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Group strength, accountability and growth under dictatorship

Abel Escribà-Folch
Universitat Pompeu Fabra, Spain

Abstract

This article tests the hypothesis that group power affects development policy by holding dictators accountable through different mechanisms. New data on dictators' modes of exit for the period 1946–2000 allow us to estimate the predicted likelihood that a given authoritarian head of government will be toppled by the elite, the military or the citizenry. When the predicted odds are used as a measure of group strength, the results of simple growth regressions reveal that a stronger citizen opposition or a greater military threat compels the ruler to improve economic growth rates. In contrast, elite power is negative for growth, although it turns positive when a country reaches a certain level of industrialized development.

Keywords

accountability, dictatorship, economic growth, group strength

Introduction

Recent research has identified accountability as one of the political foundations of economic development (Bates, 2006; Benhabib and Przeworski, 2005; Kaufmann et al., 1999). As Manin et al. (1999: 10) put it, 'governments are "accountable" if citizens can discern representative from unrepresentative governments and can sanction them appropriately, retaining in office those incumbents who perform well and ousting from office those who do not'. The underlying argument is that accountability allows for the removal of politicians should they adopt self-interested policies. Consequently, as it determines the probability of rulers remaining in power, political accountability may constitute the basic instrument that constrains rulers' choices on development policy. Yet, as Hoffman and Gibson (2006: 2) correctly emphasize, 'this new explicitly political approach to development demands that development practitioners understand not only the link between accountability and development but, more importantly, the causes of that accountability'.

Political regimes differ in the mechanisms whereby governments are held to account. Accountability mechanisms refer to the ways in which rulers can be replaced under different regimes. Klick (2005: 293) argues that, 'essentially all politicians are limited autocrats, where the limitations imposed on

Corresponding author:
Abel Escribà-Folch, Universitat Pompeu Fabra, c/o Ramon Trias Fargas, 25-2708005 Barcelona, Spain.
Email: abel.escriba@upf.edu

them differ according to the institutional structure under which they rule'. In democratic systems there are clear and regulated mechanisms through which rulers and governments can be replaced. Citizens have the chance to replace them when elections are held, while opposition parties may resort to impeachment or a motion of confidence between election years. In contrast, dictatorships are characterized by the lack of regular accountability mechanisms, so political actors have to turn to more costly means to constrain policy decisions, such as revolutions, military coups or palace putsches. However, the general literature on leadership duration has paid no attention to the different ways through which a dictator may lose power (Bienen and van de Walle, 1991).

Given the existence of routine methods to replace political leaders, models of accountability under democratic rule are based on the assumption that voters apply some criterion of welfare that limits the amount of rents politicians can extract (Benhabib and Przeworski, 2005).[1] Rents are generally assumed to harm the provision of public goods. If the incumbent performs at or above the threshold set by this criterion of welfare, he or she is likely to be re-elected. The logic under authoritarianism I defend here is basically the same, but differs from it in two key respects. First, there is not just one collective actor – the electorate – capable of replacing the ruler, but three: the elite, the military and the public. Second, given the lack of routine ways of getting rid of self-interested rulers, the welfare threshold is principally determined by each actor's capacity (or likelihood) to revolt or to stage a coup and overthrow the dictator. The higher that probability, the higher the threshold can be set. The relative capacity of each group, then, may determine the amount of rents dictators can extract and, consequently, could affect the patterns of development of a given country. The mechanism is straightforward: this dependence of survival in power on the dictator's own decisions compels him to trade off self-enrichment in the short term with the likelihood of remaining in power for another period. So accountability, in fact, acts as an 'anticipation' mechanism whereby rulers anticipate that self-enrichment or bad policies will harm their likelihood of re-election or permanence in power, so foreseeing the consequences of their policy choices. In Tullock's (2005: 52) words, 'any dictator would, of course, realize that he can make money out of the job but that the job is risky, and the more money he makes out of it, the more risky it is'.

