

# Democracy, Autocracy and Growth: Theoretical Considerations\*

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## Abstract

Comparative studies of economic development in democratic and autocratic states are widely popular. However, theoretical foundations of highly sophisticated tool-driven analysis seem vague and sometimes insufficient. This paper tries to shed light on some basic determinants of growth in autocratic and democratic political systems. Although the political system itself does not determine the growth prospects of an economy, different mechanisms translating preferences of actors into policy making are at work. Staying in office is a goal of both democratic and autocratic leaders. A distinct tool available only to autocratic regimes is repression. But authoritarian leaders can be confronted by coups or revolutions from a dissatisfied elite or citizens, while democratic leaders face pressures from the political marketplace translated through elections. Nevertheless, both are measured to some extent by the economic welfare they are supposed to generate either by growth and/or redistribution. This paper attempts to develop a basic understanding of the different constraints on democratic leaders on the one hand and the distorted incentive structure of autocratic leaders in respect to growth enhancing policies on the other. The impact of different factors influencing the incumbents decisions are discussed. We find that impatience of the citizens is a crucial factor often neglected when comparing growth performances of different political systems.

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# 1 Introduction

The discussion of how democratic and autocratic political systems affect growth paths and which system better serves the development process is ongoing.

The question to be tackled in this paper is what incentives the different political systems provide for incumbents to implement growth-enhancing policies. Assuming that staying in power is the crucial aim of both autocratic and democratic office-holders, they face different constraints realizing this aim. The incumbents are assessed to some extent by the economic welfare they are supposed to generate for their citizens either by GDP per capita growth and/or redistribution in the form of monetary transfers or the provision of public goods. In this respect time/impatience is one of the major constraints affecting survival in office. The outcome of elections — in this context depending basically on the economic welfare being generated<sup>1</sup> — confirms the incumbency in discrete points in time or not.

In autocratic regimes, the change of leadership can be realized by a coup or revolution, if transition to democracy is ruled out. The timing is far less predictable than in democracies and the costs associated with regime change are high. The risk of being overthrown in one way or another does not necessarily depend on the citizens. Autocrats have more leeway in general but they also have to control pivotal groups in society. But similar to democratic systems, leaders are assessed to some extent by the economic welfare in terms of growth and/or redistribution. Nevertheless, at first glance, one can easily assume that the time or impatience constraint puts less pressure on autocratic leaders than on democratic ones. Depending on their ability or the necessity to repress and their strategy to monetarize/maximize the benefits of being in power, they choose their efficient economic policy – growth-enhancing or not.

Given the setting above, there are two possible strategies for both politi-

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<sup>1</sup>Assuming that the median voter is decisive in a one dimensional policy space with single-peaked preferences.

cal systems: First, implementing growth-enhancing policies<sup>2</sup> under uncertainty when these policies might show positive effects on pivotal groups' personal income growth. Second, redistributing the existent resources accepting 'strong' distortive effects on the further economic development, e.g. through investments that have not been carried out or the distortive effects of high taxation.

There are two major differences between the strategies. First, they have different implications for economic development in terms of GDP-growth. Second, the time horizon is quite different. While incumbents can easily implement redistributive policies with direct effects on personal income of citizens/pivotal groups, growth-enhancing policies are less predictable in timing and effect. Based on the assumption that incumbents are mainly assessed by economic welfare generated, the impatience constraint, the survival threshold and time preference rate are decisive factors in the decision about which strategy to choose.

Economic well-being and thus survival is achieved either by enlarging or by redistributing 'the cake' among citizens. This implies a long run — short run dichotomy. Knowing about the long term nature of growth processes, democratic leaders tend to disregard growth-enhancing policies in the face of up-coming elections and the limited duration of legislative periods. Given the goal of staying in power, a trade-off exists between growth-enhancing policy making and the demand of citizens for enhanced welfare in the short run. Thus, if policies alter the distribution of power in terms of not surviving the current period, the incumbents do not have any incentive to implement these policies.

This paper tries to develop a basic idea of the incentive structure mentioned above, trading off the outlined strategies for staying in office for the political systems democracy and autocracy. After reviewing the relevant literature and outlining basic assumptions, a simple stylized two-period framework is provided, explaining the interdependence of growth-enhancing policies/redistribution and the probability of staying in office. This set-up serves

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<sup>2</sup>Assuming that incumbents do have knowledge about effective economic policy

as a basis for the discussion of the characteristics of the decisive parameters followed by some concluding remarks.

