, the leader's cost could be her expected penalty, including non-pecuniary, which may depend on the likelihood of judicial or legislative review.

Assuming that the leader's utility is linear and that the choices of the property rights regime and of diversion are enacted in the next period, we write it as follows:

$$u(\Delta_t, d_t) = -C_t \Delta_t + (d_t - \alpha_t d_t^2/2)TK_t \quad (8)^8$$

We will assume that the cost of eliminating rent seeking is linear in the latter's volume,

$$C_t = (1-\gamma_t)R_t = (1-\gamma_t) \int_0^1 r_{jt} dj, \quad 0 < \gamma_t < 1 \quad (9)$$

where  $1-\gamma_t$  is the marginal cost of eliminating rent seeking elimination. It may be useful, for example, to think of  $1-\gamma_t$  as consisting of a constant country-specific component—reflecting, for example, the extent to which rent seeking is culturally entrenched, or being related to the quality of the judiciary, or to the country's legal tradition—and of a variable, idiosyncratic component that can be interpreted as being inversely related to the leader's ability. For now it is assumed as exogenously given, but its endogenization is discussed below.

Note that the assumption that the leader can be disciplined by a penalty contrasts with much of the related literature (see, for example, Barro, 1973, and Maskin and Tirole, 2004) which features reelection prospects that serve as a leader's disciplining device. In other related papers (see Gradstein, 2007, and Paltseva, 2007) the policymaker represents one of the population's groups and cannot divert income for private gain. Consequently, the issue of imposing restraints on the policymaker does not emerge there.

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<sup>6</sup> Given the public good nature of the property rights protection this assumption is plausible.

<sup>7</sup> This assumption is stronger than needed, as the leader could be assumed to bear a portion of the cost.

<sup>8</sup> Assuming an ego rent utility component would also ensure that the leader derives a strictly positive utility from being in office.

A period referring to a lifespan, there is a new leader in each period whose identity is revealed prior to decision-making.<sup>9</sup> The decision-making sequence in each period is as follows. Individuals first determine the strictness of the leader's control through voting. Then the leader chooses whether or not to impose the property rights regime, upon which the individual consumption-investment choices are made. Then the leader selects the diversion rate and incurs the penalty cost as determined in the first stage. This determines current consumption levels as well as future incomes. The equilibrium consists of a mutually consistent sequence of these decisions.

#### 4. Equilibrium Analysis

To make decisions on the preferred leader's strength, the voters have to rationally anticipate future decision making; consequently, the analysis proceeds backwards. In the last stage, the leader choose a diversion rate so as to maximize (8); the solution is given by  $d_t = 1/\alpha_t$ , so that the amount of diversion is inversely related to the strictness of legislative control, and the resulting leader's utility is

$$u = -C_t \Delta_t + (1/2\alpha_t)TK_t$$

We then study the equilibrium consumption-investment choices for each type of institutional regime. Under rent seeking, logarithmic utility along with the multiplicative production function implies that each individual household will allocate a constant fraction of its income to consumption and another fraction to each type of investment. Specifically, maximization of the individual utility function (7) with respect to consumption, productive investment and rent-seeking outlays subject to the budget constraint (1) and the production function (6) and the analysis of the resulting first order conditions yields  $c_{it} = k_{it} = r_{it}$  which, together with the budget constraint, yields the equilibrium choices:

$$c_{it}^{\text{RS}} = y_{it} / 3, k_{it}^{\text{RS}} = r_{it}^{\text{RS}} = y_{it} / 3, \int_0^1 k_{jt}^{\text{RS}} dj = \int_0^1 r_{jt}^{\text{RS}} dj = Y_t / 3$$

where  $Y_t$  is the average income level in period  $t$ .

Substitution of  $d_t = 1/\alpha_t$ , as well as of  $k_{it}^{\text{RS}}$  and  $r_{it}^{\text{RS}}$  into the production function yields the future individual and aggregate income levels:

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<sup>9</sup> Assuming otherwise would unduly complicate the model without delivering fundamentally different insights.

$$y_{it+1}^{\text{RS}} = A \left[ \frac{y_{it}^2}{\int_0^1 y_{jt}^2 dj} \right] (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/3)^{1+\beta}, \quad Y_{t+1}^{\text{RS}} = A (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/3)^{1+\beta}$$

Further substitutions yield the utility levels

$$V_{it}^{\text{RS}} = \ln(y_{it}/3) + \ln \left\{ A \left[ \frac{y_{it}^2}{\int_0^1 y_{jt}^2 dj} \right] (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/3)^{1+\beta} \right\} \quad (10)$$

With the enforcement of property rights, individual utility maximization subject to the budget constraint (1) and the production function (3) yields the equilibrium choices,

$$c_{it}^{\text{PR}} = k_{it}^{\text{PR}} = y_{it}/2$$

and future individual and aggregate income levels,

$$y_{it+1}^{\text{PR}} = A (y_{it}/2) (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/2)^\beta, \quad Y_{t+1}^{\text{PR}} = A (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/2)^{1+\beta}$$

The corresponding utility levels are:

$$V_{it}^{\text{PR}} = \ln(y_{it}/2) + \ln \left\{ A (y_{it}/2) (1-T) ((1-(1/\alpha_t)) T)^\beta (Y_t/2)^\beta \right\} \quad (11)$$

We in particular observe that the utility maximizing level of the tax rate,  $T = \beta/(1+\beta)$ , is identical across all individuals under both regimes; and this will be assumed to be the chosen tax rate. Also note that the individual utilities increase in the leader's oversight within each regime. Clearly, as long as the leader is expected to allow the rent-seeking regime, the optimal degree of oversight from each individual's viewpoint equals infinity to ensure that there is no diversion so that  $d_t = 0$ .

We then turn to the leader's determination of whether to impose the property rights regime. Her utility—correctly anticipating future consumption-investment individual choices and the level of diversion—is

$$u = -C_t \Delta_t + (1/2 \alpha_t) T Y_t / 2 \quad (12)$$

which implies that

$$\alpha_t^* = T Y_t / 4 C = 3T / [4(1-\gamma_t)] \quad (13)$$

is the maximal level of the leader's oversight ensuring her choice of the property rights regime. It decreases with the marginal cost of eliminating rent seeking: to provide enough incentives to impose public enforcement of property rights in the context of high marginal costs, she should be allowed a significant amount of diversion, implying lax oversight; and the opposite holds for the case of small marginal costs.