This article presents evidence of how accountability mechanisms operate, and help explain average economic performance, under dictatorship. To this end we have constructed a new variable that identifies and codes the main actor involved in the autocrat's demise: the power elite, the military or the citizen opposition. The estimation of multinomial logit models of dictators' survival has allowed us to obtain a general measure of group strength by calculating the predicted (log) odds of a seizure staged by each of the political actors just mentioned. The results of the regression models indicate that group threat exerts a significant effect on rulers' decisions concerning growth.

The article is organized as follows. The next section explores what the preferences of the different groups towards development might be. The third section discusses the set of variables that may determine the capacity of each group to challenge the incumbent autocrat's position, presents the data and methods used, and reports the results of the models of rulers' survival. The fourth section presents the results of the alternative growth regressions. Finally, the fifth section concludes.

Group preferences, political accountability and development

So far, the literature analysing the institutional causes of cross-country growth differences has focused on the role of political regimes, or, more specifically, on exploring the relationship between democracy and economic performance. Two completely opposite views dominated the early theoretical debate.[2] Some theorists argued that dictatorial regimes would better promote growth than

democracies. Huntington (1968), for instance, suggested that non-democratic regimes could better stimulate growth by restraining the short-term pressures for immediate consumption and rent-seeking coming from voters, labour unions and other interest groups that risked undermining investment and the effective allocation of resources. These arguments were soon proved to be extremely naive since they overlooked the contradictions entailed in such a view. Although redistribution and rent-seeking by interest groups may be prevented, state autonomy might involve an almost total lack of constraints over rulers' decisions, allowing the dictator to divert consumption for himself and his close collaborators, leading to a greater level of inefficiency than that resulting from democratic redistribution (Przeworski, 1990). Secured property rights, the free flow of information and the rule of law were later acknowledged to provide economic actors with the proper incentives to invest (North, 1990). Recent empirical research has put an end to this debate by establishing that political regimes exert no direct effect on the rate of economic growth (Doucouliagos and Ulubaşoğlu, 2008; Przeworski et al., 2000). Consequently, the new literature on the link between institutions and development has tended to focus on the functioning of political institutions in terms of governance rather than relying on distinctions between political regimes (Kaufmann et al., 1999).[3]

Yet, it is actually among authoritarian rulers − not regimes − that we find the highest variation in terms of economic performance. The role of authoritarian rulers and, more importantly, the stability constraints limiting their political-economic decisions have been largely neglected and unexplored. As recent evidence shows, political leaders matter for growth, and matter to a much greater extent in autocratic regimes where decision-making is extremely concentrated (Jones and Olken, 2005).[4] According to the data available, there have been about 126 dictator spells (years of continuous rule under the same regime) for which data are available, during which average income growth was negative, whereas, in clear contrast, there have been about 97 dictators under whose tenure per capita income grew at average rates above 4 percent. When one takes country, regime spells or dictators' tenure (the years of continuous rule under the same effective head of government) as the cross-sectional unit, the overall standard deviation of the rate of growth of income per capita is in all cases about 8. Relevant differences emerge when one looks at the between-standard deviation, that is, the variance in economic performance between those cross-sectional units (countries, regimes and autocrats). It is 2.9 if we take countries as the units of analysis. If one takes regime spells as the cross-section, then the deviation is slightly higher at 3.03. Finally, if one takes the effective heads' or rulers' tenure, the standard deviation is much higher at 4.8. It is, then, at the leader level where we find the highest level of variability under authoritarianism.

The role of rulers' decisions pervades most of the literature on taxation and the predatory state (Grossman and Noh, 1994; Robinson, 2000). The most basic postulate, provided by Olson (1993), stated that a (seemingly exogenous) long time horizon is necessary for dictators to develop an 'encompassing interest' and, thus, to implement growth-promoting policies. However, if the probability of rulers' survival in power is made endogenous with regard to policy (in this case, taxation), by choosing the rate of rent-extraction, authoritarian governments determine at the same time both their prospects of retaining power as well as the rate of growth of the economy. In these models rent accumulation will be moderated as long as the accountability constraint is binding. So a more insulated − structurally stable − ruler will be able to increase his level of rent-extraction, making growth rates shrink, while a more insecure ruler will be more prone to restrain extraction levels.[5] The desire to extend tenure may temper the abuse of power (Klick, 2005), making accountability come into play as survival in power is dependent on rulers' performance and conduct. If group force is thought to have any impact on economic performance through accountability, the sign of that impact will depend, on the one hand, on the preferences of such groups towards development policy and

