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ABSTRACT

Inequality, Democracy and the Emergence of Institutions*

This Paper considers the emergence of institutions as a political outcome, arguing that the support for protection of private property rights is stronger the higher is the economy's aggregate income and the more equal its distribution. When these conditions initially hold, the politically influential rich elite may prefer to relinquish its power through democratization in order to commit future policy-makers to the enforcement of private property rights, thus ensuring larger investment and growth. In a very unequal economy, however, this growth-enhancing democratization will not take place. These conclusions are shown to be consistent with the existing historical and cross-country evidence.

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Keywords: democracy, inequality and property rights

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"The key problem is to find out why that sector of society then past, which I would not hesitate to call capitalism, should have lived as if in a bell jar, cut off from the rest, why was it not able to expand and conquer the whole of society?"

(Fernand Braudel, *The Wheels of Commerce*, 1982, p. 248)

1. Introduction

The importance of property rights protection for economic performance has long been recognized, at least since the times of Adam Smith.[1] More recent research documents this statistically, invariably finding that the rule of law, political stability, and respect of property rights enhance economic growth, see e. g., Easterly, 2001, 2002, Easterly and Levine, 1997, Hall and Jones, 1999. Moreover, Rodrik et al., 2002, claim that good institutions is the most important key to economic development that marginalizes other factors such as geographical conditions and trade openness.

Yet, countries differ much in the quality of their institutions. For example, the rule-of-law variable in the governance indicators' dataset compiled in Kaufman et al., 1999, varies from −2.2 (in Afghanistan) to 1.8 (in Finland). It is also interesting to compare the divergent performance of the transition economies over the past decade and a half in this regard. According to the latest Corruption Perceptions Index published by Transparency International for over 90 countries, Estonia is placed 28, and Hungary 31; whereas Russia is placed 79, and

[1] Cf., *"In all countries where there is a tolerable security, every man of common understanding will endeavor to employ whatever stock he can command…"* (Adam Smith, *The Wealth of Nations*, 1776, Book II, Ch.1)

Ukraine 83. De Soto, 2000, documents very vividly the stark difference in institutions and their use between advanced and less developed economies. He argues that, while in the former property rights protection extends to all sectors of the economy, in the latter only a fraction of it has access to capitalistic institutions. Following Braudel's citation above, he then ponders why this is so and how to broaden mass participation in these institutions.

Given that the decisions on law enforcement and on protection of private property are ultimately determined by a political process, this suggests that policy makers may or may not find it in their best interest to promote good institutions and policies leading to subsequent growth. These divergent routes can be illustrated by contrasting the economic and institutional histories of Britain and Russia in the 19th century. While the former entered this period with some kind of checks and balances on the monarchic appropriative power already in place, analogous system did not exist in the latter. Moreover, a substantial middle class emerged in Britain in the aftermath of the Industrial Revolution, whereas it sorely lacked in Russia. As a result, the gradual extension of the franchise in Britain in the course of the 19th century, accompanied and followed by changes in the political arena and social legislation, was not matched by similar processes in Russia (Pipes, 1995).[2] Although attempts at institutional reform there were made, as reviewed more in detail in a later part of the paper, they were too meager and came perhaps too late.

In a similar vein, Engerman and Sokoloff, 2002, contrast the colonial experiences in the Americas. They argue that the different distribution of factor endowments between North America and other colonies (be they British, Spanish or French) affected the patterns of settlement there. Consequently, while starting at about similar level of development in the 18th century (if at all, the US was poorer than some colonies in the Caribbean at that time),

[2] The importance of an early system of checks and balances in Britain as emphasized in North and Weingast, 1989, for the gradual democratization in the course of the nineteenth century through three Reform Acts, of 1832, 1867 and 1884, and its consequences for its institutional development have often been mentioned (see, e.g., Moore, 1966).

the former came to be dominated by the influx of European immigrants who imported their own institutions, whereas the latter never experienced massive immigration; instead, extractive colonial institutions were established there, with hierarchical structure and use of slavery. These differences, in turn, were translated into differences in income inequality and political participation across these colonies. The evolution of political franchise in the 19th century diverged in a significant way across these colonies, the US and Canada moving in a rapid pace toward adopting universal male franchise, while Latin American countries lagging far behind in this regard (Engerman and Sokoloff, 2001). Thus, in the United States by the year 1850 wealth requirements for voting were removed almost universally, and the fraction of voting population stood at around 13 percent; in contrast, in Brazil, both wealth and literacy requirements continued to exist almost 100 hundred years afterwards, in 1940, and the fraction of voters in the total population was less than 6 percent.[3] Engerman and Sokoloff, 2002, claim that this must have affected the patterns of asset accumulation and subsequent growth. They, in particular, link the development of public education to democratization noting that the US led the way in setting up a system of common schools and promoting literacy shortly after major advances in the rate of political participation, whereas in countries in South America and the Caribbean these processes were much delayed.

The above discussion suggests that the prevalence of the rule of law and the degree of enforcement of property rights in an economy, while conducive to its performance, are themselves endogenous, being determined, among other things, by political and economic conditions. Specifically, if strong institutions protect the poor, making appropriation of their income through rent seeking by the rich impossible,[4] then it follows that individual wealth

[3] In the United States, this fraction stood at 37.8% in 1940 (Engerman and Sokoloff, 2001).
[4] This is consistent with the view propagated in Adam Smith, 1776, that arbitrariness of expropriation by the rulers may have devastating consequences; he wrote: "…where men are continually afraid of the violence of their superiors, they frequently bury and conceal a great part of their stock… in case of being threatened with any of those disasters to which they consider themselves at all times exposed." (*The Wealth of Nations*, 1776, Book II, Ch.1)

determines to a large extent the attitudes towards the enforcement of property rights and, consequently, the distribution of wealth determines the political outcome in this regard. When the political machinery is controlled by small wealthy elite, it will not be interested in state protection against appropriative rent seeking despite its growth enhancing potential because rent seeking benefits the rich relatively more.[5]

Endogenizing political participation, we consider a situation where the elite initially holds political power and contemplates the possibility of allowing mass political participation. It is unable to directly commit itself to the enforcement of private property rights; rather, the decision in this regard is discretionary and is being made after the individuals have made their investment choices. Envisioning the adverse effects of rent seeking on the individuals' investment, hence aggregate growth, the elite may want to democratize so as to commit future government to enforce property rights protection. It faces a tradeoff, however, when – because of the existing polarization - democratization is expected to result in a major shift in subsequent policy making away from the preferred policy by the elite. Thus, eventual mass political participation will only occur if initial inequality is moderate or when the middle class is initially politically active. Then democratization will be followed by an increase in investment, whose fruits will be protected by the ruling government, reduced inequality and rapid growth. If, however, these initial conditions do not hold, then the elite will stick to power and, in anticipation of rent seeking, investment and growth will be small. In this case, the potential economic gains as a result of mass political participation with its commitment to the alleviation of rent seeking, will fail to be realized. The reason for this lies with the impossibility of the design of a social contract

[5]As noted by an influential commentator, "Those in power have no need of courts and laws to have their way; it is the poor and the weak who do. Anyone who doubts this proposition has only to compare the general condition and the sense of security of the lower orders in areas with weak legal traditions, as for example south-east Asia, with those like western Europe and the United States where they are deeply entrenched." (Richard Pipes, 1995, p. 289).

whereby the poor masses – who disproportionately gain from democratization – compensate the rich elite after the new government has been formed.

