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"POLITICAL REGIMES AND ECONOMIC GROWTH"

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Political Regimes and Economic Growth

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Introduction

Does democracy in the political realm foster or hinder economic growth? We review the current state of knowledge concerning the impact of political regimes on growth. Since the topic can easily spill over to a general review of political economy of development, we treat it most narrowly. Political regimes are conceptualized as democracies and dictatorships, although some distinctions among the latter are introduced when relevant. Growth is taken in the narrowest sense of changes in the per capita GDP. Only some indirect impacts of regimes on growth are considered.[1]

The article is organized as follows. Part I is a review of arguments in favor and against democracy. Part II is a summary of statistical studies in which political regime is included among determinants of growth and of methodological problems entailed in such studies. The conclusion is that we know surprisingly little: our guess is that political institutions do matter for growth but thinking in terms of regimes does not capture the relevant differences.

Arguments

In this section we review arguments that relate regimes to growth. They focus on property rights, pressures for immediate consumption, and the autonomy of dictators. While everyone seems to agree that secure property rights foster growth, it is controversial whether democracies or dictatorships better secure these rights. The main mechanism by which democracy is thought to hinder growth are pressures for immediate consumption, which reduce investment. Only autonomous states can resist this pressure and democratic states are not autonomous. The main argument against dictatorships is that authoritarian rulers have no interest in maximizing total output. These views are summarized in turn.

Either way: Democracy and Property Rights.

While there exists a widespread consensus that secure property rights are conducive to growth, the idea that democracy protects these rights is a recent invention, and we think a far-fetched one.

Economic consequences of democracy were in the center of debates concerning the rights to vote and to associate during the

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[1] We do review theories according to which regimes affect investment and the size of the public sector, which in turn influence growth, but we do not examine views in the light of which regimes affect income equality, development strategies, technological change, human capital, or population growth.

first half of the nineteenth century. Conservatives agreed with socialists that democracy, specifically universal suffrage and the right to organize, must threaten property. Madison, Macaulay, Ricardo and Marx concurred that people without property would use their political rights to expropriate the riches and would thus undermine, for better or worse, the capitalist economic system. The Scottish philosopher James Mackintosh predicted in 1818 that if the "laborious classes" gain franchise, "a permanent animosity between opinion and property must be the consequence" (Cited in Collini, Winch and Burrow, 1983: 98). David Ricardo was prepared to extend suffrage only "to that part of them [the people] which cannot be supposed to have an interest in overturning the right to property" (Ibidem: 107). Robert Macaulay in his speech on the Chartists in 1842 (1908) pictured universal suffrage as "the end of property and thus of all civilization."[2] Eight years later, Karl Marx expressed the same conviction that private property and universal suffrage are incompatible (1952: 62). According to his analysis, democracy inevitably "unchains the class struggle": The poor use democracy to expropriate the riches; the rich are threatened and subvert democracy, typically by "abdicating" political power to the permanently organized armed forces. As a result, either capitalism or democracy crumbles. The combination of democracy and capitalism is thus an inherently unstable form of organization of society, "only the political form of revolution of bourgeois society and not its conservative form of life" (1934: 18), "only a spasmodic, exceptional state of things...impossible as the normal form of society" (1971: 198).

In retrospect, these conclusions are obviously too strong. There are fourteen countries in the world today which have been continuously capitalist and democratic for the past half century. Yet these classical views should be sufficient to put to rest the recently fashionable claim that democracy promotes development by safeguarding property rights.

Douglass North (North and Thomas 1973, North 1990) is the main proponent of the view that secure property rights are crucial for growth. He emphasizes the importance of property rights for investment and the importance of institutions for creating credible guarantees. To cite a recent statement, "The more likely it is that the sovereign will alter property rights for his or her own benefit, the lower the expected returns from investment and the

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[2] Only James Mill sought to assuage these fears that the poor would plunder the rich with rather specious deductive arguments but ultimately he relied on the following empirical generalization: "We challenge them [the opponents] to produce an instance, so much as one instance, from the first page of history to the last, of the people of any country showing hostility to the general laws of property, or manifesting a desire for its subversion." (Cited in Collini, Winch and Burrow, 1983: 104).

lower in turn the incentive to invest. For economic growth to occur the sovereign or government must not merely establish the relevant set of rights, but make a credible commitment to them" (North and Weingast 1989: 803).[3] Yet North is never explicit about the institutions that would provide this commitment: we could find only one passage in his recent book in which he explicitly identifies these institutions as democratic (1990: 109). Mancur Olson (1991: 153) argued, in turn, that an autocrat cannot credibly commit himself: "If he runs the society, there is no one who can force him to keep his commitments." An insecure autocrat, in particular, is likely to plunder the society. But Olson as well fails to explain how democratic institutions could provide such a credible commitment.[4]

The market is a system in which scarce resources are allocated to alternative uses by decentralized decisions. Yet under capitalism property is institutionally distinct from authority: individuals are simultaneously market agents and citizens. As a result, there are two mechanisms by which resources can be allocated to uses and distributed among households: the market and the state. The market is a mechanism in which individuals cast votes for allocations with the resources they own and these resources are always distributed unequally; the state is a system which allocates resources it does not own, with rights distributed differently from the market. Hence, the two mechanisms lead to the same outcome only by a fluke. The allocation of resources which individuals prefer as citizens does not in general coincide with that at which they arrive via the market.

Democracy in the political realm exacerbates this divergence by equalizing the right to influence the allocation of resources. Indeed, distributions of consumption caused by the market and those collectively preferred by citizens must differ since democracy offers those who are poor, oppressed or otherwise miserable as a consequence of the initial distribution of endowments an opportunity to find redress via the state. Endowed with political

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[3] North and Thomas discover that in seventeenth-century England democracy did secure property rights: a finding not particularly surprising given that only the propertied enjoyed political rights. (*** Add Cheibub's data)

[4] Moreover, the property rights literature treats the state as the only source of potential threat. But property rights are threatened by private actors: capitalist property is threatened by organized workers, landlords' property by landless peasants, etc. It is by no means clear that the villain is necessarily "the ruler." Indeed, one liberal dilemma is that a strong state is required to protect property from private encroachments but a strong state is a potential threat itself. We owe this point to Zhiyuan Cui.

power in the form of universal suffrage, those who suffer as a consequence of private property will attempt to use this power to expropriate the riches: in the modern language, if the median voter is decisive and if the market-generated distribution of income is skewed downward, as it always is, majority rule will call for an equality of incomes. The widespread usage of democracy as a "proxy" for guarantees of property rights in econometric studies is thus unjustifiable:[5] democracy may promote growth but not via this particular mechanism.