rent-seeking, and, on the other, on their capacity to pose a credible threat to the ruler's tenure. These groups of potential challengers may differ in the type of goods that serve to ameliorate their threats to an autocrat's position. According to Bueno de Mesquita and Smith (2006), members of the supporting coalition must be rewarded with sufficient private goods not to defect. Private goods take the form of patronage and other privileges, which harm growth. In contrast, the threats from the citizens must be appeased by the delivery of public goods-oriented policies that promote growth.

Accordingly, as the power of the middle and working classes becomes politically relevant, along with their capacity to pose a more credible threat to the dictator's position, the better the ruler's policy choices can be expected to be with respect to general welfare. This is the logic underlying models in which public goods are necessary to promote growth when the threat of a revolution exists (Bueno de Mesquita et al., 2003; Grossman and Noh, 1994; Klick, 2005). Under authoritarianism, the citizenry must rely on the only instrument available – namely, the threat of a popular uprising – to provide the incumbent ruler with incentives to undertake and deliver costly public goods. Hence, rulers use the provision of public goods to ameliorate revolutionary threats (Bueno de Mesquita and Smith, 2006). Therefore, the weaker the citizen opposition is, the less the incentive the dictator will have to deliver policies that foster economic growth. The logic of this argument leads to our first hypothesis:

H1: The more credible the threat posed by the citizens (civil opposition), the higher the expected average growth rate.

Elites may be interested in either retarding or fostering development depending on the economic context and the country's stage of development. When domestic capital is scarce, members of the elite have incentives to plunder the economy's resources (Overland et al., 2005). Likewise, as Acemoglu and Robinson (2000) claim, landed elites attempt to block industrialization because it may entail a threat to their political power – a process that is more likely to occur the more political rents and monopoly profits block industrialization. In contrast, in industrialized societies elite power is more likely to translate into higher pressure for investment and the adoption of better technologies. Under these alternative settings, increases in the power of the elite could lead to diametrically opposite results in terms of economic performance. The logic of the process of rent-extraction in underdeveloped countries was perfectly explained by Brough and Kimenyi (1986: 41):

> When the dictator comes to power he does so through the help of a small number of supporters who hope to gain from the leadership of the dictator. The dictator maintains the coalition by distributing not only direct monetary transfers, but also appointments to managerial positions in government enterprises.

Discretionary power and lack of skills of these newly appointed managers lead to inefficiency and the extraction of public rents. The greater the power of this support coalition, the greater are the rewards that need to be delivered to buy its loyalty (Bueno de Mesquita and Smith, 2006; Escribà-Folch, 2007). Besides, obviously, political rents for landed elites will arguably be greater the bigger the share of the agricultural sector in total output.

The nature and preferences of members of the elite may change with development, as noted earlier. Even though cronyism may still be extensive, it can occasionally have positive consequences for growth policy when economic and political elites become more differentiated from each other. For instance, in South Korea under Park's regime, the organizational strength of the industrial business elite (*chaebol*) combined with state control over finance created a situation of

'mutual hostages', in which, in exchange for credit, the government received a constant flow of funds (Kang, 2002). The Korean economy grew at an annual average rate of 9.4 percent during that period. By contrast, in the Philippines, immediately after declaring martial law in 1972 Ferdinand Marcos began the process of building up a loyal elite of new and traditional oligarchs. To do so, he made the sugar, coconut and grain trades (among others) state monopolies and gave them to his cronies for private accumulation (Kang, 2002; Thompson, 1998). Income grew on average at the modest rate of 1 percent. From this discussion we can develop two elite-related hypotheses:

H2a: The power of the elite will translate into lower growth rates.

H2b: From a certain level of development, elite control capacity should translate into higher growth rates.