We thus obtain two possibilities: a leader who finds the elimination of rent seeking too costly and cannot divert,  $d_t=0$ ; and a leader that implements the property rights regime, is subject to the oversight of  $\alpha_t^*$  and consequently diverts the amount of

$$d_t^* = 4(1-\gamma)/3T \quad (14)$$

We will refer to the former as a weak leader, and to the latter as a strong leader, so that the distinction between the two types is solely based on their respective willingness to enforce public protection of property rights. In particular, note that variation among strong leaders is manifested through their diversion of public resources, so that in general they can be more or less benign. Further, the equilibrium amount of diversion is positively related to the marginal cost of eliminating rent seeking. The reason for this is that, in an environment with a high cost of eliminating rent seeking, lax oversight suffices to induce the leader to provide enforcement—which generates more diversion. The citizens' fundamental choice is between a weak, tightly controlled leader, who does not engage in legal enforcement and also does not divert, and a strong leader who diverts part of the tax revenues but also eliminates rent seeking through public enforcement of property rights.

Future incomes under the two scenarios, of a weak and a strong leader, respectively, can be written as follows:

$$y_{it+1}^W = A \left[ \frac{y_{it}^2}{\int_0^1 y_{jt}^2 dj} \right] (1-T) T^\beta (Y_t/3)^{1+\beta}, y_{it+1}^S = A (y_{it}/2) (1-T) ((1-d_t^*) T)^\beta (Y_t/2)^\beta \quad (15)$$

and the average next-period income levels are:

$$Y_{t+1}^W = A (1-T) T^\beta (Y_t/3)^{1+\beta}, Y_{t+1}^S = A (1-T) ((1-d_t^*) T)^\beta (Y_t/2)^{1+\beta} \quad (16)$$

Several observations are in order. First, it follows that income inequality increases, in the sense of Lorenz curve domination, over time under a weak leader, and is constant under a strong leader.<sup>10</sup> The former is quite consistent, for example, with the evolution of income distribution in Russia in the 1990s, prior to Putin's election; see Shleifer and Treisman (2005) and Milanovic (1999) for a broader discussion of the rise in inequality during transition, as well as with that in the United States during the Gilded Age, as summarized in Glaeser, Scheinkman and Shleifer (2003). Second, comparison of average next-period incomes reveals that, while strong leadership reduces rent seeking and increases productive investment, thereby promoting growth, it also generates diversion of tax revenues, so that the results are in general ambiguous. In particular, the comparison of growth rates under the two regimes hinges upon the cost associated with the elimination of rent seeking, a lower cost implying a faster growth rate under strong leadership. Recalling that this cost contains the component of idiosyncratic leader's ability, another implication is that the growth rate under strong leadership may be volatile, depending on the leader's quality, which is consistent with the results in Almeida and Ferreira (2002) and Jones and Olken (2005, 2007).

Summarizing,

**Proposition 1.** The comparison of growth rates is ambiguous and depends on the equilibrium diversion; when the cost of eliminating rent seeking is small, growth performance under strong leadership can be better than under a weak leader, but being dependent on the leader's qualities, is volatile.

The individual utilities can be written as follows:

$$V_{it}^W = \ln(y_{it}/3) + \ln \left\{ A \left[ \frac{y_{it}^2}{\int_0^1 y_{jt}^2 dj} \right] (1-T) T^\beta (Y_t/3)^{1+\beta} \right\} \quad (17)$$

and

$$V_{it}^S = \ln(y_{it}/2) + \ln \left\{ A (y_{it}/2) (1-T) ((1-d_t^*) T)^\beta (Y_t/2)^\beta \right\} \quad (18)$$

We now turn to the determination of the support for strong as opposed to tightly controlled leadership by calculating the utility differential:

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<sup>10</sup> This follows because future income is a convex function of current income under a weak leader, but a linear one under a strong leader; a formal proof is available.

$$V_{it}^S - V_{it}^W = \ln (3/2)^{2+\beta} + \ln (1 - d_t^*)^\beta - \ln \left[ \frac{y_{it} Y_t}{\int_0^1 y_{jt}^2 dj} \right] = \ln (Y_{t+1}^S / Y_{t+1}^W) - \ln \left[ \frac{y_{it} Y_t}{\int_0^1 y_{jt}^2 dj} \right] \quad (19)$$

This utility differential decreases with individual income, indicating an inverse relationship between income and preference for strong leadership. To understand the intuition, note that strong leadership can be interpreted as having two effects. One effect, on aggregate income, is generally ambiguous as discussed above. Another is the redistributive effect, which—by enforcing public protection of property rights—benefits the poor at the expense of the rich. It then follows that richer individuals favor a weak leader, whereas poor individuals favor a strong leader; and for all individuals, a higher equilibrium diversion—caused by low costs of eliminating rent seeking—implies a reduced preference for this outcome. This is related to the observation in Di Tella and MacCulloch (2007) that poor citizens often perceive capitalism to unjustly favor capitalists who are able to tilt outcomes in their favor.

Thus, we have the following

**Proposition 2.** Support for strong leadership that leads to public enforcement of property rights is positively related to individual income.

Further, when the marginal cost of rent-seeking elimination is small, the extent of the leader's oversight needed to induce enforcement is small as well, implying in turn increased preference by each individual for a strong leader. If, for instance, incomes are identical, so that the above utility differential equals  $\ln (3/2)^{2+\beta} + \ln (1 - d_t^*)^\beta$ , then a strong leader that is committed to the elimination of rent seeking constitutes the citizens' choice if and only if the cost of doing so—implying small diversion—is small enough.<sup>11</sup>

Now, let  $y_i^*$  denote the income level making an individual citizen just indifferent between the two options; all individuals whose income is below that level favor a strong leader, and the opposite for wealthier individuals. Recalling that  $F_t$  is the distribution function of income,  $F_t(y_i^*)$  is the proportion of citizens favoring a strong leader. We then write:

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<sup>11</sup> Note that, if a fixed-cost component in elimination of rent seeking was assumed, the level of oversight needed to implement enforcement would be a decreasing function of income, which, in turn, would imply that legal enforcement is more likely to benefit from public support in developed economies.

$$0 = \ln (3/2)^{2+\beta} + \ln (1- d_t^*)^\beta - \ln \left[ \frac{y_t^* Y_t}{\int_0^1 y_{jt}^2 dj} \right] = \ln (3/2)^{2+\beta} + \ln (1- d_t^*)^\beta - \ln \left[ \frac{y_t^* Y_t}{\sigma_t^2 + Y_t^2} \right] \quad (20)$$

where  $\sigma_t^2$  is the variance of the income distribution in period  $t$ .