This paper is related to several branches of the literature. One literature is that on rent seeking as appropriative activity. Skaperdas, 1992 (see also Grossman and Kim, 1995) is an important early contribution that studies the allocation of resources between production and appropriation, albeit in a static setting; Konrad, 2002, extends that framework to study the effect of rent seeking on investment; and Konrad and Skaperdas, 1998, provide further analysis of the emergence of the market for property protection. This paper extends this literature in several regards. For one, the dynamic framework offered enables us to focus on growth and distributional implications of rent seeking. In addition, while in these studies the amount of rent seeking is either determined by market forces or by a benevolent planner, here the focus is on a political choice. Finally, this paper emphasizes the importance of credit constraints, which that literature typically ignores.

Another branch examines how economic conditions affect the potential emergence of the rule of law and property rights enforcement. Gradstein, 2003, relates this to the economy's level of economic development, arguing that a poor economy may lack the resources needed to make an adequate investment in institutions. Glaeser et al., 2003, and Sonin, 2002, focus instead on income distribution, asserting that an equal income distribution is a more fertile ground for good institutions. The analysis below is closely related to all these papers by emphasizing the role of credit constraints in affecting the ability of the poor to make adequate investments.

Our main contribution relative to the above studies is that here, political participation which in those papers is taken as given, is endogenized. In this regard, this study is linked to the papers Acemoglu and Robinson, 2000, 2001 and Bertocchi and Spagat, 2001. In these papers, the rich may prefer to extend political franchise in order to alleviate the threat of

violent appropriation by the poor, the empirical implication being that franchise extension should follow manifestations of civil unrest. Here we offer a complementary explanation arguing that the rich may want to democratize so as to create a credible commitment to the enforcement of private property rights, indicating in particular that this may occur peacefully, without accompanying social tensions.[6] While in the former papers the poor have the access to the appropriation technology, the view proposed here is that, in the absence of adequate law enforcement procedures it is the rich who are likely to gain from appropriation. The analysis of gradual enfranchisement below is also related to Justman and Gradstein, 1999, who focus on redistributional issues, and to Bertocchi, 2002, who presents a multi-sector view of development where economic and political factors interact.[7] Our interpretation of property rights enforcement as a mechanism of time-consistent commitment is related to the interesting paper Fleck and Hanssen, 2002, which provides an account of the evolution of democratic institutions in ancient Greece in this regard; see also Olson, 1993, for an informal articulation of this view.[8] Finally, this paper can be viewed as generating analytical underpinnings for the important insights on the historical evolution of institutions in the New World provided by Engerman and Sokoloff, 2001, 2002, and for the cross-country findings about the significance of the middle class for investment and growth, as in Perotti, 1996, and Easterly, 2001, 2002.

The rest of the presentation is organized as follows. The next section introduces the basic model, whose initial analysis is conducted in Section 3. The main basic results are presented in Section 4 and then extended to consider gradual democratization in Section 5. Section 6 discusses some relevant historical experiences and empirical evidence, and section 7 concludes with brief remarks.

[6] The violence theory is arguably better suited to understand episodes of democratization in some countries (such as Britain) than in others (such as the United States).

[7] There is also a well established research program in political science which relates democratization to the level of economic development and income inequality, see e.g., Lipset, 1959, Muller, 1988.

2. Rent seeking versus property rights

Consider an economy populated by a measure one of households indexed by i, each consisting of a parent and child, operating in discrete time t. The initial level of household i's income is exogenously given at y_{io}, and the income level in period t, y_{it} is determined endogenously. The initial income distribution, F_0 is given, and the distribution in a subsequent period t, F_t, is endogenously determined. We assume that, initially, income distribution is typically skewed, so that its median is below its mean; the assumptions below will imply that the same holds subsequently too. In each period, the households' income is allocated between consumption and investment.

In general, the individuals allocate resources between consumption, c_{it}, productive investment, k_{it+1}, and unproductive investment in rent seeking, r_{it+1}. Normalizing all prices to one, the budget constraint then is

$$y_{it} = c_{it} + k_{it+1} + r_{it+1} \tag{1}$$

Under the regime of full protection of property rights (PR), the production function depends only on the productive investment and is given by:

$$y_{it+1} = A\, k_{it+1}{}^{a},\ A > 0,\ 1/2 < a < 1 \tag{2}$$

Note that this formulation assumes away any direct costs of enforcing the property rights regime. As will become clearer subsequently, the effect of such costs – provided that their funding is through proportional income tax – would be to uniformly decrease the support for property rights protection across the individuals; the substantive part of the analysis would remain, however, intact.

[8] The implications of time consistent rules for growth are studied in Gradstein, 2002.

Alternatively, under the rent seeking regime (RS) the state does not enforce property rights protection so that the net capital endowment, k_{it+1}, is determined jointly by productive and unproductive individual investments as follows:

$$k_{it+1} = k_{it+1}\ r_{it+1} \int_0^1 k_{it+1} di / \int_0^1 k_{it+1} r_{it+1} di$$

This formulation embodies complementarity between the two types of investment and, in particular, implies that the marginal value of rent seeking is larger for larger investors in productive capital. Because both types of investment are being endogenously determined, this specification, while being closely related to, generalizes previous formulations which rely on complementarity between rent seeking and an exogenously given productivity parameter, see e.g., Gradstein, 1995; Skaperdas, 1992, contains a conceptually similar yet different specification.[9]

The economy's production function then is

$$y_{it+1} = A\ k_{it+1}{}^{a} = A\ [k_{it+1}\ r_{it+1} \int_0^1 k_{it+1} di / \int_0^1 k_{it+1} r_{it+1} di]^{a} \tag{3}$$

It is assumed that, initially, the rent seeking regime prevails.

Each parent's preferences derive from consumption as well as from the amount of income accrued to the child. Assuming for simplicity symmetric logarithmic preferences, we write the expected utility:

$$V(c_{it}, y_{it+1}) = \ln(c_{it}) + \ln(y_{it+1}) \tag{4}$$

The level of democratization will be represented by the fraction of enfranchised individuals.

[9] Note that the aggregate levels of gross and net investment are equal, so rent seeking just redistributes income; and the existence of credit constraints suggests that the rich are more likely to benefit from this redistribution.