Against Democracy: Democracy Undermines Investment.

While the classical analyses saw democracy as a threat to private property, the same line of argument was revived in the early 1960s with a focus on growth. The first modern statements that democracy undermines growth are perhaps those by Walter Galenson and by Karl De Schweinitz, who argued in 1959 that democracy unleashes pressures for immediate consumption, which occurs at the cost of investment, hence of growth.[6] This argument acquired widespread acceptance under the influence of Samuel Huntington (1968; also Huntington and Dominguez, 1975; Crozier,

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[5] Note that this usage implies that all dictatorships are "left-wing" in the sense that they are hostile to private property. Barro (1989: 22) could find in the entire world only three right-wing dictatorships: Chile, South Korea and Singapore.

[6] Galenson mentioned both the role of unions and of governments. About unions, he argued that in a democratic society they "must ordinarily appeal to the worker on an all-out consumptionist platform. No matter how much 'responsibility' the union leader exhibits in his understanding of the limited consumption possibilities existing at the outset of industrialization, he cannot afford to moderate his demands [because of competition among unions]." About governments, he observed that "The more democratic a government is, the easier it will be to force it to translate legislative codes into real services, and pari passim, the greater the diversion of resources from investment to consumption."

According to de Schweinitz (1959: 388), if trade unions and labor parties "are successful in securing a larger share of the national income and limiting the freedom for action of entrepreneurs, they may have the effect of restricting investment surplus so much that the rate of economic growth is inhibited."

Note that both arguments assume that unions have some market or political power but they are not encompassing and centralized. If they were, their optimal strategy would be to offer some wage restrain in exchange for investment and income security (Przeworski and Wallerstein 1988).

Huntington and Watanuki, 1975).[7] In this view, democracy opens to individuals the possibility to organize and to the already existing parties, unions and other associations an opportunity to find redress via collective action, directed at employers or the state. Hence democracy generates an explosion of demands for current consumption. These demands, in turn, threaten profits; hence they reduce investment and retard growth. Democracy is thus inimical to economic development. Moreover, via a rather dubious inference, proponents of this view conclude that dictatorships are therefore better able to force savings and launch economic growth. To cite a recent statement by Vaman Rao, "Economic development is a process for which huge investments in personnel and material are required. Such investment programs imply cuts in current consumption that would be painful at the low levels of living that exist in almost all developing societies. Governments must resort to strong measures and they enforce them with an iron hand in order to marshall the surpluses needed for investment. If such measures were put to a popular vote, they would surely be defeated. No political party can hope to win a democratic election on a platform of current sacrifices for a bright future." (1984: 75)[8]

Since this body of thought is not always explicit about the assumptions and the inferences, the reasoning needs reconstructing. First, this argument assumes in the spirit of Kaldor (1955-6)-Pasinetti (1961-2) that, for reasons that are never spelled out, poor people have a higher propensity to consume.[9] Secondly, the underlying model of growth attributes it to the increase in the quantity of the stock of physical capital. Finally, democracy is always responsive to the pressures for immediate consumption. The chain of reasoning is the following: (1) poor people want to consume immediately, (2.1) when workers can organize, they drive wages up, reduce profits, and reduce investment (either by lowering

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7 According to Huntington and Domiguez (1975: 60), "The interest of the voters generally lead parties to give the expansion of personal consumption a higher priority via-a-vis investment than it would receive in a non-democratic system. In the Soviet Union, for instance, the percentage of GNP devoted to consumption was driven down from 65% in 1928 to 52% in 1937. It is most unlikely that a competitive party system would have sustained a revolution from above like this."

8 At least, Huntington et al. wrote during a period when many dictatorships, "authoritarian" and "totalitarian" did grow rapidly. Yet Rao's assertion was made in 1984, after the failure of several Latin American authoritarian regimes and of the Eastern European communist regimes was already apparent.

9 Galenson and Leibenstein (1955) were probably the first to argue that a highly unequal income distribution was necessary for savings that would facilitate investment and growth.

the rate of return or the volume of profit or both) and (2.2) when people can vote, governments distribute incomes away from investment (either they tax and transfer or they undertake less public investment), and (3) lowering investment slows down growth.[10] In turn, (4) dictators are future-oriented.

One puzzle which this literature does not address explicitly is why democracy is compatible with growth at high but not at low levels of income. Most authors seem to believe that when incomes hover around subsistence individuals will not voluntarily make inter-temporal trade-offs because they would not survive if they restricted current consumption. Why would benevolent dictators want to reduce current consumption under such conditions remains unclear.[11]

An extension of this argument is that at low levels of development democracy breeds instability and, in turn, instability lowers investment and slows down growth (Lipset 1960). There are several competing arguments why democracy would be unstable in poor societies. In general, these arguments seem to be based on the belief that distributional conflicts become less intense as societies become richer: one way to justify this claim is that as the marginal utility of consumption declines, the costs and risks people are willing to suffer in order to gain at the margin also decrease.[12]

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[10] Note that this reasoning implies that the impact of mean preserving inequality on growth is ambivalent: in the Kaldor-Pasinetti models, inequality promotes growth to the extent to which it increases incomes of those who save more but in the median voter models it slows down growth to the extent to which the political system responds to demands for redistribution. The recent evidence seems to indicate that inequality reduces growth (World Bank 1987) but it is doubtful that the mechanism is political. At least, both Alesina and Rodrik (1991) and Persson and Tabellini (1991) failed to demonstrate that the median voter model provides an explanation of this relation.