It follows then that the larger the variance and the smaller the cost of eliminating rent seeking, the larger is the cutoff income level, implying an increase in the popular support for a strong leader. Intuitively, the larger is the variance of income distribution, the larger is the relative advantage of the rich appropriating the poor under the rent-seeking regime, enhancing mass support for its elimination through legal enforcement.

Summarizing, we obtain

**Proposition 3.** A higher level of income dispersion leads to an increase in the mass support for strong leaders.

Whether a strong or a weak leader is ultimately elected in equilibrium hinges upon the balance of political power. Specifically, letting  $y_{pt}$  denote the decisive voter's income, a weak leader is elected if and only if  $y_{pt} > y_t^*$ , that is, when the wealthy elite is politically decisive.

To conclude this section, it is worth pointing out the variation among strong leaders, in terms of diverted income, that the model allows for—which directly affects the variation in the equilibrium degree of oversight among strong leaders. As seen above, it is affected by the marginal cost of eliminating rent seeking, which in turn hinges upon the leader's quality as well as upon country-wide characteristics, in particular, the quality of the judiciary and the legislative systems. This implies that strong leadership may be of an autocratic style a la Perón or Putin; but it may also be of a benevolent kind, such as in the US of the early twentieth century, during the Progressive era, which likewise emerged as a response to the domination of the wealthy elite, the robber barons, during the Gilded Age.<sup>12</sup> While the above analysis does not address this taxonomy of leadership, insights from the recent literature on political selection suggest that politicians' quality is an important consideration and that low-quality candidates may well populate the political arena, which then indicates high diversion by strong leaders. To illustrate this possibility, in Appendix 1 we switch the focus to endogenizing the supply side of a leader's

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<sup>12</sup> For example, the 1912 Progressive Party Platform includes the commitment "...to dissolve the unholy alliance between corrupt business and corrupt politics..."

selection by considering a modification of the Meissner and Polborn (2004) framework. This analysis, in particular, generates the possibility of low quality of leaders, which in turn implies lax oversight and high diversion, as shown in the preceding analysis.

## 5. Evidence

### 5.1. Empirical Approach

In this section we test some of the empirical implications of the theoretical model using the following benchmark specification:

$$Leader_j = \beta_1 Income_j + \beta_2 X_j + \beta_3 Z_j + u_j, \quad j = 1, 2, \dots, J \quad (21)$$

where *Leader* is the dependent variable and represents the individual preference for a strong leader. Based on the model above, we focus on individual income as our main variable of interest. Our benchmark specification also includes additional individual-level explanatory variables, represented by vector *X*, and country-level explanatory variables, represented by vector *Z*; *u* is the error term. We estimate the coefficients  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , where the latter two are vectors. Whereas we are primarily interested in the relationship between income and preference for strong leadership, for robustness purposes we also employ a similar specification with a set of dependent variables related to individual preferences of democratic governance, estimating the above equation with *Democ* replacing *Leader* in the above equation, where *Democ* alternately consists of five proxies in this regard.

The data come from the World Value Survey (WVS), a worldwide survey carried out by the Inter-University Consortium for Political and Social Research (ICPSR) that consists of individual cross-national questions on a wide variety of topics, such as the economy, politics, foreign policy, and identity, as well as on socio-economic background of individual respondents and his or her attitudes on several topics. Data come from face to face interviews with a sampling universe of adult citizens 15 years old and older from over 70 developed and developing countries.<sup>13</sup> Our sample is composed of tens of thousands of individuals who were surveyed in

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<sup>13</sup> The countries and number of firms included in our sample are Albania (1,000), Algeria (1,282), Argentina (1,280), Austria (1,522), Bangladesh (1,500), Belgium (1,912), Bulgaria (1,000), Belarus (1,000), Canada (1,931), Chile (1,200), China (1,000), Croatia (1,003), Czech Republic (1,908), Denmark (1,023), Estonia (1,005), Finland (1,038), France (1,615), Greece (1,142), Hungary (1,000), Iceland (968), India (2,002), Indonesia (1,004), Iran (Republic of Islamic) (2,532), Iraq (2,325), Ireland (1,012), Israel (1,199), Italy (2,000), Japan (1,362), Jordan

the fourth wave, during 1997-2004. All the dependent variables used in this paper are categorical and thus the coefficients are estimated using Ordered Probits.<sup>14</sup> Additionally, all regressions have robust standard errors and have been clustered either at the regional level (when including country dummies) or at the country level (when including country-level controls, namely, the Gini coefficient).

The definitions of all the variables used in the paper are described in Table 1, Table 2 contains descriptive statistics, and Table 3 presents a correlation matrix with corresponding  $p$ -values.

## 5.2. Results

Our main result appears in the first column in Table 4, where a statistically significant negative link is exhibited between individual income, as measured at the household level, and preference for a strong leader. To address a potential concern that this may be driven by the effect of education (the link between education and democracy features in the related literature; see Glaeser, Ponzetto and Shleifer, 2007, and references therein), the second column also includes the education variable. While this causes a reduction in the coefficient of the income variable, that coefficient remains significant.<sup>15</sup>

We also include country-level Gini coefficients in our regressions and find that there is a positive and statistically significant link with preference for a strong leader. As predicted by the model, in countries with high income inequality, the preference for a strong leader is greater, as shown in the third column of Table 4.<sup>16</sup> (Notice that in this specification education loses statistical significance.)<sup>17</sup>

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(1,223), Republic of Korea (1,200), Kyrgyzstan (1,043), Latvia (1,013), Lithuania (1,018), Luxembourg (1,211), Malta (1,002), Mexico (1,535), Republic of Moldova (1,008), Morocco (2,264), Netherlands (1,003), Nigeria (2,022), Pakistan (2,000), Peru (1,501), Philippines (1,200), Poland (1,095), Portugal (1,000), Puerto Rico (720), Romania (1,146), Russian Federation (2,500), Saudi Arabia (1,502), Singapore (1,512), Slovakia (1,331), Vietnam (1,000), Slovenia (1,006), South Africa (3,000), Zimbabwe (1,002), Spain (2,409), Sweden (1,015), Turkey (4,607), Uganda (1,002), Ukraine (1,195), Republic of Macedonia (1,055), Egypt (3,000), Great Britain (1,000), United Republic of Tanzania (1,171), United States (1,200), Venezuela (1,200), Germany West (1,037), Germany East (999), Northern Ireland (1,000), Serbia (1,200), Montenegro (1,060), Serbian Republic of Bosnia (400) and Bosnia Federation (800).