We will assume that income determines enfranchisement, so that only the households whose income exceeds $\underline{y}_t$ are enfranchised. A direct interpretation of this threshold is the property and literacy requirements which were widespread until quite recently in many parts of the world, including Europe and the Americas (for an excellent review of the latter, see Engerman and Sokoloff, 2001, which is partly summarized below).[10] In each period, all decisions in the economy are made by the parents. In particular, the enfranchised parents first determine by majority voting the new franchise. Then a decision on the institutional regime is made by the entitled voters, and the consumption-investment choices are individually made.

3. **Equilibrium analysis**

This section's analysis sets the stage for the subsequent analysis of enfranchisement. In particular, throughout this section it is assumed that the enfranchisement threshold is exogenously given.

3.1. Consumption-investment choices

We first present the equilibrium consumption-investment choices for each type of institutional regime. Under rent seeking, maximization of the individual utility function (4) with respect to productive investment and rent seeking outlays subject to the budget constraint (1) and the production function (3) yields the following equilibrium choices:

$$c_{it}^{RS} = y_{it} / (1+2a),\ k_{it+1}^{RS} = r_{it+1}^{RS} = a y_{it} / (1+2a),\ \int_0^1 k_{it+1} di = a Y_t / (1+2a) \qquad (5)$$

[10] Even where suffrage is universal, however, political activism is strongly correlated with income – see, e.g., Rosenstone and Hansen, 1993, for the evidence in the US and Verba et al., 1978, for a cross-country evidence.

the future income level:

$$y_{it+1}^{RS} = A[y_{it}^2 (a\ Y_t / (1+2a))/ E(y_{it}^2)]^a \tag{6}$$

and the utility level

$$V_{it}^{RS} = \ln[y_{it} / (1+2a)] + \ln \{A[y_{it}^2 (a\ Y_t / (1+2a))/ E(y_{it}^2)]^a\} \tag{7}$$

From (6), summing up across the individuals, the average next-period income is

$$Y_{t+1}^{RS} = A[a/(1+2a)]^a [E(y_{it}^{2a})/ E(y_{it}^2)^a] Y_t^a \tag{8}$$

Moreover, because (6) is a convex function of individual income (as $a > 1/2$ by assumption), it follows that income variability increases over time.

With the enforcement of property rights, individual utility maximization with respect to productive investment and rent seeking outlays subject to the budget constraint (1) and the production function (2) yields the following equilibrium choices:

$$c_{it}^{PR} = y_{it}/ (1+a),\ k_{it+1}^{PR} = a\ y_{it}/ (1+a) \tag{9}$$

the future income level:

$$y_{it+1}^{PR} = A\ [a\ y_{it}/ (1+a)]^a \tag{10}$$

and the utility level

$$V_{it}^{PR} = \ln[y_{it}/ (1+a)] + \ln \{A\ [a\ y_{it}/ (1+a)]^a\} \tag{11}$$

From (10), there is income convergence over time, and the average future income is:

$$Y_{t+1}^{PR} = A\ [a\ / (1+a)]^a E(y_{it}^a) \tag{12}$$

Comparison reveals that the regime of property rights protection, by alleviating wasteful rent seeking, generates higher total net investment than the rent seeking regime.[11] Moreover, comparing next-period incomes we obtain:

$$Y_{t+1}^{RS} - Y_{t+1}^{PR} = A[a/(1+2a)]^a\,[E(y_{it}^{2a})/E(y_{it}^2)^a]\,Y_t^a - A\,[a/(1+a)]^a\,E(y_{it}^a)$$

Since y_{it}^2 is a convex transformation of income, it follows from the standard results on the behavior under uncertainty that $E(y_{it}^{2a})/E(y_{it}^2)^a < E(y_{it}^a)/Y_t^a$,[12] implying that the next-period income, hence, the growth rate, are higher under the property rights regime.

Collecting the results,

Proposition 1. Under the property rights regime income variability decreases whereas under the rent seeking regime it increases over time; and the economy's net investment and average income growth rate are higher under the former.

3.2. Regime commitment

It will be useful to separately conduct the analysis of the regime choice depending on whether commitment to an institutional regime is possible or not. Here we suppose that the regime choice is made by majority voting among the enfranchised parents, in anticipation of the consumption-investment decision characterized above.

Comparing the two regimes from the viewpoint of an individual household we obtain:

$$V_{it}^{PR} - V_{it}^{RS} = \ln[y_{it}/(1+a)] + \ln\{A\,[a\,y_{it}/(1+a)]^a\} - \ln[y_{it}/(1+2a)] -$$

$$\ln\{A[y_{it}^2(a\,Y_t/(1+2a))/E(y_{it}^2)]^a\} = (1+a)\ln[(1+2a)/(1+a)] + a\ln[E(y_{it}^2)/y_{it}Y_t] \qquad (13)$$

The welfare differential (13) decreases in income so that richer individuals stand to gain

[11] As $\int_0^1 k_{it+1}\,di = a\,Y_t/(1+a) > \int_0^1 k_{it+1}\,di = a\,Y_t/(1+2a)$.

relatively less than the poor from the property rights regime. This, in turn, implies that the median income household's vote among the enfranchised is decisive. Letting subscript "d" denote that household, the individuals will choose protection of property rights if and only if the welfare differential is positive:

$$(1+a)\ln[(1+2a)/(1+a)] + a\ln[E(y_{it}^2)/y_{dt}Y_t] > 0 \tag{14}$$

where the identity of the decisive voter is determined from:

$$F_t(y_{dt}) - F_t(\underline{y}_t) = 1/2 \tag{15}$$

Inspection reveals that the political preference for protection of property rights decreases with the political bias in favor of the rich, which in turn increases with the franchise threshold. When the franchise threshold (hence, because of (15), the income of the decisive voter y_{dt}) is low, then protection of property rights prevails, and if the threshold is large enough, rent seeking will be the choice of the decisive majority.

Because rent seeking leads to slow average income growth and, in particular, slow income growth among the poor, a Pareto improving arrangement would be for the rich to choose property rights protection and to be compensated for this. Incomplete contracting, however, makes this difficult to implement.