## 2 A glance at the literature

Turning to the somewhat artificial category of ‘autocracy versus democracy’, the question of which political system and institutional framework (rules-of-the game) is better for economic growth is widely discussed and is still unresolved. Undoubtedly, the nature of the political system has an impact on economic policy-making and economic performance in general. It constitutes the platform on which the fundamental rules governing society and the economy are negotiated. On this basis a broad empirical literature has evolved, which mostly compares growth patterns in democratic and autocratic states. Two opposing views can be distinguished and both are supported by scholars.

The broad line of theoretical arguing of the first group considers a democratic system as a precondition for growth because only a system of checks-and-balances can guarantee secure property rights. In autocratic systems, the government is unable to credibly commit itself to provide secure property rights. Following Wintrobe (1990), autocrats can always choose their preferred tax rate and expropriate citizens rendering promises incredible.

In contrast, democratic institutions facilitate the accumulation of physical and human capital needed to generate sustainable growth. Mostly institutional economists like North and Thomas (1973), North (1990) and Williamson (2000) shaped this theoretical approach. Empirical work also seems to support this view. Long and Shleifer (1993) show in a historical study that growth strongly correlated with the influence merchants had on economic policy-making, whereas absolutist rulers tended to overtax, choking off economic growth. Further influential publications, including Knack and Keefer (1995), Easterly (2002), Dollar and Kray (2003), Rodrik (2003), Acemoglu, Johnson, and Robinson (2004), and Krieckhaus (2006) point out that democratic structures constraining governmental power and thus secur-

ing property rights are a central precondition for growth.

Another line of reasoning based on the *Lipset-Aristotle hypothesis* (Lipset (1960)) considers secure property rights more a policy-decision of the government than an outcome of the checks-and-balances structure of democratic systems. Consequently, autocratic states are also able to implement secure property rights and growth-enhancing policies. The more empirical studies of Barro (2000), Djankov, Glaeser, La Porta, Lopez-de Silanes, and Shleifer (2003), and Glaeser, La Porta, Lopez-de Silane, and Shleifer (2004) support that approach.

The most extensive study of autocratic regimes and their economic origins so far has been carried out by Acemoglu and Robinson (2005). In a game theory analysis on the basis of the income difference of the median voter and the average income they derive several hypotheses. An early systematic and to our knowledge first formal treatment of strategic choice of autocratic leaders is provided by McGuire and Olson (1996). The elite choose either predatory or growth-enhancing policies in order to maximize their own benefits. The authors point out that it makes more sense for the autocratic leader to provide a certain amount of public goods and secure property rights. This in turn leads to higher investment and growth which can be taxed to their benefits. They state that

whenever a rational self-interested actor with unquestioned coercive power has an encompassing and stable interest in the domain over which the power is exercised, that the actor is led to act in ways that are, to a surprising degree, consistent with the interest of society and of those subject to this power (McGuire and Olson (1996, 73))

This view of autocrats as strategic decision-makers was taken up by several other scholars including Bourguignon and Verdier (2000), Rajan and Zingales (2006), Robinson (1999).

A common understanding of most scholars is that autocratic leaders or elites have more leeway for action. The interpretation of whether this leeway has a positive or negative impact on economic development differs widely as we have seen. Moreover, the enhanced possibilities to implement policies is subject to constraints, too. The possibility of a coup or revolution is around the corner and poses a constant threat to the incumbent influencing their decision-making concerning the allocation and redistribution of resources. Persson and Tabellini (1994) and Alesina and Rodrik (1994) introduced the impact of social inequalities and redistribution into this branch of literature. They found that for a given level of inequality redistribution in democracies is higher than in autocratic regimes. Both argued that if the median voter's income is much lower than the average income, they will vote for redistribution. The distorting influence of redistribution then lowers growth. In autocratic system this effect is supposed to be lower<sup>3</sup>.