<sup>14</sup> Ordinary least squares were also estimated. Results are analogous.

<sup>15</sup> Marginal effects for our variable of interest are shown in Appendix 2.

<sup>16</sup> For the sake of economy we do not present marginal effects, but they may be provided upon request.

<sup>17</sup> Whereas it seems very unlikely that endogeneity between income and preference for a strong leader may be an issue, such a possibility cannot be ruled out completely. We follow Acemoglu et al. (2007) who use savings as an instrument for education to explain democracy. In the first stage we apply a linear probability model on income and use as instrument the five-year gross average country savings prior to the year of the survey and include the labor

Inclusion of additional controls that have been used in a related paper, Di Tella and McCulloch (2007)—age, age squared, age at which education was completed, employment status, and the self-positioning in the political scale—does not change the results, and in particular, our key variable of interest remains statistically significant at conventional levels; also, the inclusion of the Gini coefficient yields similar results as before, as shown in Table 5.<sup>18</sup>

Table 6 presents additional evidence pertaining to various proxies of the preferences for tightness of legislative control, as captured by the approval of democracy. In particular, we find that the coefficient of income is (i) positive and statistically significant with respect to a preference for a democratic political system; (ii) negative and statistically significant with respect to the idea that economic systems run badly in democracies; (iii) negative and statistically significant with respect to the opinion that says democracies are indecisive and have too much squabbling; (iv) negative and statistically significant with respect to the statement that says democracies are not good at maintaining order; and (v) positive and statistically significant with respect to the idea that says that democracies may have problems but are better systems. Summarizing, therefore, the higher the individual’s income, the more supportive she is of democratic governance.<sup>19</sup>

## 6. Concluding Remarks

Recent work has emphasized the importance of governance for economic performance. A seemingly important governance feature is the degree of legislative foresight over elected leadership. While democracy often assumes a substantial extent of oversight, the examples of

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status as an individual-level instrument. Income yields a negative coefficient, which is statistically significant further confirming the main prediction of the model. Also, since the model generates endogenous income inequality we use religion and legal origin as instruments for inequality, see Appendix 3. As an alternative instrument we also use individual savings from WVS. While results are somewhat weaker, they do not change the key findings of the paper. These latter results as well as IV findings using the extended specifications of Table 5 are available upon request.

<sup>18</sup> Sala-i-Martin (1997) develops a robustness test by looking at the entire distribution of the estimator of the variable of interest by focusing on the fraction of the density function lying on each side of zero. If 95 percent of the density function for the estimates of the coefficient of interest lies to the right of zero, one could say that this variable is more likely to be correlated with our dependent variable. We systematically augment our benchmark specification by using a pool of ten additional variables, included three at a time, in all the possible combinations. We compute the coefficient estimates, its variance, the integrated likelihood, and the  $cdf(0)$  for each regression and compute the aggregate  $cdf(0)$  of our coefficient of interest as the weighted average of all individual  $cdf(0)$ s. Income is said to be robust if the weighted  $cdf(0)$ , is greater than or equal to 0.90. Applying this methodology we find that robustness at 6.4 percent. Results may be provided upon request.

<sup>19</sup> We repeat the exercise using instrumental variables along the lines of the estimations performed in the case of strong leader. The results are similar to the case of Table 6 with the exception of the statement that says that

democratically elected strong leaders, sometimes endowed with autocratic powers, suggest existence of significant variation in this regard. Yet, existing work has neglected this aspect.

This paper's model argues that a popular demand for a strong leader with little legislative oversight is likely to emerge in a context of weak public protection of property rights, whereby the rich elites can expropriate the poor. While lax oversight causes diversion of public resources by the leader, it also provides him with incentives to restrain the rent-seeking advantage of the rich, thereby increasing investments and in turn generating perceived benefits for the poor. Further, it is shown that mass support for strong leaders is larger the less equal the distribution of income. Empirical support for the theory is provided by studying individual-level survey data that contain questions about the support for strong leadership and for democratic governance. Consistent with the model, it is found that individual income is inversely related to a strong leader's support. More specifically, the poor tend to be relatively more supportive of strong leadership and more suspicious of democracy than the rich, and this effect is shown to be independent of the education effect on pro-democratic attitudes.

An alternative view of why strong leaders often benefit from public support is that their subsequent diversion could not be fully anticipated by myopic voters. There are two problems with this view, however. First, it may be difficult to reconcile with forward-looking rational voting behavior. Further, it is not clear how this alternative theory would give rise to the empirically observed inverse relationship between individual incomes and support for strong leaders.

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democracies may have problems but are better systems, which yields no statistically significant link. The results are shown in Appendix 4.

## References

- Acemoglu, D. et al. 2007. "Income and Democracy." MIT Department of Economics Working Paper No. 05-05. Cambridge, United States: Massachusetts Institute of Technology. Forthcoming in *American Economic Review*.
- Almeida, H., and D. Ferreira. 2002. "Democracy and the Variability of Economic Performance." *Economics and Politics* 14: 225-257.
- Barro, R.J. 1973. "The Control of Politicians: An Economic Model." *Public Choice* 14: 19-42.
- . 1996. "Democracy and Growth." *Journal of Economic Growth* 1: 1-27.
- Besley, T., and M. Kudamatsu. 2007. "Making Autocracy Work." CEPR Discussion Paper 6371. London, United Kingdom: Centre for Economic Policy Research.
- Bobba, M., and D. Coviello. 2007. "Weak Instruments and Weak Identification in Estimating the Effects of Education on Democracy." *Economics Letters* 96(3): 301-306.
- DeLong, B.J., and A. Shleifer. 1993. "Princes or Merchants? City Growth before the Industrial Revolution." *Journal of Law and Economics* 36: 671-702.
- Di Tella, R., and R. MacCulloch. 2007. "Why Doesn't Capitalism Flow to Poor Countries?" NBER Working Paper 13164. Cambridge, United States: National Bureau of Economic Research.
- Glaeser, E.L., J. Scheinkman and A. Shleifer. 2003. "The Injustice of Inequality." *Journal of Monetary Economics* 50: 199-222.
- Glaeser, E.L., G.A.M. Ponzetto and A. Shleifer. 2007. "Why Does Democracy Need Education?" *Journal of Economic Growth* 12(2): 77-99.
- Gradstein, M. 2007. "Inequality, Democracy, and the Protection of Property Rights." *Economic Journal* 117: 252-269.
- Grossman, H. 2002. "'Make Us a King': Anarchy, Predation, and the State." *European Journal of Political Economy* 18: 31-46.
- Guriev, S., and A. Rachinsky. 2005. "The Role of Oligarchs in Russian Capitalism." *Journal of Economic Perspectives* 19: 131-150.
- Guriev, S., and K. Sonin. 2007. "Dictators and Oligarchs." Mimeographed document. Available at SSRN: <http://ssrn.com/abstract=983908>.
- Jones, B.F., and B.A. Olken. 2005, "Do Leaders Matter? National Leadership and Growth since World War II." *Quarterly Journal of Economics* 120: 835-864.