3.3. Lack of commitment

We assume that a ruling coalition cannot directly commit itself to the enforcement of property rights in a credible way, so that the consumption-investment choices are made

[12] This is analogous to the claim that the risk premium is higher the more risk averse the individual is.

simultaneously with the political determination of the institutions. Arguably, this is a realistic scenario:

> "To be sure, the rational autocrat will have an incentive, because of his interest in increasing the investment and trade of his subjects, to promise that he will never confiscate wealth or repudiate assets. But the promise of an autocrat is not enforceable by an independent judiciary… History provides not even a single example of a long and uninterrupted sequence of absolute rulers who continuously respected the property and contract-enforcement rights of their subjects." (Olson, 1993, p. 572)

The analysis proceeds backwards. At the last stage of the decision making process the enfranchised voters collectively determine the property rights regime and make their investment decisions. Comparing the utility levels under the two regimes from an individual viewpoint, the property rights regime is preferred if and only if

$$-\ln r_{it+1} - \ln \left[\int_0^1 k_{it+1} di \Big/ \int_0^1 k_{it+1} r_{it+1} di \right] > 0 \qquad (16)$$

The respective individually optimal investment decisions under each regime are given as in the above analysis. At the equilibrium, these decisions should be taken along with (16). Employing this and because the identity of the decisive voter is given by (15), simple calculations confirm that the property rights regime will emerge in the political equilibrium if and only if

$$\ln y_{dt} < \ln[E(y_{it}^2)/ Y_t] \qquad (17)$$

Thus, as in the previous case, if the income of the decisive voter is large enough, the rent

seeking regime will be preferred, and if it is sufficiently small, the regime of full property rights protection will constitute the equilibrium choice.

To sum up,

Proposition 2. Both with and without commitment to an institutional regime, the richer an individual the more favorable she is toward inefficient rent seeking; and when the political bias in favor of the rich (the franchise threshold, hence the policy maker's income) is large enough, rent seeking will be preferred by the politically decisive elite.

This has direct dynamic implications for the economy's evolution which will be more fully explored in the next section.

4. Democratization

The previous analysis has taken the level of democracy as given, ignoring the emergence of democratic institutions. These, however, are in a sense most fundamental. In particular, the episodes of democratization – such as the emergence of universal male suffrage in the course of the nineteenth century Britain, female suffrage movement in several European countries and the US in the twentieth century, voting franchise of the African Americans in the South of the United States – have all been dramatic events in the histories of these countries, and their incidence took place over relatively long period of time. While the decisions on the rule of law and on the extent to which private property rights are enforced are also evidently extremely important, they are nevertheless secondary to the political system and ultimately reflecting the will of politically active ruling groups; in other words, arguably, it may be impossible for a ruler to directly commit himself to the enforcement of property rights. Even if these are legally protected their enforcement is a political decision, so that the only possible

means to commit future generations to enforce property rights is indirect, by shaping the political decision making process.

Because in our framework voting franchise fully determines the identity of the decisive voter, in this section we endogenize the democratization process, assuming that the initial franchise threshold, $\underline{y}_0$, is given and determining future thresholds $\underline{y}_t$. The franchise decision is made first by currently decisive majority, upon which the newly enfranchised majority determines the institutional regime, and the individuals simultaneously make their consumption-investment choices.

From equation (15), the determination of the voting franchise, $\underline{y}_t$, is tantamount to the determination of the identity of the decisive voter in the institutional choice stage. Comparing (14) and (17), when the median income of the currently enfranchised is high enough, he will prefer rent seeking at both ex ante and ex post stage; likewise, if his income is low enough, he will prefer full property rights protection at both stages. In these cases, the currently enfranchised majority has no incentive to relinquish its powers by lowering the franchise threshold. Recall that, when the majority consists of wealthy elite and, therefore, implements the rent seeking regime, the economy grows slowly and inequality increases. A Pareto improving social contract would then be for the rich to extend the franchise and to get compensated for this by the poor. This, however, seems impossible to implement as the newly enfranchised majority will always have an incentive to renege, and the rich will not have the political power to enforce the contract.[13]

When the income of the currently decisive voter is in the intermediate range, however, more precisely,

$$\ln[E(y_{it}^2)/Y_t] < \ln y_{dt} < \ln[E(y_{it}^2)/Y_t] + (1+a)\ln[(1+2a)/(1+a)]/a \qquad (18)$$

[13] Acemoglu and Robinson's, 2000, model also exhibits this feature in a related but different setting.

then, as revealed by comparing (14) and (17), the current majority prefers protection of property rights *ex ante*, but is better off under rent seeking *ex post*, the reason being the different constraints faced by the policy maker whose regime choice affects investment decisions only in the *ex ante* scenario. In this case, it will want to delegate the decision making power to an individual with a lower income by decreasing the franchise threshold so as to commit the future decisive majority to choose its preferred level of property rights protection.

To sum up,

Proposition 3. When the decisive policy maker belongs to the rich elite, franchise will not be extended despite its growth and welfare enhancing potential. Only when the policy maker's income is in the intermediate range, will the franchise be extended in order to commit the future governments to the regime of property rights protection.

To examine the dynamic implications of this analysis, recall that the initial franchise threshold is high, so that the wealthy control the political machinery. If initial inequality is high and the rate of income growth is slow, the share of individuals with income above the initial voting franchise $\underline{y}_0$ will not rise. This implies that the identity of the decisive voter will not change, and the rich will continue to constitute the ruling elite. As a result, there will be no democratization, rent seeking will prevail, accompanied with sluggish growth and rising inequality. If, in contrast, the initial franchise threshold is relatively low, inequality is small, or the productivity parameter is large so that the poor experience significant income growth, then the fraction of enfranchised individuals will increase over time. This will cause the shift of the political power to the middle income group, which then may lower the franchise threshold causing massive political participation. This, in turn, will result in the adoption of

the property rights regime, increase in the growth rate and reduction in inequality. This latter trajectory is consistent, therefore, with the Kuznets curve resulting from political transition.

Proposition 4. Ultimate democratization depends on initial conditions. If the middle class is initially enfranchised or if the initial inequality is relatively low and the economy is productive enough to generate income growth among the poor, democratization will eventually follow, resulting in protection of property rights, lower inequality and faster growth. Otherwise, the economy will be ruled by wealthy elite and rent seeking will prevail, generating slow growth and high inequality.

5. Gradual democratization

In contrast to the previously considered scenario, in reality democratization typically occurs gradually, evolving over time. Thus, in nineteenth century Britain universal male suffrage was achieved as a result of three major legislation acts over the period of more than five decades. To allow for this gradual evolution, we now extend the model by considering the determination of the level of property rights protection. Following Sonin, 2002, consider a generalization of the relationship between gross and net investment mediated through rent seeking

$$k_{it+1} = k_{it+1}\, r_{it+1}^{\,1-P_{t+1}} \int_0^1 k_{it+1} di \Big/ \int_0^1 k_{it+1} r_{it+1}^{\,1-P_{t+1}} di, \quad 0 < P_{t+1} < 1$$

where P_{t+1} is interpreted as the level of property rights protection; $P_{t+1} = 0$ corresponds to the rent seeking regime and $P_{t+1} = 1$ corresponds to the property rights regime considered above. The production function is now modified as follows:

$$y_{it+1} = A\ k_{it+1}{}^{a} = A\{\ [k_{it+1}\ r_{it+1}{}^{1-P_{t+1}} \int_0^1 k_{it+1} di / \int_0^1 k_{it+1} r_{it+1}{}^{1-P_{t+1}} di\ ]\ \}^{a} \tag{19}$$

Also suppose that the population consists initially of three income groups identified by their income level y_{it}, $i = p, m, r$, and their composition size, q_i, $q_p + q_m + q_r = 1$, where we assume that the rich constitute the minority, $q_r < q_p + q_m$.[14] This assumption of discrete number of income groups will play an important role in the analysis below, but it is also quite realistic to suppose that, at least for political purposes the individuals are organized into distinct income classes.[15] Only the rich are initially enfranchised. As in the above analysis, they first decide on whether to extend the franchise; then the individual consumption-investment decisions and the collective decision on the degree of property rights protection are made.