In this vein, Agell and Persson (2006) show that the scope of redistribution in a democracy depends on the ability distribution between average and median voter. If the ability distribution is sufficiently skewed the median voter will rely on the social transfers and will not bother about deadweight losses. Although the discussion about the redistributive impact of income inequality is not resolved on empirical grounds, the idea of the median voter or the citizens exerting pressure on governments via the political market place — in democracies *and* autocracies — is appealing. Drazen summarized this for transition countries as

political constraints [which] is shorthand for the fact that decisions that are made by a political mechanism, and hence they may be quite different from those made by a social planner, subject to the same informational and technical constraints. The political

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<sup>3</sup>However, Benabou (1996) and Deininger and Squire (1996) and Deininger and Squire (1998) show, that this impact is not significant attributing the results of Persson and Tabellini (1994) and Alesina and Rodrik (1994) to the minor quality of data and methodological short-comings. Deininger and Squire (1996) show that not inequality per se has a negative effect but the inequality in assets such as land which goes along with the findings of Barro (1999).

problem in transition is that *for a program of reform and transition to succeed, it must have the necessary political support at crucial decision stages*<sup>4</sup>(Drazen (2000, 624)).

The strand of literature dealing with the impact of the political constraint ‘election’ on macroeconomic policy-making goes back to Kramer (1971) and was devoted to investigations of democratic political systems. Under the assumption that the economic situation of voters influences voting decisions, Kramer empirically studied the impact of economic conditions on electoral outcomes and found a strong responsiveness of economic conditions in elections. For example a 10% decrease in per capita real personal income would result in 4-5% decrease in the share of votes of the incumbent administration. There is a long-running debate about if and how voters evaluate<sup>5</sup> economic performance<sup>6</sup>. Without going into detail, in our context Kramer’s finding, termed the *responsibility-hypothesis* is of interest. He argued that voters hold the government responsible for the development of the economy (Kramer (1971)).

The same holds true in an autocratic setting. Theoretical literature on the impact of pressure from the political marketplace also exist to a certain extent for autocratic settings. Recently, Gandhi and Przeworski (2007) showed that autocrats set up pseudo democratic institutions to lengthen their tenure by giving some rivals a stake in the decision making process by providing a platform for finding compromises. Focussing on the economic determinants of bottom up threats, Robinson (1999) derived hypotheses of public goods provision in respect to revolution probability of the group not in power, the citizens. Overland, Simons, and Spagat (2005) choose a similar approach,

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<sup>4</sup>Emphasis in original

<sup>5</sup>One main issue of discussion is whether voters evaluate economic performance myopic, rational or retrospective. According to Mueller (2003) the retrospective voting hypothesis received the greatest deal of support given the survey studies and the vote- and popularity function studies. The weighting of events of the distant past relative to the recent past still draws a lot of attention. A good overview of the earlier work dealing with developed democracies can be found in Gartner (1994). An excellent extensive survey of Voting/Popularity-functions has been delivered by Nannestad and Paldam (1994) providing an overview of around 100 studies in this area.

<sup>6</sup>Later his question was termed the ‘economic-voting hypothesis’ by Lewis-Beck (1986)

linking economic policy-making to a (theoretically derived) *bifurcation point* which decides whether growth-enhancing policies or growth diminishing policies are pursued. In line with Robinson (1999), Shen (2005) argues that long lasting autocrats do not necessarily implement growth enhancing policies. Summing up, the existing research acknowledges the impact of economic performance on election outcomes/regime stability and vice versa. However, as we have seen, a wide array of approaches has been applied with sometimes contradicting results.

Borrowing the tools of the existing research outlined above, this paper attempts to develop an idea of the incentive structure and constraints in democratic and autocratic systems leading to different policies and growth patterns.

### 3 A basic framework

The aim of the framework is to gain some insights about the trade-off between growth-enhancing policies and redistributive policies lowering/raising the probability of survival in the short run and vice versa in the long run. In this respect we are not providing an elaborate model, instead we try to create a basis for discussing some theoretical issues. Therefore, we consider the political system as well as growth dynamics in the most abstract way.

In a democratic system, the preferences of the median voter are assumed to be crucial in determining the policies. In autocracy, they are decided by an elite, which can be a dictator, a party, a military junta, an oligarchic group or similar. For simplicity, we call the elite, party, person in power the incumbent for both autocratic and democratic states. Following Wintrobe's classification of autocratic regimes (Wintrobe (1990)), we do not refer to totalitarian or tyrannic regimes which have other motivations determining their policies than are of interest here. The systems themselves are considered as black-boxes. We also abstract from motivations of incumbents other than staying in power, which is the precondition for action for whatever purpose.