[11] Self-interested dictators, discussed below, would not care about some people starving. "Developmentalist" dictators may have lower time discount rates than members of the present generation, particularly since their own survival is assured. One might also think that since dictators engage simultaneously in several uncorrelated projects, they are less risk averse than individuals who engage in one. We are just speculating: this literature is strangely silent on this crucial topic.

[12] De Schweinitz (1964: 21 and 31) argued that in poor societies output is primarily a function of land, which is given in fixed supply. Hence, the game is zero-sum. In turn, "The relative urgency of the wants to be satisfied by a high-income economy is not so great as in a subsistence economy. Conflict is therefore

Against Democracy: Dictatorship Insulates the State from Particularistic Pressures.

The question why dictators would behave in a "developmentalist" fashion has been studied by some scholars engaged in comparisons of the Far East and Latin America.[13] In this view, the key to the superior economic performance of the Asian Tigers is "state autonomy," more specifically "insulation" of the state apparatus from outside pressures. This argument takes two steps: (1) "state autonomy" favors growth and (2) "state autonomy" is possible only under authoritarianism.

State autonomy enhances economic performance because (1) The state has a role to play to make the economy function efficiently,[14] (2) The state must be autonomous if it is to perform this role well, and (3) The state apparatus wants to perform this role well. The reason an autonomous state is needed to improve economic performance is either economic or political pursuit of particularistic self-interest. Individuals often behave in collectively suboptimal way as economic agents, specifically they underinvest.[15] In turn, individuals behave in a collectively

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more negotiable and its occurrence does not pose the threat to the stability of society that it does where the stakes involved are higher."

[13] Dore (1978) offered a culturalist explanation: "I suspect that a major motive [of dictators] ... is to increase national 'strength' and prestige, to raise the nation's position in the international pecking order and thereby their own position in the ranks of the world's rulers." Thus, in this view all that matters is whether dictators are motivated by vanity or greed.

[14] Since these writings tend to be informed by the literature on endogenous growth, they place emphasis on learning, increasing returns to scale, human capital, and allocative efficiency rather than on investment in physical capital. The particular authors writing on the Asian experience (Amsden 1989, Haggard 1990, Wade 1990, Westphal 1990, essays in Gereffi and Wyman 1990) offer divergent justifications for the role of the state but we leave this issue aside to concentrate on the political aspects.

[15] Suppose (see Przeworski and Wallerstein 1988) that the government seeks to maximize the (present or future) consumption of a representative household, $C(\tau, s)$, $C_s > 0$, that depends on the policy τ and private decisions to supply s, subject to the constraint that $s = s(\tau)$, with $ds/d\tau < 0$ in the relevant range. The partial derivative $C_\tau = C_s(ds/d\tau) < 0$ represents deadweight losses: one way to think about them is that this is the price, in units of C, that the government must pay for the autonomy of private agents. If the government could control both τ and s, it could reach a

suboptimal way as citizens when they organize into interest groups that pressure governments to transfer incomes in their favor. Hence, the primary emphasis in this literature is on the "capacity" of the state to pursue developmentalist policies (primarily to force savings) and on the "insulation" from private pressures, particularly those originating from large firms or unions. The model of politics that implicitly underlies this analysis has been put forth by Becker (1983). Interest groups compete for rents, each maximizing the net difference between the eventual benefit from the policy and the cost of lobbying. The equilibrium which results is inefficient both because lobbying is wasteful and because transfers of income that result from group pressures cause deadweight losses. When government policies are a result of group pressures, they respond to particularistic interests of those groups which have most to gain and which are the easiest to organize.[16] Moreover,

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higher optimum. Let us use Barro's (1990) model to illustrate this point. In this model, when the government chooses the tax rate $\tau^* = \alpha$ that maximizes the rate of growth (and under Cobb-Douglas the present value of future consumption), private agents invest less than they would under a lower tax rate. If the government could mandate private investment at a somewhat higher level, output would grow faster: "the planning optimum" is superior to the market equilibrium. Hence, forced savings improve economic performance. Note that the kind of autonomy that is required to achieve this superior solution is very strong: the government chooses not only the level of taxation but also of investment from private incomes or the supply of labor by households. The state just takes over the economy and runs it by command.

This is not the kind of autonomy that is advocated by most students of the Asian miracle. But perhaps this is what it takes. Westphal (1990: 58) tells the following story about South Korea: "President Park had a number of preeminent businessmen arrested shortly after he came to power, and then threatened them with the confiscation of their ill-gotten wealth. They were restored to grace only after effectively agreeing to employ their wealth in socially productive development activities. Park's authority depended on military support ...." If we are to follow Westphal's analysis of the South Korean experience, the recipe is the following: nationalize banks, maintain a large public sector, minutely control credit, set publicly announced, quarterly export targets for individuals commodities, markets, and firms, control foreign capital inflows, and "arrest" capitalists if they resist.

[16] Becker does not use the language of "rent-seeking: in his model deadweight losses result only from transfers of income, not from lobbying per se. In fact, the term "rent-seeking" is often present in this literature. But "rent-seeking" is a bogeyman: only if preferences are fixed and the adjustment to equilibrium is

when the state becomes permeated by private pressures, when particular agencies enter into coalitions with specific private interests, policies lose internal coherence. The state must be sheltered from such pressures; indeed, it must be protected against being able to respond to these pressures even if it wanted to. Hence, "insulation from societal pressures" and "cohesiveness of the decision-making structure" are the crucial conditions for successful policies (Haggard 1990: 43). The state is the only potentially universalistic actor and to act on behalf of universalistic interest it must be insulated from societal pressures and capacitated to pursue policies it finds best. Haggard's (1990: 262) formulation is most explicit: "Institutions can overcome these collective-action dilemmas by restraining the self-interested behavior of groups through sanctions; collective-action problems can be resolved by command."[17]

While the consensus that state autonomy improves economic performance seems to be widespread among the students of Asian miracles, some go on to argue that authoritarian regimes are more likely to establish the required form of autonomy. The main proponent of this view is Haggard (1990: 262): "Since authoritarian political arrangements give political elites autonomy from distributionist pressures, they increase the government's ability to extract resources, provide public goods, and impose the short-

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instantaneous can adjustment costs be avoided. Whenever trades are consumed out of equilibrium, someone collects rents, and the only way to reach political, that is, collective, decisions is to go through a process in which groups organize, pressure, persuade, influence, and perhaps even wine and dine public officials. How else are the public officials to know what the collective preferences are? Moreover, note that in the presence of incomplete markets and imperfect information, the very notion of "rents" is not well defined.