As for the military, there are two opposing views concerning its role in development (Kaldor, 1976). The early literature considered the military to be a modernizing force providing societies with stability and modernization by providing channels for social mobility, being a rationally based organization and improving technology (Levy, 1966). Subsequent studies have largely discredited this view, advancing two principal arguments. First, although possibly concerned about development, officer corps are unlikely to have the political and economical skills to pursue the 'correct' economic policies (McAlister, 1966). Second, once in office, military governments are likely to be more concerned about improving and securing their own status and conditions than about productive investment (Jackman, 1976).

Under authoritarianism, either in power or not, the armed forces – or a faction within them – may act as a compensating force, which could induce the ruler to curb his greed. If a military ruler is in power, regime-narrowing and the progressive personalization of power is a major cause of military resentment (Dix, 1982). If not, Kimenyi and Mbaku (1995: 701) point out that 'military leaders assure that competitive interest groups do not develop modes of behaviour that are detrimental to "state" security. Activities of such groups are carefully monitored by military elites to ensure that none develops enough violence potential to capture the government.' Addressing the preferences of the military as an institution, the early literature on military intervention affirmed that what the armed forces detest most is social unrest within the country (which may arise as a result of poor economic performance), so that, usually, they seize power with the purpose of restoring order once it is clear that the incumbent government is incapable of doing so (Finer, 1976; Nordlinger, 1977; O'Donnell, 1973). Indeed, it is shown that coup attempts are more likely when there is an economic recession and widespread discontent against the incumbent ruler (Galetovic and Sanhueza, 2000; Londregan and Poole, 1990). Thus, our armed forces hypothesis can be expressed as follows:

H3: The overall impact of the strength of the military on growth will be positive, as they feel aversion for personalization and predation.

Estimating group strength

Variables and methods

We distinguish three groups that may replace an incumbent dictator: the elite, the military and the citizenry. Therefore, in order to estimate the structural strength of these groups, we first need to identify the ways in which they may oust or replace the incumbent autocrat. The elite, formed from

those political and economic sectors constituting the basic ruler's support coalition (the insiders), can replace leaders through formally or informally regulated and peaceful ways, or through a plot or a palace putsch. The military use coups or the threat of intervention. Citizens must resort to revolutions, strikes and protests; although in some cases they are allowed to vote in open elections.[6] In order to estimate the underlying capacity of each group to effectively remove the dictator, we use a time-series cross-sectional data set containing a worldwide sample of dictators and authoritarian governments covering the period from 1945 (or the year of the country's independence) to 2000. We have constructed a new variable named *WAYOUT*,[7] which identifies and codes the main actor involved in the leadership demise if a change occurred in a given year: the elite, the military, the citizen opposition or foreign forces. As the dependent variable has more than two discrete outcomes, the estimation method we use for the survival models is multinomial logit.[8] This method derives probabilities for each alternative *j* (i.e. being removed by the elite, the military or the public) among J alternative ones by estimating J – 1 equations for the odds of each particular alternative relative to a baseline (in this case $j = 0$, i.e. remaining in power). Beck et al. (1998) point out that the parametric duration model and the time-series cross-sectional logit model are the same model, if one properly controls for time dependence. Controlling for time dependence when using ordinary logit to estimate duration models is important as the logit estimates may be biased if the baseline hazard rate is time-dependent. To do so, we include the logarithmic transformation of the duration variable.[9]

Let us review the independent variables considered. Civilian and military rulers might face a greater threat from their own collaborators and elites. Rival factions within the army may become the major threat to military dictators, as factional groups also have access to military equipment and weapons. Disunity is the military's worst fear; as Geddes (1999) points out, the military will prefer to hand power to civilians if its cohesiveness is endangered. Lacking a concrete source of legitimacy, civilian rulers tend to institutionalize the regime and thereby regulate access to power and the succession process.[10] Monarchical power is based on dynastic rights; any potential rival lacking this characteristic will find it difficult to consolidate power. This is the reason why most palace putsches that occur within monarchical regimes are staged by members of the royal family. We use two dummy variables: 'military', coded 1 if the effective head is or ever was a member of the military by profession; and 'civilian', coded 1 if the effective head is civilian. 'Monarch' is the omitted category.