In our setup, the incumbent is already in power, and it does not matter if they gained it through a regular election, a coup, a revolution or a transition to democracy. The incumbent is in office for one period and decides about the policies concerning redistribution  $r$  and growth  $g(r)$  in terms of monetary transfers/provision of public goods or higher wage earnings. The economic welfare they managed to generate then decides about their ‘survival’. We consider the policy choice of the incumbent as a decision problem with no strategic interaction with the ‘demand’ side. The incumbent decides about the level in redistribution  $r$  in their first term in office. This decision either takes them to the next period or not. As will be discussed later, deciding about a change in redistribution is not an option in the second period. Redistribution  $r \in [0, 1]$  is defined as the level of redistribution.

The GDP per capita growth rate is denoted  $g$  and  $g$  can be raised by lowering redistribution  $r$ . Following *AK*-style endogenous growth models, forgoing consumption results in savings which turn into investment translating into long run growth. The function  $g(r)$  is assumed to be twice differentiable, strictly falling and concave with  $g'(r) < 0$  and  $g''(r) < 0$ . The rationale behind this function is that redistribution has a negative impact on growth rates due to distortive effects of taxation and omitted investment. There are no spill-over effects from redistribution to growth.

Starting with the incumbent’s sole aim of staying in power, we assign the policy function  $P$  to the overall utility function  $V(\pi(P))$ .  $\pi(P)$  is assigned to the survival of periods and is a function of the policy  $P$ . Let us first consider the policy function  $P(r)$  in the period the incumbent comes to power, be it a through a coup, a revolution or a regular election, subsequently called first period. A very basic specification of the policy function which describes his transition to the second period could be

$$P_t(r) = g(r) + r \tag{1}$$

The only choice for the incumbent at this stage the amount of  $r$  ensuring his reelection. Unconstrained maximization leads to the first order condition

$$\frac{\partial P_t(r)}{\partial r} = 0 \tag{2}$$

which yields a maximum<sup>7</sup> at  $g'(r^*) = -1$ .

The policy function's first order condition tells us only about the balance of the negative impact of redistribution on growth and the optimal balance for a given function  $g(r)$ . For autocratic regimes classification in periods is somewhat artificial but based on the assumption that they have to justify their policies to a certain extent at certain points in time.

Expanding the baseline framework introducing an impatience constraint  $\alpha \in (0, 1)$  which is considered an exogenous variable with  $\alpha \doteq 1$  there is no impatience and  $\alpha \doteq 0$  standing for full time constraint. The open form of the interval is chosen because there will always be at least a minimum of redistribution or growth contributing to the policy function. This impatience constraint captures the demands of the citizens and decides about the effectiveness of the strategies 'growing' or 'redistributing'. It measures how much the different strategies contribute to the policy function and thus the overall use of the strategy concerning survival  $\pi$  of the period. This impatience constraint varies widely from a well established autocrat with modest demands of the citizens to a weak democracy confronted with wide-ranging short notice demands of the electorate. The way  $\alpha$  is introduced into the policy function reflects the nature of the 'measures' redistribution and growth. While redistribution has an immediate effect on the citizens' welfare, growth is considered to be of more long term nature. Thus, a high impatience constraint for example forces the incumbent to redistribute more knowing that the benefits of omitted redistribution in the form of higher growth might come too late for him. The policy function now takes the form of

$$P_t(r) = \alpha g_t(r) + (1 - \alpha)r \quad (3)$$

yielding its maximum at

$$g'_t(r^*) = \frac{-1 + \alpha}{\alpha} \quad (4)$$

indicating that the higher the time or impatience constraint to generate welfare, the stronger the need to bias the growth – redistribution balance to the

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<sup>7</sup>Second order condition:  $\frac{\partial P_t(r)}{\partial r} < 0$

redistribution side. This is quite straight forward taking into account that the incumbent cannot wait for the positive effects of low redistribution on growth.