The optimal investment levels and the resulting income are:

$$k_{it+1} = a y_{it} / (1+2a-a\ P_{t+1}),\ r_{it+1} = a y_{it} (1-P_{t+1}) / (1+2a-a\ P_{t+1}),$$

$$y_{it+1} = A\ \{[a Y_t / (1+2a-a\ P_{t+1})]\ [y_{it}{}^{2-P_{t+1}} (1-P_{t+1})^{1-P_{t+1}} / \int_0^1 y_{it}{}^{2-P_{t+1}} di\ ]\ \}^{a} \tag{20}$$

This, in particular, indicates that income inequality increases over time as long as the degree of property rights protection is low enough, $P_{t+1} < 2 - 1/a$.

Assuming for expositional brevity an internal solution, the individually optimal level of property rights protection is given by:

$$-\ln r_{it+1} + \int_0^1 k_{it+1} r_{it+1}{}^{1-P_{t+1}} \ln r_{it+1} di / \int_0^1 k_{it+1} r_{it+1}{}^{1-P_{t+1}} di = 0, \quad 0 < P_{t+1} < 1 \tag{21}$$

and differentiation reveals that the preferred level of property rights protection decreases in

[14] Because the group size will remain constant, the time subscript is omitted.
[15] It will become evident from the analysis below that, with a continuous distribution of income, franchise extension would have occurred in every period.

income.

If it was possible to commit to a level of property rights protection, the individuals' preferred choice would take into account its positive effects on productive capital accumulation; in particular, the first order condition, upon invoking the envelope theorem, would be as follows:

$$-\ln r_{it+1} + \int_0^1 k_{it+1} r_{it+1}^{1-P_{t+1}} \ln r_{it+1} di / \int_0^1 k_{it+1} r_{it+1}^{1-P_{t+1}} di + a / (1+2a - a P_{t+1}) + 1 = 0 \qquad (22)$$

Comparison with (21) reveals that – because the added term in the left-hand side of (22) is positive and since the left-hand side is a decreasing function of P_{t+1} – for every individual, the optimal level of property rights protection is higher when chosen *ex ante* the investment choices. This observation implies that each individual may have an incentive to delegate the decision making power with regard to the level of property rights protection to a poorer individual than himself.

INSERT FIGURE 1 HERE

Consider the decision by the initially enfranchised rich on the extension of the franchise. Because of the discrete number of income groups, whether or not this will happen depends on the identity of the newly enfranchised decisive voter. As is shown in Figure 1, franchise extension will only take place if that voter's preferences with regard to the desired level of property rights protection are not too remote from those of the rich.[16] In this figure, P^O denotes the decisive voter's optimal level of property rights protection had he had the ability to precommit; P^* denotes the equilibrium level without commitment; and V^* denotes

[16] For notational brevity, the time subscript will be omitted.

the decisive voter's equilibrium utility level. It should be clear that extension of the franchise will benefit the currently decisive voter only if the resulting equilibrium will yield the utility level higher than V^*, which would be the case if the new equilibrium will result in the level of property rights protection in the interval (P^*, P^{**}). Suppose, for instance, that the income of the poor is low enough so that with them being decisive, the equilibrium level exceeds P^{**}; this implies that the rich will not be interested to extend the franchise to the poor. Also, assume that the middle group is larger than the rich group.[17] Then franchise will be extended only if the former group is not too impoverished, so that its preferred level of property rights protection is within the above interval.[18]

The above arguments set the stage for the analysis of the dynamic evolution of the economy. Assuming that $q_p > q_m > q_r$, if the economy is initially poor with high inequality, then the rich will not find franchise extension in their best interest. If the level of property rights protection under such circumstances is low (so that $P_{t+1} < 2 - 1/a$), inequality will further increase. In this case, low level of property rights protection and high inequality will reinforce each other over time resulting in limited franchise. In contrast, if the economy is well developed initially and the distribution of income is relatively equal, the level of property rights protection chosen by the rich will be relatively high, $P_{t+1} > 2 - 1/a$, implying a decrease in inequality. But then eventually a point in time will be reached when political transition will take place, and franchise will be extended to include the middle class. This will only reinforce the forces indicated above, implying a gradual extension of the franchise when inequality has further decreased.

We summarize,

[17] Note that if the middle income group is small, in particular, less numerous than the rich, then the franchise will not be extended.

[18] Likewise, if the political power currently belongs to the middle class, franchise will only be further extended if the poor are numerous enough and if their income level is sufficiently close to that of the middle class group.

Proposition 5. Only if the initial conditions are favorable (high average income, low inequality) will the franchise be gradually extended resulting in higher levels of property rights protection; otherwise, the rich elite will continue to rule, inequality will increase, and property rights protection will remain low.

6. Evidence

This section provides some supportive evidence for the above theory. We first describe the very divergent institutional developments in Russia and the United States in the 19th century arguing that some of their features are broadly consistent with the presented model and then turn to contemporary cross-section evidence for additional support.

6.1. Historical experience

Russia. It would be instructive to contrast the account of Russia's institutional history with that of the well known institutional evolution in Britain. Britain had had a long history of continuous struggle between the monarchy and the nobility, from the Magna Carta to the Glorious Revolution. It entered the nineteenth century as a well constrained monarchy, with an independent judiciary and a Bill of Rights. As a result, individual rights to property and contract enforcement were relatively secure prior to the Industrial Revolution. The latter further reinforced the status of commercial interests and the bourgeoisie, which had already possessed considerable strength as a power broker in the confrontation between the monarchy and the nobility. The Reform Acts of 1832 and 1867 gave formal recognition to the already existing political power of the middle class.

Russia's initial conditions upon entering the 19th century differed in several important

respects from those of more advanced European countries, such as Britain. First, Russia did not have the history of struggle between the nobility and monarchy. The nobility was relatively powerless and its status much dependant on the monarchy. While often enjoying substantial material benefits in the form of land and estate ownership, it was reluctant in promoting its interests through political struggle. Second and related to the former, both the state and nobility traditionally assumed a very paternalistic role toward their subjects. They were perceived as not only being responsible for protection against external threats, but also for daily routine of the populace. Third, money economy was almost non-existent, implying that monetary interests in the form of the bourgeoisie were not represented in any power struggle. Many of the trade and commerce functions typically performed by various population groups, in Russia were the privilege of the nobility, which virtually held monopoly rights over mining and metallurgy – vital industries of the time. Early in the century, a few nobility families owned 64 percent of the mines, 66 percent of the glass manufactures, and 80 percent of the potash works (Pipes, 1995, p. 212).