In turn, note for future reference that in Becker's model the state apparatus does not derive any rents: in fact, the state is but a vector of private pressures.

[17] Bardhan (1990: 5) provides an operational recipe: "What seems to be important in these cases in making a difference in outcomes toward a developmental state is the extent of centralization of decision making, coupled with its flexibility in dealing with changes in technical and market conditions...; how much operational space the economic technocrats get in their design and implementation of policy; how important meritocratic recruitment and predictable long-term career paths are in the organization of the bureaucracy; and how much leeway the state has in restructuring its relationships with labor, business and the rural sector."

term costs associated with efficient economic adjustment."[18] Hence, this reasoning entails the same assumption, albeit now educated by the collective action literature, that the society invariably exerts pressures for immediate consumption and it completes the argument for the superiority of dictatorships by explaining the role of the state. What it fails to answer is why an autonomous state would behave in the interests, long- or short-term ones, of anyone else but its own.

In Favor of Democracy: Autonomous Rulers are Predatory.

Self-interest of the state is the point of departure of several recent models which take democracy to be the benchmark of efficiency and which find any form of state autonomy as pernicious for economic performance. In these views, the state is always ready to prey on the society (North 1990) and only democratic institutions can constrain it to act in general interest. Hence, dictatorships, of any stripe, are a source of inefficiency.

Barro (1990), Findlay (1990), Olson (1991) and Przeworski (1990) constructed models which differ in detail but generate the same conclusion. These models assume that governments engage in activities that increase the productivity of or supply inputs to private production: not only governments provide law and order, safeguard property rights, enforce contracts, and defend from external threats but they also supply other inputs to private production that are not efficiently supplied by the market. Hence, some productive role of the state is optimal for maximizing efficiency, growth, or welfare. To put these models in a common framework, we rely on the distinctions developed by Przeworski (1990), with some slight terminological and notational differences.

The general way to think is that output Y depends on G, the stock (or flow) of government services and P, the stock (or flow) of private resources, so that

$$Y = F(G,P),^{19} \qquad (1)$$

where G and P can be thought of as stocks of capital or flows of labor services, so that G+P=K or G+P=L for a fixed K or L, and the

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[18] Not everyone associates state autonomy with authoritarianism. Bardhan (1990: 5) takes issue with this position: "it is not so much authoritarianism per se which makes a difference, but the extent of insulation (or 'relative autonomy') that the decision-makers can organize against the ravages of short-run pork-barrel politics." And (1988) "Authoritarianism is neither necessary nor sufficient for this insulation."

[19] We assume that F(.) has the properties which satisfy throughout the second order conditions for the maximum.

government can either own a stock of capital or derive its revenues by taxing incomes during each period: all that follows is quite general. Output is thus maximized when $F_G = F_P$, with an internal solution $0 < G^* < 1$, where G^* is the optimal (output, growth, or welfare maximizing) size of the public sector.[20]

Political regimes can be characterized by (1) the locus of decision making and (2) property right to the fiscal residuum, where the "fiscal residuum" is the difference between the total output and the cost of the government. In some regimes the decision about the size of the government is made by citizens through some voting process; in other regimes, it is made by the state apparatus. In turn, in some regimes the fiscal residuum is the property of citizens, in the sense that the state apparatus has no legal right to privately appropriate it (the state can only tax or accumulate stocks to use the resources as inputs to production); in other regimes the fiscal residuum can be consumed privately by the members of the state apparatus. Let us distinguish three regimes:

Regimes	Who decides the size of government	Who has the right to fiscal residuum
Democracy	Citizens	Citizens
Autocracy	State Apparatus	State Apparatus
Bureaucracy	State Apparatus	Citizens

Personalized dictatorships, in the style of Somoza in Nicaragua or Trujillo in the Dominican Republic, as well as "crony dictatorships," such as Marcos' Philippines provide examples of autocracies. The Soviet and Eastern European regimes typify bureaucracies: the Party-State decided how big the government should be but individual members of the nomenklatura could not privately appropriate (sell, capitalize, cede, or leg) the output. The same was true of the "bureaucratic-authoritarian" regimes in

[20] Assuming balanced budget, that is, $G = \tau Y$ (or $G=\tau K$ in a static formulation), where τ is the tax rate, and a constant-returns Cobb-Douglas production function of the form $Y = G^{\alpha}P^{1-\alpha}$ one can show, in a variety of frameworks, that the optimal tax rate is $\tau^* = G^*/Y = \alpha$. Barro (1990), who derived this results in the context of a growth model, came to a guess of $\alpha = 0.25$ for a typical economy, but he also noted that the elasticity of output with regard to public expenditures may vary across countries due to factors such as geography, the share of agriculture, urban density, and so on. Cheibub (1992), using the Barro-Wolff (1989; also Barro 1989 and 1991) cross-sectional data set, estimated α for 75 countries between 1970 and 1985, getting estimates in the range of 0.14 for the least developed to 0.25 for the most developed countries.

Latin America (O'Donnell 1975). Hence autocracy and bureaucracy represent different forms of dictatorship.

*** Figure 1 Here ***

To examine the consequences of these institutional characteristics, examine Figure 1. The output without government is Y(0); as the size of the government increases from 0 to G*, output grows; then it declines. The size of the area between Y(G) and the diagonal line, G, represents fiscal residuum.

Now, let us consider what happens under democracy, with a warning that the model offered here is naive: we comment on this model critically below but in this literature democracy serves as the benchmark. The democratic story is briefly the following: well informed individuals vote for parties, parties compete for votes, this competition eliminates rents, and once in office, the victors behave as perfect agents of the public. Hence, the winning platform is the one that maximizes $V(Y)$, with $V_Y > 0$, where V represents the vote share or the probability of winning, and the solution to this problem is G*: the size of the government is efficient.