- Jones, B.F., and B.A. Olken. 2007. "Hit or Miss? The Effect of Assassinations on Institutions and Wars." NBER Working Paper 13102. Cambridge, United States: National Bureau of Economic Research.
- International Labour Organization (ILO). 2005. *Key Indicators of the Labour Market*. Fifth edition. Geneva, Switzerland: ILO.
- Konrad, K.A., and S. Skaperdas. 2005. "The Market for Protection and the Origin of the State." CESifo Working Paper 1578. Munich, Germany: CES-IFO.
- La Porta, R. et al. 1999. "The Quality of Government." *Journal of Law, Economics and Organizations* 15: 222-279.
- Maskin, E., and J. Tirole. 2004. "The Politician and the Judge: Accountability in Government." *American Economic Review* 94(4): 1034-1054.
- Meissner, M., and M. Polborn. 2004. "Paying Politicians." *Journal of Public Economics* 88: 2423-2445.
- Milanovic, B. 1999. "Explaining the Increase in Inequality During the Transition." *Economics of Transition* 7: 299-341.
- Olson, M. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review* 87: 567-576.
- Paltseva, E. 2007. "Autocracy, Devolution and Growth." Stockholm, Sweden: Stockholm School of Economics. Mimeographed document. <http://www.econ.ku.dk/epru/Paltseva.autocracy.pdf>
- Papaioannou, E., and G. Siourounis. 2007. "Democratization and Growth." CEDI Discussion Paper 07-13. London, United Kingdom: Brunel University. [http://www.cedi.org.uk/?q=system/files/CEDI\\_07-13.pdf](http://www.cedi.org.uk/?q=system/files/CEDI_07-13.pdf)
- Przeworski, A., and F. Limongi. 1993. "Political Regime and Economic Growth." *Journal of Economic Perspectives* 7: 51-69.
- Persson, T., and G. Tabellini. 2003. *The Economic Effect of Constitutions*. Cambridge, United States: MIT Press.
- . 2007. "The Growth Effect of Democracy: Is it Heterogeneous and How Can it be Estimated?" CEPR Discussion Paper 6339. London, United Kingdom:
- Rodrik, D., and R. Wacziarg. 2005. "Do Democratic Transitions Produce Bad Economic Outcomes?" *American Economic Review* 95: 50-56.
- Sala-i-Martin, X. 1997. "I Just Ran Two Million Regressions." *American Economic Review* 87: 178-83.

- Shleifer, A., and D. Treisman. 2005. "A Normal Country: Russia after Communism." *Journal of Economic Perspectives* 19, 151-174.
- Sonin, K. 2003. "Why the Rich May Prefer Poor Protection of Property Rights." *Journal of Comparative Economics* 31: 715-731.
- World Bank. 2007. *World Development Indicators*. Washington, DC, United States: World Bank. CD-ROM.
- World Value Surveys (various years): <http://www.wvs.org>

**Table 1. Variables Description**

Variable	Description
<b>Individual-Level Data</b>	
Preference for a strong leader	Some people favor, and others are against, having a strong leader in their country. The question in the survey is as follows: Would you say it is a (1) very good, (2) fairly good, (3) bad or (4) very bad way of governing this country having a strong leader who does not have to bother with a parliament and elections. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) very bad – (4) very good. <i>Source:</i> World Value Surveys (various years).
Approval of a democratic political system	The question in the survey is as follows: Would you say it is a (1) very good, (2) fairly good, (3) bad or (4) very bad way of governing this country having a democratic political system. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) very bad – (4) very good. <i>Source:</i> World Value Surveys (various years)
Agreement with opinion that says that in democracy economic system runs badly	The question in the survey is: Could you please tell me if you (1) agree strongly, (2) agree, (3) disagree or (4) strongly disagree with this statement “In democracy economic system runs badly”. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) strongly disagree – (4) agree strongly. <i>Source:</i> World Value Surveys (various years)
Agreement with opinion that says that democracies are indecisive and have too much quibbling	The question in the survey is: Could you please tell me if you (1) agree strongly, (2) agree, (3) disagree or (4) strongly disagree with this statement “Democracies are indecisive and have too much quibbling”. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) strongly disagree – (4) agree strongly. <i>Source:</i> World Value Surveys (various years).
Agreement with opinion that says that democracies aren't good at maintaining order	The question in the survey is: Could you please tell me if you (1) agree strongly, (2) agree, (3) disagree or (4) strongly disagree with this statement “Democracies aren't good at maintaining order”. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) strongly disagree – (4) agree strongly. <i>Source:</i> World Value Surveys (various years).
Agreement with the opinion that says that democracy may have problems but is better	The question in the survey is: Could you please tell me if you (1) agree strongly, (2) agree, (3) disagree or (4) strongly disagree with this statement “Democracy may have problems but is better than any other form of government”. Data is from the fourth wave of the survey (1997-2004). This variable scale was changed to: (1) strongly disagree – (4) agree strongly. <i>Source:</i> World Value Surveys (various years).
Income	A scale of incomes in which the household falls into, before taxes and other deductions. This variable takes values from 1 to 10, 1 being the lowest decile and 10 the highest. The data is recollected in local currency, scaled and then aggregated so the deciles represent a country level income ranking. <i>Source:</i> World Value Surveys (various years).
Education	The exact question in the survey is: What is the highest educational level that you have attained? (1) Inadequately completed elementary education, (2) Completed (compulsory) elementary education, (3) Incomplete secondary school: technical/vocational type, (4) Complete secondary school: technical/vocational type, (5) Incomplete secondary: university-preparatory, (6) Complete secondary: university-preparatory, (7) Some university without degree/higher education, (8) University with degree/higher education. This variable was changed to one with pseudo years of education, according to each level. <i>Source:</i> World Value Surveys (various years).
Age	Respondent's age. <i>Source:</i> World Value Surveys (various years).
Age – complete education	The age at which the respondent finished full-time education. <i>Source:</i> World Value Surveys (various years).
Gender	Gender of the respondent. (1) Female and (0) Male. <i>Source:</i> World Value Surveys (various years).