Considering only one period or, more clearly, the conditions for transition to the next period, gives only slight hints to the forces at work. Introducing the intertemporal view integrates the fact that incumbents have to live with the ‘sins’ they committed in the past. That is, generating welfare and thus reassuring reelection in the second period is negatively dependent on the amount redistribution in the period before. Now, he has to bear the full costs of high redistribution in form of lower growth over the complete second period and it is the only variable affecting his survival of the second period. Thus, the chances of getting reelected in the second period are lower if redistribution was excessive in the first period. Introducing a second period in its simplest form results in

$$P(r) = P_t(r) + \delta P_{t+1}(r) \tag{5}$$

with  $\delta \in (0, 1)$  denoting the exogenously determined discount factor of the incumbent weighting survival of future periods against survival of the present period. Without specifying the second period further this results in the first order condition  $P'_t(r) + \delta P'_{t+1}(r) = 0$  which can be rewritten as  $\frac{-P'_t(r)}{P'_{t+1}(r)} = \delta$  saying that for a given  $\alpha$  only the discount rate determines the maximization calculation.

In our basic view the incumbent decides effectively only once about  $r$  in the beginning of the first period. Theoretically the incumbent could decide about more or less redistribution also in the beginning of the second period. But having in mind that after they survived the first period the impatience constraint<sup>8</sup> is presumably low ( $\alpha \doteq 1$ ). Thus, the incentive to redistribute is non-existent assuming that  $\alpha \doteq 1$ , and thus  $r$  does not positively contribute to his policy function. Specifying the second period following the rationale

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<sup>8</sup>Given the fact that the incumbent just got reelected or confirmed in office, the ‘impatience’ of the electorate seems to be satisfied

outlined above the amount of redistribution in period  $t$  decides about the growth rate  $g_{t+1}$ . The second period is thus  $P_{t+1}(r) = g_{t+1}(r)$  indicating that the survival of the second period is determined only by the growth rate  $g(r)$  generated. The extensive form shows the trade-off between the two periods.

$$P(r) = \alpha g_t(r) + (1 - \alpha)r + \delta g_{t+1}(r) \quad (6)$$

with the first order condition

$$1 - \alpha + \alpha g'(r^{**}) + \delta g'(r^{**}) = 0 \quad (7)$$

and a maximum at

$$g'(r^{**}) = \frac{-1 + \alpha}{\alpha + \delta} \quad (8)$$

In this form we can see that redistribution will be lower with a lower time constraint ( $\alpha \doteq 1$ ) and a higher discount rate. What we also can immediately gather is that

$$g'(r^{**}) = \frac{-1 + \alpha}{\alpha + \delta} < \frac{-1 + \alpha}{\alpha} = g'(r^*) \quad (9)$$

saying that the optimal  $r = r^{**}$  in an intertemporal view is lower than  $r = r^*$  in a single period maximization. Summing up the results so far: no surprises. A higher time constraint and a high discount rate lead the incumbent to less redistribution.

So far, the policy function suggest a continous pay-off. Assuming that the incumbent is only interested in power measured in legislative periods we assume the discrete utility function  $V(\pi(P)) \in \{0, 1, 2\}$  where the pay-off 0 stands for not surviving the first period, 1 for surviving the first but not the second period, and 2 for surviving the first and second period. Therefore we include  $\pi$  indicating the survival of the periods. The pay-off is only realized with the value  $\pi = 1$  for both periods — transition to period two and three. Growth and redistribution are the only variables affecting survival of the period(s)  $\pi \in \{0, 1\}$ , 0 stands for voted out of office/overthrow and 1 for survival. Therefore,  $\pi_t P_t$  with  $\pi_t = 1$  stands for the survival of the first period and the corresponding pay-off and  $\pi_t(P_{t+1})$  with the same conditions for survival of the second period.  $\pi$  is determined endogenously by

$$\pi = \begin{cases} 0 & \text{if } P = \alpha g_t(r) + (1 - \alpha)r < \phi, \\ 1 & \text{if } P = \alpha g_t(r) + (1 - \alpha)r \geq \phi. \end{cases}$$

with  $\phi \in [0, 1]$  representing the exogenous threshold for survival.

This threshold reflects the expectations of the electorate/citizens about the *amount* of welfare to be generated which justifies the survival of the incumbent. The incumbent determines the variable redistribution and thus personal welfare of citizens in the first period knowing that redistribution in period  $t$  has adverse effects on growth — and thus his reelection probability — in the present and even more so in the subsequent period  $t + 1$  because of the non-existing effect of  $\alpha$ . Including the survival threshold the framework takes the form of

$$V(\pi(P)) = \pi_t(P_t) + \pi_t(P_t)\delta\pi_{t+1}(P_{t+1}) \quad (10)$$

The second  $\pi_t$  indicates that overall pay-off is 0 if he does not survive the first period.