As a result, there virtually was no middle class in Russia in the beginning of the nineteenth century. It only started taking shape later on, in the aftermath of the Decembrists uprising of 1825. The emergence of an educated *intelligentsia* in that period created a push toward the judicial and social legislation of the 1860s. One of the pillars of this reform, the emancipation law of 1861, was the abolishment of serfdom, which signified probably for the first time the acknowledgment by the ruling elite of private property rights of broad masses of the population. Another important piece of legislation was the judicial reform of 1864. Prior to that period, justice formed a part of the administration, which was a major difference between the social order in Russia and western European countries of the time. In the latter, some kind of separation of the judicial process from the state – first introduced in Rome by the second century BC - has existed since the 14th century; this, in itself, implies an element

of property rights and individual autonomy from administrative powers. In contrast, in Russia – in accordance with the very paternalistic view of the state – all legal matters, whether commercial, criminal, or even family, were decided by state appointed courts (Pipes, 1995).[19] The reform did envision some autonomy for the judiciary, although it was never fully implemented. A third important ingredient of the reform was the creation of regional autonomy, the *zemstvo*, in most of the provinces. This provided an opportunity for the *intelligentsia* to assert its influence, if not on a state scale, at least in local affairs.

While there is controversy among the historians as to how successful the Great Reforms were in modernizing Russia's institutions, it is clear that their main objective was to preserve the power of autocracy and aristocracy. The tsar Alexander II was vehemently opposed to any significant checks on absolutism, as a result of which the establishment of a meaningful national legislative assembly was delayed by several decades (Seton-Watson, 1967, Walkin, 1962).[20] Nevertheless, it was an important beginning of a process, which is claimed to have given the push for the subsequent rapid industrialization of the 1890s under the able leadership of finance minister Sergei Witte. The modernization process, however, failed to benefit broad groups of the population. Concentration of business ownership in Russia significantly exceeded that in other European countries, implying that the fruits of modernization were reaped by a relatively small group. While the abolishment of the serfdom generated the opportunity for labor mobility in farming, in the absence of an agrarian reform many peasants found themselves worse off in the aftermath of the reform, especially as now they had to meet burdensome fiscal obligations, the Redemption Payments, which were further exacerbated by high natural population growth and collapse of the traditional

[19] Because the distinction between the private and the public spheres was blurred, state officials, including the judiciary, were perceived not as executives acting in the interests of the public, but rather as enforcers of the autocratic rule. Limitations on the arbitrariness of their actions were minimal, and they took after their own private interests not less than after their duties; corruption in Russia achieved formidable proportions and became part of its folklore.

[20] Limited representation on a local scale was introduced through municipal *dumas* in 1870.

commune life. It is estimated that in 1900 between a quarter and a half of a peasant's needs were covered by farming, which implies that they had to enter the status of semi-serfs voluntarily (Pipes, 1995, p. 168). After semi-constitutional legislation was introduced in early 1900s (Witte acting now as the prime minister), it encountered a polarized Russia with a growing resentment by the emerging proletariat, a new tsar Nikolai II desperately clinging to power, and a still weak middle class. The historical backwardness that continued to permeate Russia well into early twentieth century was a major impediment for a successful development.

The United States. Recent studies of the historical evolution of democratic institutions in the Unites States, such as Keyssar, 2000, and Engerman and Sokoloff, 2001, provide further pieces of evidence broadly consistent with the theory presented above. In particular, the comparative account by the latter authors of franchise restrictions in the United States, among the states themselves and versus Latin American countries, emphasizes the significance of inequality for shaping democratic institutions.

The thirteen colonies that initially formed the United States all had some kind of property requirements, mostly based on land holdings, for franchise. Levels of enfranchisement varied a great deal by location. They were higher in New England and in the South than in the mid-Atlantic colonies; and higher in new, sparsely populated settlements than in more established and densely populated ones (Keyssar, 2000, p. 7). Nevertheless, because the distribution of wealth was relatively equal, the franchise was quite extended overall even prior to the Revolution. According to some estimates (Williamson, 1960), between 50 and 60 percent of all adult men were allowed to vote. Franchise was further extended in the decades following the Revolution, so that in 1790 between 60 and 70 percent of all adult men were eligible to vote (Keyssar, 2000). In the first half of the

eighteenth century most of property restrictions were gradually removed, significantly increasing the eligible voting population. Colonies that joined the federation typically lead the way in this regard and were followed by the original thirteen colonies. There are several theories that explain this pattern, one of them being that the distribution of wealth in the new colonies was more equal than in the old ones. As a result, while in the 1824 presidential elections only slightly more than a quarter of white adult men voted, this percentage increased to three quarters in the elections of 1844; in some of the newly joined colonies the percentage was much higher than that – 94 percent in Georgia, 89.7 in Mississippi, 89.6 percent in Kentucky (Engerman and Sokoloff, Table 2). By 1856 all states eliminated property qualifications, although some (Pennsylvania and Rhode Island) continued practicing tax-paying qualifications long afterwards.

The 1840-50s witnessed an unprecedented surge in immigration to the United States, especially from Ireland and Germany causing a population increase of about 20 percent. Many of these immigrants lacked any sizeable capital or marketable skills, and they took jobs in factories, construction, and transportation. In some urban areas in the East Coast, newly arrived immigrants formed up to a quarter of the population, and their percentage among the workers was much higher. Many of the immigrants were poor and Irish Catholics, which led to a backlash of the native population, both along the class and the ethnicity dimensions. The nativist movement, which became known as the Know Nothings and whose purpose was to impose various restrictions, in particular, concerning the franchise, on immigrants, gained substantial political power in the 1850s. The outcome was franchise restrictions, never on a federal level but on local and state levels, such as the use of literacy tests, which although almost never imposed in the much more egalitarian Midwest and the Plains, were introduced in some states along the East Coast.

The post-Civil War period refocused the franchise debate to the issue of the rights of

African Americans. While racial attitudes played a crucial role in this debate, economic considerations also were quite important, as emphasized in Kousser, 1974. In particular, various restrictions, specifically, literacy requirements basically resulted in exclusion of the blacks from a political process in the highly unequal Southern states and reflected the economic interests of landowners. Because of the new immigration waves at the end of the nineteenth-early twentieth centuries, inequality sharply increased, in particular in the North. Apprehension towards the newcomers, many of whom were poor, resulted in new legislation, mostly at a state level, but now also at a federal level, to enforce literacy requirements for voting. The presence of class dissentions could clearly be discerned here: literacy requirements were introduced in states where the Republican party was powerful; in contrast, the Democratic party, relying on the support of the urban workers, was generally in opposition (Keyssar, pp. 144-145).