Marital status	4 dummies: (1) Married or living together as married, (2) Divorced, separated or widowed, and (3) Single. In all the regressions (3) is the omitted dummy. <i>Source: World Value Surveys (various years).</i>
Work status	Labor status composed of 6 dummies: (1) Employed (Part or full time), (2) Self-employed, (3) Retired/pensioned, (4) Housewife not otherwise employed, (5) Student, and (6) Unemployed. In all the regressions, dummy (1) is omitted. <i>Source: World Value Surveys (various years).</i>
Self-positioning in political scale	How the respondent place his/her views on the scale from (1) Left to (10) Right. <i>Source: World Value Surveys (various years).</i>
<b><i>Country-Level Data</i></b>	
Gini	The Gini index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. Data is from the last year available for each country. <i>Source: World Development Indicators (2007).</i>
Savings	Gross savings (% of GDP). Data is the mean of the last five years for each country. <i>Source: World Development Indicators (2007).</i>
Region	Region in which each country falls into: Africa, Asia, North America and Europe, Middle East and North Africa, and Latin America and the Caribbean. <i>Source: World Development Indicators (2007).</i>
Religion	Identifies the percentage of the population of each country that belonged to Catholic, Muslim or Protestant religion in 1980. For countries of recent formation, the data is available for 1990-95. <i>Source: La Porta et. al. (1999)</i>
Legal origin	Dummies that identify the origin of the commercial law of a country. Each variable equals one if it is French, Scandinavian or German Common Law (and zero otherwise), respectively. English Common Law is the omitted dummy. <i>Source: La Porta et al. (1999)</i>
Labor productivity	Defined as output per unit of labor input (persons employed). <i>Source: ILO (2005)</i>

**Table 2. Summary Statistics**

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Preference for a strong leader	76,878	2.12	1.03	1	4
Preference for a democratic political system	72,927	3.39	0.72	1	4
In democracy economic system runs badly	67,339	2.24	0.79	1	4
Democracies are indecisive and have too much squabbling	68,275	2.48	0.83	1	4
Democracies aren't good at maintaining order	68,507	2.25	0.82	1	4
Democracy may have problems but is better	70,117	3.27	0.75	1	4
Income	76,878	4.69	2.40	1	10
Education	76,297	10.58	4.13	3	16
Age	76,755	41.08	15.94	15	98
Age - complete education	66,356	19.13	5.65	3	97
Gender: female	76,878	0.50	0.50	0	1
Marital stat: married	76,878	0.63	0.48	0	1
Marital stat: divorced, separated or widow	76,878	0.12	0.32	0	1
Work status: unemployed	76,248	0.09	0.29	0	1
Work status: Self-employed	76,248	0.10	0.30	0	1
Work status: Retired	76,248	0.14	0.34	0	1
Work status: Student	76,248	0.07	0.26	0	1
Work status: Housewife	76,248	0.14	0.35	0	1
Self positioning in political scale	57,029	5.63	2.37	1	10
Gini Coefficient	57,721	37.05	9.11	25	58

**Table 3. Pairwise Correlations**

	Preference for a strong leader	Preference for a democratic political system	In democracy economic system runs badly	Democracies are indecisive and have too much squabbling	Democracies aren't good at maintaining order	Democracy may have problems but it is better
Income	-0.1038 (0.000)	0.0768 (0.000)	-0.1154 (0.000)	-0.1053 (0.000)	-0.1047 (0.000)	0.0547 (0.000)
Education	-0.068 (0.000)	0.0518 (0.000)	-0.077 (0.000)	-0.0662 (0.000)	-0.0824 (0.000)	0.0355 (0.000)
Age	0.0011 (0.738)	-0.0123 (0.000)	0.0176 (0.000)	0.0405 (0.000)	0.0413 (0.000)	0.0393 (0.000)
Age - complete education	-0.0863 (0.000)	0.0809 (0.000)	-0.0712 (0.000)	-0.0661 (0.000)	-0.0762 (0.000)	0.0454 (0.000)
Gender: female	0.0019 (0.571)	-0.0413 (0.000)	0.0438 (0.000)	0.0133 (0.000)	0.0272 (0.000)	-0.0291 (0.000)
Marital stat: married	0.0243 (0.000)	0.0095 (0.005)	-0.0089 (0.011)	-0.0165 (0.000)	-0.0023 (0.514)	0.0215 (0.000)
Marital stat: divorced, separated or widow	0.0131 (0.000)	-0.0471 (0.000)	0.0424 (0.000)	0.0516 (0.000)	0.0458 (0.000)	-0.0085 (0.012)
Work status: unemployed	0.0386 (0.000)	-0.027 (0.000)	0.0401 (0.000)	0.0219 (0.000)	0.0268 (0.000)	-0.0215 (0.000)
Work status: Self-employed	0.0007 (0.837)	0.0282 (0.000)	-0.014 (0.000)	-0.0074 (0.034)	-0.0027 (0.434)	-0.0042 (0.222)
Work status: Retired	0.0105 (0.002)	-0.0269 (0.000)	0.0346 (0.000)	0.0611 (0.000)	0.0527 (0.000)	0.0111 (0.001)
Work status: Student	-0.0141 (0.000)	0.0312 (0.000)	-0.0142 (0.000)	-0.0133 (0.000)	-0.0245 (0.000)	-0.0091 (0.008)
Work status: House wife	0.0295 (0.000)	-0.0056 (0.097)	0.0157 (0.000)	-0.0134 (0.000)	0.0132 (0.000)	-0.0083 (0.015)
Self positioning in political scale	0.0897 (0.000)	0.0206 (0.000)	-0.0208 (0.000)	-0.0118 (0.003)	0.0093 (0.019)	0.0245 (0.000)
Gini Coefficient	0.1057 (0.000)	-0.0156 (0.000)	0.0728 (0.000)	0.0498 (0.000)	0.055 (0.000)	-0.1002 (0.000)

**Table 4. Ordered Probits: Preference for a Strong Leader**

Dependent Variable: Preference for a Strong Leader			
	(1)	(2)	(3)
Income	-0.035 (0.008)***	-0.021 (0.004)***	-0.039 (0.016)**
Education		-0.026 (0.010)**	-0.001 (0.009)
Gender: female	0.004 (0.008)	-0.002 (0.006)	0.03 (0.013)**
Marital status: married	0.047 (0.017)***	0.008 (0.018)	0.099 (0.033)***
Marital status: divorced, separated or widow	0.074 (0.011)***	0.025 (0.010)**	0.09 (0.062)
Gini Coefficient			0.013 (0.005)**
Observations	76878	76297	57229
Pseudo R-Squared	0.09	0.09	0.01

Robust standard errors are in parentheses. All regressions include country dummies and standard errors adjusted for clustering by region with the exception of (3) which includes clustering at the country level, only as it has a country-level control and thus, country dummies cannot be included.

\* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Table 5. Ordered Probits: Preference for a Strong Leader**

	Dependent variable: Preference for a Strong Leader			
	(1)	(2)	(3)	(4)
Income	-0.023 (0.004)***	-0.038 (0.005)***	-0.03 (0.004)***	-0.035 (0.014)**
Education	-0.031 (0.008)***			-0.011 (0.008)
Age	-0.011 (0.001)***	-0.012 (0.002)***	-0.01 (0.001)***	-0.003 (0.002)**
Age squared	0.0001 (0.00001)***	0.0001 (0.00001)***	0.0001 (0.00001)***	
Age - complete education			-0.017 (0.004)***	
Gender: female	-0.007 (0.011)	-0.008 (0.011)	-0.014 (0.011)	0.003 (0.034)
Marital stat: married	0.083 (0.025)***	0.101 (0.024)***	0.072 (0.019)***	0.139 (0.027)***
Marital stat: divorced, separated or widow	0.09 (0.022)***	0.104 (0.022)***	0.083 (0.019)***	0.101 (0.045)**
Work status: unemployed	0.053 (0.024)**	0.071 (0.027)***	0.061 (0.026)**	0.071 -0.057
Work status: Self-employed	-0.042 (0.029)	-0.016 (0.028)	-0.038 (0.021)*	-0.015 (0.054)
Work status: Retired	0.039 (0.017)**	0.04 (0.008)***	0.029 (0.016)*	0.088 (0.038)**
Work status: Student	-0.067 (0.048)	-0.07 (0.052)	-0.04 (0.041)	-0.016 (0.049)
Work status: Housewife	0.009 (0.034)	0.058 (0.021)***	0.03 (0.030)	0.119 (0.097)
Gini coefficient				0.013 (0.006)**
Self positioning in political scale	0.02 (0.002)***	0.022 (0.002)***	0.022 (0.001)***	0.031 -0.022
Observations	56043	56506	50337	42292
Pseudo R-Squared	0.10	0.09	0.09	0.01

Robust standard errors are in parentheses. For regressions (1), (2) and (3), standard errors adjusted for clustering by region and each includes country dummies. In the case of (4), standard errors were adjusted clustering by country. \* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent.

**Table 6. Ordered Probits: Opinions of Democracy**

	Dependent variables									
	Preference for a democratic political system		In democracy economic system runs badly		Democracies are indecisive and have too much squabbling		Democracies are not good at maintaining order		Democracy may have problems but it is better	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Income	0.042 (0.008)***	0.027 (0.005)***	-0.049 (0.010)***	-0.037 (0.007)***	-0.043 (0.011)***	-0.034 (0.007)***	-0.043 (0.008)***	-0.03 (0.005)***	0.037 (0.012)***	0.025 (0.010)**
Education		0.027 (0.008)***		-0.022 (0.009)**		-0.016 (0.010)		-0.025 (0.009)***		0.022 (0.007)***
Gender: female	-0.087 (0.011)***	-0.08 (0.012)***	0.088 (0.013)***	0.084 (0.014)***	0.01 (0.006)*	0.006 (0.005)	0.045 (0.009)***	0.038 (0.007)***	-0.071 (0.012)***	-0.066 (0.014)***
Marital status: married	0.013 (0.014)	0.057 (0.018)***	0.031 (0.022)	-0.002 (0.016)	0.029 (0.034)	0.006 (0.024)	0.052 (0.026)**	0.014 (0.022)	0.062 (0.010)***	0.096 (0.011)***
Marital status: divorced, separated or widow	0.007 (0.019)	0.058 (0.026)**	0.056 (0.010)***	0.015 (0.014)	0.082 (0.014)***	0.054 (0.005)***	0.091 (0.014)***	0.046 (0.014)***	0.081 (0.017)***	0.122 (0.022)***
Observations	76926	76379	72162	71639	73255	72725	73465	72938	75678	75136
Pseudo R-Squared	0.06	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.07

Robust standard errors are in parentheses. For all the regressions standard errors adjusted for clustering by region and each one includes country dummies. \* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent.

## Appendix 1. Endogenization of Leaders' Quality

Suppose that there are two potential candidates for leadership who differ in their quality,  $1-\gamma^J$ ,  $J = L, H$ , where  $\gamma^H > \gamma^L$ .<sup>20</sup> The candidates first decide whether to compete for leadership; following Meissner and Polborn (2004) this is assumed to be costless. In case no one has entered the contest, their respective payoffs are normalized to zero. If only one of them, candidate  $J$ , enters, she becomes the leader, in which case her utility is  $U^J = f(\gamma^J) + \sigma^J + u$ , where  $u$  is given by (8).  $\sigma^J$  is the net psychic value of being in power; it can also be negative to reflect the possibility that the cost outweighs the ego rents of leadership. We assume that  $\sigma^J$  and  $\sigma^{-J}$  are only privately known and are identically independently distributed according to the cdf  $G$ . The utility of the other candidate then is  $U^J = f(\gamma^J)$ ,  $f' > 0$ . Thus, the “stay-out” candidate also benefits from the leader’s decision; this is the case, for example, if both candidates value social welfare, which increases with the leader’s quality.

If both candidates enter, voting takes place. Since individuals’ utilities decrease with diversion, or increase with the leader's quality, all prefer the higher-quality candidate, so that  $\gamma^H$  wins. We let  $p^J$  denote the probability of candidate  $J$  entering the contest. After the identity of the leader has been determined as above, the rest of the decision-making follows as in the preceding analysis. In particular, we note that because the tightness of legislative control is set so as to make the leader just indifferent between enforcing public protection of property rights and not,  $u = 0$ .