Surviving the first period thus depends on  $\pi_t$  and the conditions for it outlined above. As explained on page 11,  $\alpha \doteq 0$  for the second period because of the assumed non-existing impatience constraint after the survival of the first period. So the incumbent has no incentive to redistribute at this point in time — the only point he can decide about redistribution in this framework — because it has only a negligible effect on passing the survival threshold.

Equation (4) showed the unconstrained maximum for the electorate and the incumbent for the first period. However, we are not interested in the maximum utility of the electorate or only the first period for the incumbent but the optimal path of redistribution knowing that redistribution reduces growth in the next period. The incumbent tries to optimize redistribution for a given  $\phi$  leading to the optimal path of redistribution  $\alpha g(r_\phi) + (1 - \alpha)r_\phi = \phi$  which guarantees reelection with a minimum of redistribution<sup>9</sup>. At the same time

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<sup>9</sup>By definition  $r_\phi > r^{**}$ , otherwise it would be no constraint. At the same time  $r_\phi < r^*$  because it is the optimal path of redistribution and not the unconstrained maximization of the first period.

the incumbent realizes the maximum growth prospects — given the reelection constraint — for the next legislative periods. Rewriting the reelection constraint to

$$r_\phi = \frac{\phi - \alpha g(r_\phi)}{1 - \alpha} \quad (11)$$

we can see that a higher reelection constraint leads to more redistribution for a given  $\alpha$ .<sup>10</sup>

At  $r_\phi$  survival is secured with the minimum amount of redistribution giving the constraint  $\phi$ . At the same time the incumbent realizes the maximum growth prospects — given the reelection constraint — for the next period. The incumbent can now decide about the amount of redistribution for the given parameters and functions  $\alpha, \delta, \phi$  and  $g(r)$ .

The next natural step is to acknowledge that  $\phi$  is not known to the incumbent, say they decide under the condition of uncertainty. As laid out before, the higher the economic welfare that is generated the higher the survival probability. Thus it is rational for the incumbent — given a certain natural risk aversiveness not explicitly modelled here — to redistribute more than the optimal amount  $r_\phi$  given the uncertainty of the survival threshold. To secure at least the corresponding pay-off for the transition to the second period  $P_t$  he will choose  $\bar{r}_\phi > r_\phi$  so redistribution is biased upwards, deviating from the optimal choice  $r_\phi$ . Of course, this negatively affects the probability of  $\pi$  becoming 1 in the second period. The uncertainty about the survival threshold and the individual risk-aversiveness of incumbents can thus be identified as a additional factor contributing to deviate from optimal growth path.

Rounding up the different choices of  $r$  given the different circumstances, the overall order of  $r$  is  $r^* > r_\phi > \bar{r}_\phi > r^{**}$ . Given that order, we can see that — apart from the parameters — risk aversion is an additional factor that has to be taken into account and seriously affects the change in redistribution.

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<sup>10</sup>Of course this is also subject to the maximization constraint given by  $g'_t(r) = \frac{-1+\alpha}{\alpha}$ .

## 4 Implications of different parameters

So far the general mechanisms securing survival have been discussed without taking into account the specific features of the political systems democracy and autocracy. In the framework suggested here, we find that the mechanism driving growth is similar for the different political systems and that the main differences are displayed in the parameter values for  $\alpha$ ,  $\phi$  and  $\delta$  while the different parameters have a different impact concerning the exogenous condition of the country. Having established a set-up, we discuss some issues concerning different parameter values for democracy and autocracy in the next section.

The time constraint  $\alpha$  (which could be alternatively called impatience constraint) is far more decisive in democratic systems. This measure mostly captures the desire of the citizens for immediate consumption and accordingly weights the long term growth benefits against the short term redistributive benefits. In our view,  $\alpha$  contains an impatience element and a temporal element. A low  $\alpha$  gives the incumbent the chance to wait for the benefits of higher growth generated by omitted consumption and thus pass the survival threshold when elections are held. On the other hand, this temporal element could be dominated by the impatience of the electorate. For example, imagine the situation after a transition from a centrally planned economic system under autocratic rule to a market-based one with democracy. The desire for backlog consumption of the citizens might render long term growth strategies impossible and immediate redistribution might be necessary to stabilize the government and prevent a reversal to autocracy or the call for new elections. An ‘inofficial’ survival threshold — distinct from the regular election date — could be in place.