In turn, under autocracy, the state, which has the right to the fiscal residuum, maximizes the net difference $A(Y,G) = Y - G$, output minus the cost of production of this output.[21] The first order conditions for the problem are

$$F_G = F_P + 1 > F_P, \tag{2}$$

implying that the size of the government will be smaller than optimal. One way to see it is to note that autocracy is indifferent between high output and large government size and small output and small government size: the indifference curves for autocracy in Figure 1 are aa and the autocratic equilibrium is A.

Finally, bureaucrats derive utility in part from the output and in part from the government size itself: the larger the government, the more power and perks. Hence, the objective of the bureaucracy is to maximize $B(Y,G)$, with utility increasing in both arguments, so that the solution to the bureaucratic program is

$$F_G = F_P - B_G/B_Y < F_P, \tag{3}$$

with the result that the government is larger than the efficient

[21] The autocratic government must purchase production services or labor services from individual agents at equilibrium prices and it receives only the fiscal residuum. Production of Y is also costly under democracy but the vote for the competing platforms is a function of Y since some voters receive incomes for supplying G, For autocracy G is only a cost.

level. The indifference curves for bureaucrats in Figure 1 are bb and the bureaucratic equilibrium is B. The ratio B_G/B_Y represents the degree of bureaucratic autonomy: if this ratio is very small, but positive, we are dealing with a democracy in which the bureaucracy is not quite a perfect agent of the public; if this ratio is large, the state becomes as large as it was under communism.

Thus in any dictatorship, whether autocracy or bureaucracy, the size of the government deviates from the level that maximizes output, growth, or the present value of future consumption. The underlying model of democracy is, however, patently implausible: it assumes perfect information among voters, perfect competition among parties, and perfect agency. True, Flaherty (1990) has shown that democracy is "informationally efficient": if voters are informed, majority rule is the only system that minimizes the sum of two errors, namely, rewarding badly performing agents and punishing well performing ones.[22] But in spite of all the efforts following Downs' (1957) seminal book, this model of democracy is a house of cards: as Downs himself argued, there are good reasons why voters would not be well informed, there are good reasons why they would vote strategically for public goods, under uncertainty voters may have different ex-ante and ex-post evaluations of policies (Rodrik and Fernandez 1992), when there are externalities voting equilibrium will diverge from a decentralized one (Elster and Moene 1989),[23] under some electoral systems the incumbent representatives from opposing parties have incentives to collude and to construct barriers to entry (Crain, 1977),[24] majority rule equilibrium exists only under most restrictive assumptions, ..., one can go on. Moreover, these "economic models of democracy" are ridden with paradoxes (Przeworski 1990). Since they take preferences to be fixed and exogenous to the political process, they fail to explain what parties do when they "compete"; since they conclude that parties converge to the same platform, they cannot even predict which will win; since they assume that voters care only about policies and politicians only about victory, they treat politicians as if they were not voters. Finally, these models never succeeded

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[22] In a similar vein, Sah (1991) argues that decision making in democracies is more decentralized than in dictatorships: democracies have more "preceptors" involved in decision making. As a result, dictatorships should exhibit a higher variance in performance.

[23] To provide just one example, a recent survey in Poland shows that 70 per cent of respondents prefer an economy consisting of private firms over one owned by the state but 60 per cent prefer to work for the state.

[24] Party competition must be easily the most protected industry in the United States.

to resolve the issue of agency: If politicians are motivated only by power, then indeed their tenure in office is economically costless to the public. But if power is also an instrument for getting other things politicians may want, and this is the standard way of skirting the issue of politicians' motivations, then they must be getting some rents for performing office, and they do not function as perfect agents.

None of the above implies that democracy is less efficient than dictatorships of various stripes (for a spirited defense of the democratic process see Wittman 1989). But since those who argue that democracy favors growth fail to provide a reasonable model of the democratic process and those who see dictatorship as necessary to restrain particularistic pressures skirt over the motivation of the state apparatus, we do not have a framework within which this controversy could be resolved.

In one way, the critics and defenders of democracy talk past each other. The critics argue that dictatorships are better at forcing savings; the defenders that democracies are better at allocating investment. Both arguments can be true but, as we shall see, statistical analyses fail to distinguish these effects.

Evidence

Statistical Evidence is Ambivalent

The statistical evidence is inconclusive and the studies that produced it are all seriously flawed.

Przeworski (1966) found in an analysis of variance of 57 countries, including Eastern Europe, between 1949 and 1963, that mobilizing dictatorships beginning at medium levels of development grew the fastest, followed by already developed democracies and by the least developed countries in general. Adelman and Morris (1967) used a continuous index of regime types in a cross-sectional study of 74 underdeveloped countries, including the communist bloc, between 1950 and 1964. They found a mild positive effect of authoritarianism for the less and medium developed countries and no effect for the more developed ones. Dick (1974) covered the period 1959 to 1968 in 59 underdeveloped countries, including Eastern Europe but not India. Using a trichotomous classification of regimes, he compared mean rates of growth and concluded that democracies develop slightly faster. Huntington and Dominguez (1975) studied 35 countries with less than $500 per capita GNP in 1961, distinguishing one-party systems, competitive systems and a residual category of unstable regimes. They compared mean rates of growth during the 1950s and discovered that authoritarian regimes did better. Marsh (1979) covered 98 countries between 1955 and 1970, using Bollen's (1980) index of democracy and performing cross-sectional regression on the average rates of growth.