If candidate  $L$  stays out, her payoff is  $f(\gamma^H)$  if  $H$  enters and zero otherwise, whereas if she enters her utility is  $f(\gamma^H)$  if candidate  $H$  enters (and wins) or  $f(\gamma^L) + \sigma^L$  if  $H$  stays out. Thus,  $L$  always enters.<sup>21</sup> If  $H$  enters she wins, and her payoff is  $f(\gamma^H) + \sigma^H$ ; if she stays away, her payoff is  $f(\gamma^L)$ . Thus, she enters whenever

$$f(\gamma^H) + \sigma^H > f(\gamma^L), \text{ or } \sigma^H > f(\gamma^L) - f(\gamma^H)$$

Additionally, we have  $p^H = 1 - G(f(\gamma^L) - f(\gamma^H))$ , and  $p^L = 1$ , which pins down the Bayesian Nash equilibrium. With the probability  $1 - p^H = G(f(\gamma^L) - f(\gamma^H))$  no entry by high quality candidates takes place, and a low quality candidate become the leader. The basic intuition here is that

<sup>20</sup> We omit time subscripts for notational brevity and refer to  $\gamma$  as fully capturing leader’s quality. Also, an extension to more than two candidates is straightforward.

<sup>21</sup> It is assumed that the support of  $G$  exceeds  $-f(\gamma^L)$ .

leadership entails a public good element, but may be burdensome. Knowing that they are certain to lose the contest, low-quality candidates are less reluctant to enter and to risk assuming the leadership burden than high-quality candidates.

We thus obtain

**Proposition 4.** Low-quality candidates always enter the contest and become leaders provided that high-quality candidates refrain from entering.

## Appendix 2. Marginal Effects of Benchmark Specification

Dependent variable: Preference for a Strong Leader				
	Very bad	Bad	Fairly good	Very good
<i>Ordered probit</i>				
Income	0.0075	-0.0001	-0.0039	-0.0036
Education	0.0092	-0.0001	-0.0048	-0.0044
Gender: female	0.0008	0.0000	-0.0004	-0.0004
Marital status: married	-0.0029	0.0000	0.0015	0.0014
Marital status: divorced, separated or widow	-0.0090	0.0000	0.0047	0.0043
<i>Ordered probit with IV</i>				
Income	0.0280	0.0008	-0.0148	-0.0140
Education	0.0027	0.0001	-0.0014	-0.0013
Gender: female	-0.0012	0.0000	0.0006	0.0006
Marital status: married	-0.0169	-0.0004	0.0090	0.0084
Marital status: divorced, separated or widow	-0.0009	0.0000	0.0005	0.0005

Marginal effects based on benchmark specification, namely, column 2 in Table 4. Marginal effects ( $dy/dx$ ) test discrete change of a dummy variable from 0 to 1. Country dummies are included in all the regressions. Standard errors are robust and adjusted for clustering by region. In the ordered probit with instrumental variables, the first stage is a lineal probability model for income (or/and education). The instruments used were labor status dummies and the average country savings the previous five years.

**Appendix 3. IV Ordered Probits:  
Preference for Strong Leader**

	Ordered Probit with IV		
	(1)	(2)	(3)
Income	-0.09 (0.022)***	-0.079 (0.033)**	-0.177 (0.074)**
Education		-0.008 (0.015)	0.086 -0.067
Gender: women	0.005 (0.006)	0.003 (0.006)	0.039 (0.018)**
Marital stat: married	0.058 (0.016)***	0.048 (0.035)	0.234 (0.111)**
Marital stat: divorced, separated or widow	0.007 (0.011)	0.003 (0.015)	0.135 -0.165
Gini coefficient			0.018 (0.010)*
Observations	69229	68734	55165
Pseudo R2	0.09	0.09	0.00

Robust standard errors are in parentheses. All regressions include country dummies and standard errors adjusted for clustering by region with the exception of (3) which includes clustering at the country level, only as it has a country-level control and thus, country dummies cannot be included. In the ordered probit with instrumental variables, the first stage was estimated using a lineal probability model where exclusion restriction is met. The instruments used were individual work status dummies: unemployed, self-employed, retired, student and housewife (omitted: employed) and the average country savings the previous five years. In regression (3), the Gini coefficient was also instrumentalized with religion and legal origin. \* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent.

### Appendix 4. IV Ordered Probits : Opinion of Democracy

	Dependent variables									
	Preference for a democratic political system		In democracy economic system runs badly		Democracies are indecisive and have too much squabbling		Democracies aren't good at maintaining order		Democracy may have problems but it is better	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Income	0.052 (0.021)**	0.05 (0.060)	-0.108 (0.035)***	-0.154 (0.074)**	-0.100 (0.057)*	-0.137 (0.074)*	-0.119 (0.043)***	-0.105 (0.039)***	0.032 (0.021)	0.021 (0.061)
Education		0.001 (0.026)		0.03 (0.026)		0.024 (0.014)*		-0.009 (0.009)		0.008 (0.026)
Gender: female	-0.091 (0.013)** *	-0.09 (0.014)***	0.087 (0.016)***	0.09 (0.017)***	0.00 (0.007)	0.002 (0.007)	0.036 (0.006)***	0.034 (0.006)***	-0.078 (0.014)***	-0.077 (0.017)***
Marital status: married	0.001 (0.012)	0.005 (0.044)	0.036 (0.018)*	0.084 (0.059)	0.034 (0.031)	0.073 (0.051)	0.066 (0.020)***	0.051 (0.027)*	0.054 (0.005)***	0.067 (0.042)
Marital status: divorced, separated or widow	0.017 (0.034)	0.019 (0.030)	-0.025 (0.027)	-0.008 (0.019)	0.012 (0.045)	0.024 (0.040)	-0.005 (0.036)	-0.01 (0.038)	0.072 (0.022)***	0.078 (0.014)***
Observations	69387	68919	65226	64770	66192	65730	66353	65895	68338	67870
Pseudo R-Squared	0.06	0.06	0.03	0.03	0.04	0.04	0.04	0.04	0.06	0.06

Robust standard errors are in parentheses. All regressions include country dummies and robust standard errors adjusted for clustering by region. The first stage was estimated using a linear probability model where exclusion restriction is met. The instruments used were individual work status dummies: unemployed, self-employed, retired, student and housewife (omitted: employed) and the average country savings the previous five years. \* Significant at ten percent; \*\* significant at five percent; \*\*\* significant at one percent