There seems to be a decisive difference concerning  $\alpha$  to well established, industrialized democracies where impatience is presumably lower, which leaves more room for the incumbent to implement long term growth strategies. The acceptance and age of a democracy seems to have a mitigating effect on  $\alpha$ .

In an autocratic setting the impact of  $\alpha$ , in terms of the temporal component, is negligible. As there is no such thing as the necessity to justify incumbency on a periodical basis time plays a minor role concerning the maximization considerations of the autocrat. The impatience component of  $\alpha$  is far more decisive. Once in power, stabilizing this power is an important incentive to redistribute or bribe pivotal groups in society. Similar to instable democracies, the need to realize backlog consumption for the citizens immediately might trigger redistributive policies.

Given that passing/failing  $\phi$  in autocracies is not institutionalized and temporally fixed in terms of regular elections, the considerations of an autocrat are quite different. The danger for the incumbent here is the growing willingness for the citizens to overcome the collective action problem. While the incumbent in a well established, rich democracy theoretically has the necessary leeway to follow long term strategies in the time frame of the legislative period, an autocratic leader can be confronted with a revolution or coup any time. In this respect Wintrobe's dictators dilemma is of interest, hinting at the deficits concerning information processing in autocratic regimes (Wintrobe (2001)). Thus, the major problem in this respect is to realize actual impatience  $\alpha$  in combination with lowering  $\phi$  and at least redistributing  $r_\phi$ . As recently pointed out by Milante (2007) balancing the costs of civil conflict against the costs and rewards of further repression decides the willingness of all actors to engage in cooperation. In contrast to  $\phi$  the autocrat cannot influence  $\alpha$ . The autocrat's only possibility is to keep  $\phi$  lower and redistribute according the importance of different groups in society.

Taking a closer look at the survival threshold  $\phi$  we have a clear distinction between the systems. Democratic leaders have to take it almost completely exogenously compared to autocratic leaders. The uncertainty of the future benefits of policies in combination with a 'rational' bias for the present especially in transition countries eventually leads to a non-adoption of potentially beneficial policies. Democratic leaders are confronted with citizens' demands which is not comparable to autocratic regimes. Generally speaking, a principal-agent setting prevails in the relationship with the electorate. This



gives the incumbent some leeway for action because it is not rational of the electorate to monitor their performance closely. Nevertheless, at the election date the electorate judges the incumbent and the demands of the citizens are higher in the face of the possibility of costlessly voting the incumbent out of office. The *only* possibility to influence  $\phi$  is to shape or frame the expectations of the electorate — as laid out by Chong and Mark (2007) — by clearly signalling the benefits of refraining consumption today to generate higher benefits in the future. Keefer and Vlaicu (2005) showed that especially in young democracies this is a difficult task concerning the fact that credibility is hard to build up and takes time. Overall speaking  $\phi$  is higher and the possibilities to influence the survival threshold are very limited in democracies.

In contrast, autocratic regimes have a much better standing. A very basic difference between autocracy and democracy is that government changes take place with much lower ‘costs’ in democracies because it is institutionalized in terms of elections. Autocratic leaders do not have to justify their performance in regular elections. Autocratic regimes change either by revolutions, coups or a transition to democracy. The former two are usually accompanied by very high and sometimes prohibitive costs. In this respect, the collective action problem works in favour of autocratic regimes. Depending on their capabilities, they can influence the survival threshold by devoting resources to the repression of pivotal groups. The demands concerning personal welfare can be kept at a modest level using repression. The more efficient the tool ‘repression’, the lower  $\phi$ .

Additionally, as outlined above, although they might not pass the survival threshold, the collective action problem has still to be solved by the citizens or political opponents to implement a successful regime change.