Authoritarian regimes developed faster according to his analysis. Weede (1983) studied between 1960 and 1974 124 countries, which excluded Eastern Europe and oil exporters, using Bollen's index and cross-sectional regression analysis. He discovered again, particularly when he controlled for government spending, that authoritarian regimes did better. Kormendi and Meguire (1985) used Gastil's index in a regression analysis of 47 countries between 1950 and 1977. They found that democracies grew faster. Kohli (1986) selected 10 underdeveloped countries during 1960-1982. He used a dichotomous classification and compared mean rates of growth in the 1960s and 1970s. There was no difference during the first period and a slight difference in favor of authoritarian regimes during the second period. Landau (1986) classified regimes dichotomously and used regression to analyze 65 countries between 1960 and 1980. He found that authoritarian regimes enjoyed faster growth. Sloan and Tedin (1987) examined 20 Latin American countries from 1960 to 1979. They classified regimes into five types and used regression to discover that on the average bureaucratic-authoritarian regimes do better and traditional dictatorships worse than democracy. Marsh's (1988) study used the same index of democracy and almost the same number of countries as Kormendi and Meguire but covered the period 1965-1984, concluding that there was no difference. Pourgerami (1988) used a five point scale of democracy in a regression analysis of 92 countries covering the same period as Marsh and discovered that democracies grew faster. Scully (1988, 1992) found the same using Gastil's index in a regression analysis of 115 countries between 1960 and 1980. Barro (1989) replicated this finding using the same index in an analysis of 72 countries, excluding oil producers, between 1960 and 1985. Grier and Tullock (1989) used Gastil's index in a time series analysis between 1961 and 1980. They found that democracies did better in 28 African and 16 Latin American countries and no difference among 15 Asian countries. Remmer (1990) focused on 11 Latin American countries between 1982 and 1988. Having compared means, she found a statistically insignificant difference in favor of democracies. Pourgerami (1991), using a three-point scale of democracy and a simultaneous equations system in an analysis of 106 less developed countries in 1986 found that democracies grew faster. Finally, Helliwell (1992) used three indices of democracy in a 2SLS analysis of 90 countries between 1960 and 1985 to discover that democracy has a negative but statistically insignificant effect on growth.

Altogether, these 18 studies generated 21 findings (some distinguished areas or periods). Among them, eight found in favor of democracy, eight in favor of authoritarianism, and five discovered no difference. What is even more puzzling is that among the 11 results published before 1988, eight found that authoritarian regimes grew faster, while none of the nine results published after 1987 supported this finding. And since this difference does not seem attributable to samples or periods, one can only wonder about the relation between statistics and ideology.[25] For reasons discussed below, we hesitate to attach much significance to these results one way or another. Hence, we still do not know what the facts are.

Inferences based on standard regression models are invalid

The reason we have little robust statistical knowledge about the impact of regimes on growth is that the research design required to generate such knowledge is complex. This complexity is due to three sources: (1) simultaneity, (2) attrition, and (3) selection.

Following the seminal work of Lipset (1960), there is an enormous body of literature, theoretical and statistical, to the effect that democracy is a product of economic development. This literature suffers from ambiguities of its own. While the belief is widespread that democracy requires as a "prerequisite" some level of economic development, there is much less agreement which aspects of development matter and why. A certain level of development is seen as required for a stable democracy because affluence reduces the intensity of distributional conflicts, because development generates the education or the communication networks required to support democratic institutions, because it swells the ranks of the middle class, because it facilitates the formation of a competent

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[25] Indeed, it is sufficient to read Scully (1992: xiii-xiv) to stop wondering: "The Anglo-American paradigm of free men and free markets unleashed human potential to an extent unparalled in history.... One needs evidence to persuade those who see promise in extensive government intervention in the economy. I have found such evidence, and the evidence is overwhelmingly in favor of the paradigm of classical liberalism." The evidence on the effect of democracy on growth consists of cross-sectional OLS regressions in which investment is controlled for (so that political effects measure efficiency but not the capacity to mobilize savings) and the economic variables are an average for 1960-1980 (although GNP data are vailable until 1985 and there were several economic collapses under democratic regimes after 1980) while the political variables are for 1973-1986. The dummies for political variables work in the right direction and are significant one at a time but when put together the dummy for politically open regimes (less than 2 points on the Gastil scale) has a wrong sign while "individual rights" and "free market economy" have a right sign but the t-statistics are not significant. In turn, the evidence for the negative role of the size of government is based on a model which, in the light of Ram (1986), appears to be misspecified and in which (G/Y) appears only as the 1960 value, not the average for the period.

In general, it seems that one can always get what one wants by appropriately specifying the model.

bureaucracy and so on. Statistical results are somewhat mixed[26] but the prima facie evidence in support of this hypothesis is overwhelming: all developed countries in the world constitute stable democracies while stable democracies in the less developed countries remain exceptional.

Attrition is a more complicated issue. Following Lipset again, everyone seems to believe that durability of any regime depends on its economic performance. Economic crises are a threat to democracies as well as to dictatorships. The probability that a regime survives a crisis need not be the same, however, for democracies and dictatorships: one reason is that under democracy it is easier to change a government without changing the regime, another is that democracies derive legitimacy from more than their economic performance. We also have the argument by Olson (19xx;

[26] Lipset (1960) studied European, developed English-speaking and Latin American countries. He classified regimes into stable democracies, unstable democracies and dictatorships, and stable dictatorships. To measure development, he used 15 indices of wealth, industrialization, education and urbanization. All but two indices correlated with democracy. Cutright (1963) analyzed 77 countries, excluding Africa, between 1940 and 1961. He created an index of democracy by observing whether the minority party was represented in the parliament and whether the chief executive was elected. He found that this index of democracy correlated with measures of communication, urbanization, education and labor force out of agriculture. Neubauer (1967) considered only 23 democratic countries, using an index of democracy that included the extent of suffrage, equality of representation, freedom of press and party competition. This measure correlated weakly with an index of communication but not with urbanization, education and the non-agricultural labor force. Smith (1969) analyzed 110 countries between 1946 and 1965. He combined Cutright's index with a scale developed by Banks and Textor and found it to be correlated with urbanization, education and communication indices everywhere except in Sub-Saharan Africa. Soares (1987) used a number of different measures of democracy and different periods to discover that the correlation between democracy and development is invariably positive among the Western European and Anglo-Saxon countries but not among the Latin American countries. Bollen and Jackman (1985) studied 100 countries in 1960 and 1965 using Bollen's index of democracy. They discovered that per capita GNP does explain democracy and former British colonies are more likely to be democratic. Finally, Helliwell (1992) found strong support for the thesis associating democracy with high levels of per capita income.