Engerman and Sokoloff, 2001, present a broad picture of the franchise in the United States comparing it to that in other countries of the New World. It shows that the United States has preceded these other countries by many decades in promoting wide political participation. Thus, in the middle of the nineteenth century the rate of population voting in the United States was eight times more than elsewhere in the hemisphere, except Canada; property and literacy requirements were much lower; and distribution of income much more equal. And among Latin American countries themselves, more egalitarian ones were the first to remove property and literacy qualifications. Engerman et al., 1999, argue that these different patterns of the evolution in inequality and the distribution of political power resulted in divergent paths of human capital investment. In particular, while the United States led the way in establishing public schools and achieving high rates of literacy, Latin American countries lagged far behind. For example, by the end of the 19th century the United States has achieved almost universal literacy, about 90 percent, whereas in Brazil the literacy rate was

around 10 percent.

6.2. Cross-section evidence

Several of the hypothesized relationships above seem to be consistent with the accumulated cross-country evidence. For example, the positive relationship between the quality of institutions, such as the rule of law and protection from expropriation, and economic growth has been documented in many studies, such as Easterly and Levine, 1997, Hall and Jones, 1999, Knack and Keefer, 1995, and Mauro, 1995. Knack and Keefer, 1995, for instance, find that a standard deviation increase in their index of institutional quality generates on average an extra 1.2 percentage points of income growth. These findings have also been corroborated in Chong and Calderon, 2000, and in Kaufmann and Kraay, 2002, the former study also detecting a causal positive effect of development on institutional quality, which however the latter fails to confirm.

To avoid the methodological difficulties inherent in cross-country analyses, Banerjee et al., 2002, study the effects of a particular institutional change, a land reform in the Indian province of West Bengal, which granted tenants longer tenure and better protection from eviction. The authors use a quasi-experimental approach for identification purposes. Their main finding is that as a result of the reform, sharecroppers' yields have increased by more than 50 percent, turning West Bengal into one of the most successful provinces in agriculture.

Much less work has been done on the determinants of institutional quality. There appear to be some indications that polarization, in particular, with respect to the distribution of income, negatively affects institutional quality and thereby slows growth – see Easterly, 2001, and Keefer and Knack, 2000. The latter study, for instance, argues that the main channel of the adverse effect of inequality on growth is through lax enforcement of property

rights, although its mechanism remains to be unclear; and the former finds some support for the adverse effect of inequality on democracy. Moreover, Easterly, 2001, focuses specifically on the effects of the middle class on investment and growth arguing that they are of an enormous magnitude.[21] Easterly, 2002, provides further support for these results carefully instrumenting for the likely endogeneity of the effect of inequality on growth. This study, in particular, identifies institutional quality as an important channel through which this effects is manifested.

Banerjee et al., 2001, study the economic performance of sugar cooperatives in an Indian state of Maharashtra over the period 1971-93. They find a significant effect of the distribution of political influence in these cooperatives on outcomes. Specifically, although the eastern region of the state is relatively more fertile than the arid western region, sugar cooperatives there have generated lower yields. Banerjee et al., 2001, attribute this to the different institutional structure in the cooperatives of two regions, those in the former allotting disproportionately larger control rights to wealthier members, who find it in their best interest to depress the price of sugar so as to extract larger rent.

7. Concluding remarks

This paper's starting point is that democracy is conducive to more egalitarian institutions and then it goes on to examine the incentives for the rich oligarchy to relinquish its political power through democratization. In its framework, political, economic and institutional factors feed each other. Initial conditions – the level of economic development, income distribution and the political bias – have been found to play a key role for the likelihood of eventual democratization; in particular, the analysis identifies an important role for a

[21] Both studies also find ethnolinguistic fractionalization to be detrimental for institutional quality.

powerful middle class, which can propel political and, ultimately, economic changes. Depending on these conditions the economy may converge to democratic participation, resulting in egalitarian income distribution and relatively fast growth; or to get stuck in a situation where the rich elite controls policy making, with higher inequality and slower growth. The model's predictions have been found to be broadly consistent with both the historical evidence and with contemporary cross-section regularities.

References

Acemoglu, D. and J. Robinson, 2000, "Why did the West extend the franchise? Democracy, inequality and growth in historical perspective," **Quarterly Journal of Economics,** 115, 1167-1199.

Acemoglu, D. and J. Robinson, 2001, "A theory of political transitions," **American Economic Review**, 91, 938-963.

Banerjee, A., Mookherjee, D., Munshi, K and D. Ray, 2001, "Inequality, control rights, and rent seeking: Sugar cooperatives in Maharashtra," **Journal of Political Economy**, 109, 138-190.

Banerjee, A., Gertler, P. and M. Ghatak, 2002, "Empowerment and efficiency: tenancy reform in West Bengal," **Journal of Political Economy**, 110, 239-280.

Bertocchi, G., 2002, "The law of primogeniture and the transition from landed aristocracy to industrial democracy," mimeo.

Bertocchi, G. and M. Spagat, 2001, "The politics of cooptation," **Journal of Comparative Economics**, 29, 591-607.

Chong, A. and C. Calderon, 2000, "Causality and feedback between institutional measures and economic growth," **Economics and Politics**, 12, 69-82.

De Soto, H., 2000, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*.

Easterly, W. and Levine, R., "Africa's growth tragedy: Policies and ethnic divisions," **Quarterly Journal of Economics**, 1997, 112, 1203-1250.

Easterly, W., 2001, "The middle class consensus and economic development," **Journal of Economic Growth**, 317-336.

Easterly, W., 2002, "Inequality *does* cause underdevelopment: New evidence from commodity endowments, middle class share, and other determinants of per capita income," Center for Global Development, WP.

Engerman, S. L. and K. L. Sokoloff, 2001, "The evolution of suffrage institutions in the New World," NBER WP 8512.

Engerman, S. L. and K. L. Sokoloff, 2002, "Factor endowments, inequality, and paths of development among New World economies," NBER WP 9259.

Engerman, S. L., Mariscal, E.V. and K. L. Sokoloff, 1999, "The persistence of inequality in the Americas: Schooling and suffrage, 1800-1945," mimeo.

Fleck, R.K. and F.A. Hanssen, 2002, "The origins of democracy: A model with application to ancient Greece," mimeo.

Glaeser, E., J. Scheinkman and A. Shleifer, 2003, "The injustice of inequality," **Journal of Monetary Economics**, 50, 199-222.

Gradstein, M., 1995, "Intensity of competition, entry and entry deterrence in rent seeking contests," **Economics and Politics**, 7, 79-91.

Gradstein, M., 2002, "Rules, stability, and growth," **Journal of Development Economics**, 67, 471-484.

Gradstein, M., 2003, "Governance and growth," **Journal of Development Economics**, forthcoming.

Grossman, H.I. and M. Kim, 1995, "Swords or plowshares? A theory of security of claims to property," **Journal of Political Economy**, 103, 1275-1288.