Taking one step before, it is easier for the autocratic incumbent to shape the expectations of their citizens. Given their control over the media and communication technologies, propaganda is a useful instrument to frame the attitudes towards the government and personal welfare.<sup>11</sup> Therefore, the

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<sup>11</sup>Chong and Mark (2007) pointed out that the competitiveness of the system is decisive factor in the ability to frame public opinion. They investigated democratic systems but

leeway for implementing growth enhancing policies in terms of less redistribution is theoretically higher.

A similar difference can be observed for the time preference rate. Given the fact that regime change is much more costly in the face of collective action problems the costs of losing power for an autocratic leader are supposed to be higher as well. Without going into detail about what happens to disposed autocratic leaders, it seems clear that they are much more concerned about their future than democratic leaders. In this respect the assumption of autocrats having a higher discount rate seems reasonable. It is questionable if this assumption leads to the outcome ‘less redistribution’ as predicted by the proposed framework. One could easily think of the autocrat using more repression to lower  $\phi$  instead of redistributing less to pass the survival threshold in the second period. Nevertheless, dynastic considerations might come into play and make long term considerations like higher growth attractive given the rising cost of repression in the subsequent periods because of  $\phi$ . However, one has to bear in mind that this effect is foiled by the uncertainty of the survival threshold. Taking into account the high costs of losing power, uncertainty about the survival threshold could lead to more redistribution. In this respect it is not clear which effect dominates decision making.

As mentioned before government change is institutionalized in democratic systems. There are costs but they are much lower for the incumbent as well as the citizens compared to the costs of a revolution or coup. Abstracting from the subjective time preference of the incumbent, the costs of losing power are far less dramatic than in autocracies. The incumbent might for example keep a seat in the parliament and get a chance for a comeback. Apart from the pay-offs assumed in the paragraphs above one could think of the benefits of being in power in the different political systems. Intuitively one would say that in autocratic regimes the benefits are higher given the possibilities for kleptocratic behaviour in office.

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one could easily reason that this effect might be much higher in autocracies.

## 5 Concluding remarks

We discussed some of the basic features of the incentive structure of political systems with respect to policy decision ‘redistribution’ affecting growth and survival in office. Applying some rather strict assumption in terms of growth dynamics and political systems we find that different strategies of autocratic and democratic leaders are driven by differences in the parameter values. Abstracting from political business cycles, and turning redistribution into a categorial decision at the beginning of the first period might be perceived as not very realistic. However, we are more interested in the long-term outcomes concerning the general incentive structure affecting the overall basic decision for or against redistributinal policies.

Summing up, there seems to be some evidence that impatience plays a more important role in the democratic leaders considerations. Furthermore, the time preference of autocratic leaders is supposed to be higher due to the higher costs associated with the loss of power. And last, that the survival threshold is lower given the lower demands and the higher costs of regime change for the citizens.

The different empirical results in the literature hinted at in the second section might result from neglecting the ‘maturity’ of democracies. Our discussion suggest that this factor might be more important than it is perceived, given that impatience alters the maximization calculus of the incumbent decisively. Following the recent work of Garri (2007), the effects of impatience on political decision making are assumed to be mixed. Nevertheless, we find that taking into account the necessity to satisfy immediate needs of the citizens especially in transition economies, makes a decisive difference in comparing the economic performance of autocratic and democratic states.<sup>12</sup>

It turned out that a major issue is the problem of deciding under uncertainty what the actual survival threshold is. The risk aversiveness of the incumbent

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<sup>12</sup>This effect was to our knowledge mostly dealt with in the discussion how inequality affects growth performance through credit market imperfections, social conflict and capital accumulation. For an overview and a recent approach see Borisov and Lambrecht (2007).

in respect to lowering redistribution and thus endangering survival seems a major impediment to implementing growth enhancing policies.

Applying the discussion results to our framework the possibilities to implement growth-enhancing policies — in our case less redistribution — are theoretically larger in autocratic systems. The incumbent has more leeway given that he is not exposed to the pressures of the ‘political market place’ to the same extent as democratic incumbents. Nevertheless, our simple framework — relaxing the assumption that the sole aim is staying in power — does not cover the incentive for autocratic leaders to keep the benefits of growth or omitted redistribution for themselves given their ability to influence the survival threshold and the collective action problem of the citizens. Lower redistribution would not result in higher growth driven by investment but in personal enrichment of the autocrat. Therefore, having more leeway for implementing growth-enhancing policies is undermined by the presumably larger benefits of being in power for an autocratic leader.

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