In general these findings suggest that the level of development, measured by a variety of indicators, is positively related to the incidence of democratic regimes in the population of world countries but not necessarily within the particular regions.

also Huntington 1968), supported by the data we are about to present, that rapid growth is destabilizing for democracies but not for dictatorships.[27]

This evidence suffices to render suspect any study that does not treat regimes as endogenous.[28] If democratic regimes are more likely to occur at higher level of development or if democracies and dictatorships have a different chance of survival under various economic conditions, then regimes are endogenously selected. Under such conditions, the observed world is not a random sample from some underlying statistical distribution. Since this is the heart of the statistical difficulties, we spell out the nature of this problem in some detail (See Przeworski and Limongi 1992, from which this discussion is drawn).

We want to know the impact of regimes on growth. We observe Brazil in 1988 and discover that it was a democracy which declined at the rate of 2.06. Would it have grown had it been a dictatorship? The information we have, the observation of Brazil in 1988, does not answer this question. But unless we know what would have been the growth of Brazil in 1988 had it been a dictatorship, how can we tell if it would have grown faster or slower than under democracy?

Had we observed in 1988 a Brazil that was simultaneously a democracy and a dictatorship, we would have the answer. But this is not possible. There is still a way out: if the fact that Brazil was a democracy in 1988 had nothing to do with economic growth, we could look for some country that was exactly like Brazil in all respects other than its regime and, perhaps, its rate of growth, and we could match this country with Brazil. But if the selection of regimes shares some determinants with economic growth, an observation that matches Brazil in all respects other than the regime and the rate of growth will be hard to find: there will be observations without a match. And then the comparative inferences

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[27] Olson cites several reasons. One is that, since rapid growth is obtained by increasing investment, "a rapid increase in the rate of growth will tend to be associated with a decline in the standard of living." More importantly, rapid growth generates social mobility which uproots individuals from their traditional ties and makes them vulnerable for recruitment into radical mass movements. And he claims (542) that the effect is more pronounced for democracies than for dictatorships: "there was rapid growth in the Soviet Union under Stalin's five year plans: yet the nation was relatively stable, and for obvious reasons," namely, repression.

[28] Helliwell (1992) estimated, by instrumental variables, a simultaneous model in which per capita income explains the degree of and democracy affects growth. He found, as we noted above, that democracy has a negative sign but the t-statistics are low.

will be biased: Whenever observations are not generated randomly, quasi-experimental approaches yield inconsistent and biased estimates of the effect of being in a particular state on outcomes. Indeed, this much is now standard statistical wisdom (The literature on this topic is vast; see recent reviews by Heckman 1990, Maddala 1985, Greene 1990). Yet the implications of this failure are profound: we can no longer use the standard regression models to make valid inferences from the observed to the unobserved cases. Hence, we cannot compare.

The pitfalls involved in the studies summarized above can be demonstrated as follows. Averaging the rates of growth of ten South American countries between 1946 and 1988, one discovers that authoritarian regimes grew at the average rate of 2.15 per cent per annum while democratic regimes grew at 1.31 per cent. Hence, one is inclined to conclude that authoritarianism is better for growth than democracy. But suppose that in fact regimes have no effect on growth. The only variables which affect growth, in the same way for both regimes, are YEAR, which encapsulates the effect of international economic conditions, and LEVEL, which captures the country specific conditions. In turn, suppose that regimes do differ in their probabilities of surviving various economic conditions. Authoritarian regimes are less likely to survive when they perform badly than when they grow more rapidly. Democratic regimes are somewhat less vulnerable to economic crises than dictatorships but in turn they are less likely to survive when growth is very rapid. In addition, we suppose that the probability of survival of both regimes depends on the number of other democracies in the region at each moment (OD). These probabilities jointly describe how regimes are selected: the dependence of survival on growth constitutes endogenous selection, the diffusion effect represents exogenous selection.

We generated 5,000 (500 per country) 43 year histories obeying these assumptions, each beginning with the level and the regime observed in 1946.[29] The results are given below:

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[29] The growth rates for both regimes were generated by (coefficients are the results of OLS):

GROWTH = 0.0492 - 0.000457*YEAR - 0.0000014*LEVEL + 0.04*HIT,

where HIT was drawn from standard normal distribution.

Then we used the observed probabilities that a regime would survive given its rate of growth and the number of other democracies in the region. (These probabilities are given in the table.) We threw dice from a uniform distribution to determine whether the transition occurred.

	Simulated (Scaled to N=10)	Observed N = 10
Average Growth for All Countries	1.64	1.64
Average Authoritarian Growth	2.15	2.15
Average Democratic Growth	1.33	1.31
Difference in Favor of Authoritarianism	0.82	0.84
Total Years under Authoritarianism	161	178
Total Years under Democracy	269	252
Number of Transitions to Democracy	19.6	19
Number of Transitions to Authoritarianism	18.5	19
Pr{Dem failed|Low growth}	0.03	0.08
Pr{Dem failed|Fast growth}	0.17	0.16
Pr{Auth failed|Low growth}	0.21	0.21

As one would expect, authoritarian regimes grew faster than democracies. And these data were generated under the assumption that regimes have no effect on growth. It is the difference in the way regimes are selected--the probabilities of survival conditional on growth--that generate the difference in growth. Hence, the observed difference is due entirely to selection bias.[30]

Let us now subject these data to OLS, where REG = 1 for Authoritarianism and REG = 0 for Democracy. The results are given below:

VARIABLE NAME	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 21496 DF
REG	0.87942	0.0564	15.593
LEVEL	-0.94707E-04	0.2848E-04	-3.325
YEAR	-0.04365	0.2306E-02	-18.927
CONSTANT	4.3878	0.1499E-02	29.263

The regime coefficient is positive and significant! Indeed, authoritarianism appears to increase the rate of growth by 0.88 of one per cent: a difference almost identical with that of means.

[30] We could have gotten the same result in a different way. Suppose that (1) levels converge, that is, growth is a negative function of income, and (2) dictatorships occur at low levels while democracies are more frequent at high levels. Then we will observe fast growing dictatorships (at low levels) and slowly growing democracies (at high levels).

Thus standard regression fails the same way as the comparison of means, even with controls.