Hall, R. and C. Jones, 1999, "Why do some countries produce so much more output per worker than others?" **Quarterly Journal of Economics**, 114, 83-116.

Justman, M. and M. Gradstein, "Industrial revolution, political transition and the subsequent decline in inequality in nineteenth-century Britain," **Explorations in Economic History**, 36, 109-127.

Kaufmann, D., Kraay, A. and P. Zoido-Lobaton, 1999, http://www.worldbank.org/wbi/governance/datasets.htm#dataset

Kaufmann, D., Kraay, A., 2002, "Growth without governance," World Bank, mimeo.

Keefer, P. and S. Knack, 2000, "Polarization, Politics, and Property Rights: Links between Inequality and Growth," Policy Research Department, World Bank working paper.

Keyssar, A., 2000, *The Right to Vote: The Contested History of Democracy in the United States*, Basic Books, New York.

Knack, S. and P. Keefer, 1995, "Institutions and economic performance: Cross-country tests using alternative institutional measures," **Economics and Politics**, 7, 207-227.

Konrad, K.A, 2002, "Investment in the absence of property rights: The role of incumbency advantage," **European Economic Review**, 46, 1521-1537.

Konrad, K.A and S. Skaperdas, 1998, "Extortion," **Economica**, 461-477.

Kousser, J.M., 1974, *The Shaping of Southern Politics: Suffrage Restrictions and the Establishment of the One-Party South, 1880-1910*, New Haven.

Lipset, S.M., 1959, “Some social requisites of democracy: Economic development and political development,” **American Political Science Review**, 53, 69-105.

Mauro, P., 1995, "Corruption and growth," **Quarterly Journal of Economics**, 110, 681-712.

Moore, B. Jr., 1966, *The Social Origins of Dictatorship and Democracy*, Beacon Press, Boston.

Muller, E.N., 1988, “Democracy, economic development, and income inequality,” **American Sociological Review**, 53, 50-68.

North, D.C. and B.R. Weingast, 1989, "Constitutional commitments: The evolution of institutions governing public choice in seventeenth-century England," **Journal of Economic History**, 49, 803-832.

Olson, M., 1993, "Dictatorship, democracy, and development," **American Political Science Review**, 87, 567-576.

Perotti, R., 1996, "Income distribution, democracy, and growth: What the data say?" **Journal of Economic Growth**, 1, 149-187.

Pipes, R., 1995, *Russia under the Old Regime*, Penguin Books, 2nd ed.

Rodrik, D., A. Subramanian and F. Trebbi, 2002, "Institutions rule: The primacy of institutions over geography and integration in economic development," mimeo.

Rosenstone, S.J. and J.M. Hansen, 1993, **Mobilization, Participation and Democracy in America**, McMillan, NY.

Seton-Watson, H., 1967, *The Russian Empire 1801-1917*, Oxford at the Clarendon Press, Oxford, New York.

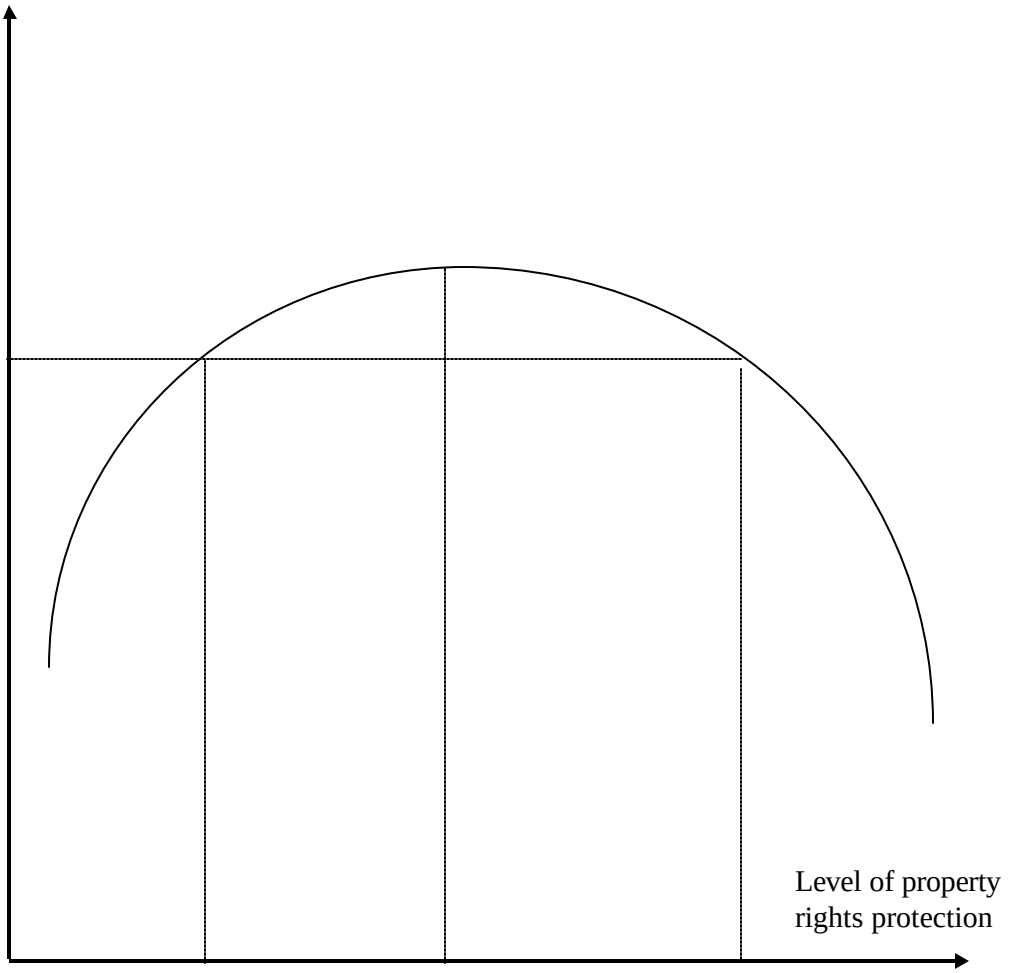
Skaperdas, S., 1992, "Cooperation, conflict, and power in the absence of property rights," **American Economic Review**, 82, 720-739.

Sonin, K., 2002, "Why the rich may prefer poor protection of property rights," **Journal of Comparative Economics**, forthcoming.

Verba, S., Kim, J.-O. and N.Nie, 1978, **Participation and Political Equality: A Cross-National Comparison**, Cambridge: Cambridge University Press, 1978.

Walkin, J., 1962, *The Rise of Democracy in Pre-Revolutionary Russia: Political and Social Institutions under the Last Three Tsars*, New York, Praeger.

Williamson, C., 1960, *American Suffrage: From Property to Democracy 1760-1860*, Princeton NJ.


Level of property
rights protection