To correct for the effect of selection, we followed the procedure developed by Heckman (1978) and Lee (1978), in a dynamic formulation based on Amemyia (1985). (See Przeworski and Limongi 1992 for details.) Once we corrected the effects of selection, we generated the unbiased means for the two regimes and these, not surprisingly, reproduced the assumptions under which the data were generated:

GROWTH UNDER	N	MEAN	ST. DEV	VARIANCE
Authoritarianism	21000	1.5234	0.67407	0.45437
Democracy	21000	1.6630	0.58289	0.33976

Hence, we have come the full circle: we generated data in such a way that regimes had no impact on growth but growth affected the selection of regimes, we discovered that the observed values were higher for authoritarianism, we corrected for selection and we discovered that, save for sampling errors, regimes do not differ in affecting growth.

Since we are reporting work in progress, we are not yet ready to present results using real data. Indeed, these methodological comments should end with a warning. Selection models turn out to be exceedingly sensitive: minor modifications of the equation that specifies how regimes survive can affect the signs in the equations that explain growth. Standard regression techniques yield biased (and inconsistent) inferences but selection models are not robust (see Greene 1990: 750, Stolzenberg and Relles 1990). In turn, while reverting to simulation provides at least the assurance that one does not attribute to regimes the effects they do not have, it may still fail to capture the effects they do exert.

Conclusions

The simple answer to the question with which we began is that we do not know whether democracy fosters or hinders economic growth. All we can offer at this moment are some guesses.

First, it is worth noting that we know little about determinants of growth in general. The standard neo-classical theory of growth was intuitively unpersuasive and it implied that levels of development should converge: a prediction not born by the facts. The endogenous growth models are intuitively more appealing but empirically difficult to test since the "engine of growth" in these models consists, in Romer's (1992: 100) own words, of "ephemeral externalities." Statistical studies of growth notoriously explain little variance and are very sensitive to specification (Levine and Renelt 1991). And without a good economic model of growth, it is not surprising that the partial effect of regimes is difficult to assess.

Secondly, there are lots of bits and pieces of evidence to the effect that politics in general does affect growth. At least everyone, governments and international lending institutions included, believes that policies affect growth and, in turn, scholars tend to think that politics affect policies. Reynolds (1983), having reviewed the historical experience of several countries, concluded that spurts of growth are often associated with major political transformations. Studies examining the impact of government spending on growth tend to find that the size of government is negatively related to growth but the increase of government expenditures has a positive effect (Ram 1986, Lindauer and Velenchik 1992). Studies comparing the Far East with Latin America argue that there is something about the political institutions of the Asian countries which makes them propitious for growth. In general, there are lots of suggestive stories but little hard evidence.

Our own hunch is that politics does matter but "regimes" do not capture the relevant differences. Post-war economic miracles include countries that had parliaments, parties, unions, and competitive elections as well as countries ran by military dictatorships. In turn, while Latin American democracies suffered economic disasters during the 1980s, the world is replete with authoritarian regimes that are dismal failures from the economic point of view.[31] Hence, it does not seem to be democracy or authoritarianism per se that makes the difference but something else.

What that something else might be is far from clear. "State autonomy" is one candidate, if we think that the state can be autonomous under democracy as well as under authoritarianism, as do Bardhan (1988 and 1990) and Rodrik (1992). But this solution meets the horns of a dilemma: an autonomous state must be both effective at what it wants to do and insulated from pressures to do what it does not want to do. The heart of the neo-liberal research program is to find institutions that enable the state to do what it should

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[31] As Sah (1991) has argued, authoritarian regimes exhibit a higher variance in economic performance than democracies: President Park of South Korea is now seen as a developmentalist leader but President Mobutu of Zaire is nothing but a thief (Evans 1989). But we have no theory that would tell us ex ante which we are going to get. We do know, in turn, that until the early 1980s the democratic regimes which had encompassing, centralized unions combined with left-wing partisan control performed better on most economic variables than systems with either decentralized unions or right-wing partisan dominance.

but disable it from doing what it should not. But thus far no one found such institutions, and in our view there are no such institutions to be found. In a Walrasian economy, the state has no positive role to play, so that the constitutional rule is simple: the less state, the better.[32] But if the state has something to do, we would need institutions which enable the state to respond optimally to all contingent states of nature and yet prevent it from exercising discretion in the face of group pressures.[33] Moreover, as Cui (1992) has argued, if markets are incomplete and information imperfect, the economy can function only if the state insures investors (limited liability), firms (chapter 11), and depositors (two-tier banking system). But this kind of state involvement inevitably induces a soft-budget constraint. The state cannot simultaneously insure private agents and not pay the claims, even if they result from moral hazard.

Even if optimal rules do exist, pre-commitment is not a logically coherent solution. The reason is that just any commitment is not good enough: it must be a commitment to an optimal program. And advocates of commitment (for example, Shepsle 1989) do not consider the political process by which such commitments are established. There is something peculiar about arguments which claim that commitment is required to disable discretionary responses to rent-seeking activities of private actors but do not consider the possibility that private actors would want to commit the state to a suboptimal program. Yet the same forces that push the state to suboptimal discretionary interventions also push the state to a suboptimal commitment. Assume that the government wants to follow an optimal program and it self-commits itself. At the present it does not want to respond to private pressures but it knows that in the future it would want to do so; hence, it disables its capacity to do it. The model underlying this argument is Elster's (1979) Ulysses.[34] But the analogy does not hold since Ulysses makes his decision <u>before</u> he hears the Sirens. Suppose that he has already heard them: why does he not respond to their song now and is afraid that he would respond later? If governments do bind themselves, it is already in response to the song of the Sirens and their pre-commitment will not be optimal.

All we can conclude is that the question of the impact of

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32 Von Hayek wanted to abolish the legislature (in fact, he thought that legislatures should be elected for 15 year terms by voters 45 years or older and should be independent of political parties) and to eliminate central banks. See Cui (1992: 6).

33 Note that in his seminal article Strotz (1956: 173) argued that precommitment is the preferred strategy only under certainty.

34 Note that Elster (1989: 196) himself argues against the analogy of individual and collective commitment.

politics on growth is wide open for reflection and research.

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