Many leaders became heads of government after having played a leading role in the struggle for independence from their colonial masters. Anti-colonial activism might well deter other elite members – and the military – from challenging their position. Furthermore, the process of elite substitution after independence renders the newly appointed elite members' privileges highly dependent on the ruler's position as head of the new government. To capture this, we have constructed the variable 'colony before', which takes the value of 1 if the previous political regime was a colony, 0 otherwise.

Regarding military coups, O'Kane (1981) identifies two main preconditions determining the likelihood of a coup. The first has to do with dependence on primary goods exports in poor countries (especially democracies). Such dependence makes a country's economy more sensitive to external shocks affecting economic performance. The second precondition establishes some obstacles to the occurrence of coups: the recent independence of a country – which may generate a 'honeymoon' effect[11] – and the experience of past coups. Consequently, we control for the number of past transitions to authoritarianism to gauge regime repressiveness and past instability.

Concerning the collective strength of the opposition, the resource mobilization theory contends that existing conflict will lead to the emergence of social movements if changes occur in resources, group organization and opportunities for collective action. In this respect, the rise of 'electoral authoritarianism' – among many other names – may provide such movements with these opportunities stressed

by this late approach. So, a certain degree of controlled political liberalization (as a response to increased dissent) provides opposition members with more room for organizing and coordinating previously latent groups operating clandestinely. To measure the degree of regime institutionalization we use two variables: 'Single institution', coded 1 if a single party, a legislature or both exist, and 'multiple institutions', coded 1 if a legislature with multiple parties exists. The dummy 'multiple institutions' should be positive for the case of exits 'from the bottom'. Organizational strength can also be the result of prior democratic history, as pre-existing organizations can use their social capital and mobilization capacity to oppose the new authoritarian ruler once democracy has broken down. Consequently, we use a dummy variable, 'democracy before', coded 1 if the previous regime was a democracy, 0 otherwise.

According to the structural approach, some underlying factors within the countries may hinder group coordination. This is the case of ethnic fractionalization, which may obstruct collective action by increasing information costs between groups and, consequently, reducing regime accountability (Padró-i-Miquel, 2006).

The international context may also influence the stability of government. Marinov (2005) shows that economic coercion destabilizes those leaders it targets; while Gleditsch and Ward (2006) show that the prospects for democratization are strongly influenced by the regional and global proportion of democracies. The growing number of democracies may induce a shift in the elite's preferences through an increase in foreign pressure; for instance, by either giving financial and strategic support to opposition movements or by imposing economic sanctions to weaken foreign, usually authoritarian, governments and, moreover, making multilateral sanctions – especially if backed by international organizations – more effective (Drezner, 2000).[12] Nonetheless, the effectiveness of foreign pressure may be counterbalanced by the presence of regional support for a given regime. When the proportion of other authoritarian governments in the region is high, cross-border smuggling and the possibility of crossing borders to shield from domestic prosecution may become more difficult for clandestine groups, and military aid may be provided. Two variables capture the international context: the yearly proportion of democracies in the world and the proportion of dictatorships within the same region.

On the other hand, in order to thwart any coordination attempt within political groups, rulers might well resort to co-optation through patronage networks and rent delivery to buy political support. Such rents have two main sources: natural resources and foreign aid. Resource rents and aid allow governments to fund extensive patronage networks and to reduce the state's need to tax citizens' income, which in turn diminishes pressures for accountability (Bräutigam, 2000; Ulfelder, 2007). Consequently, we introduce a variable capturing rent availability: 'Resource-rich country' is a dummy variable, coded 1 if the average ratio of oil or primary commodity exports to total exports exceeds 50 percent, 0 otherwise; and the variable 'aid per capita' as a measure of foreign aid.

When resources are scarce, benefits and privileges are distributed through institutions such as a legislature or single party (Gandhi and Przeworski, 2006). Party organizations provide its members with a durable frame wherein to resolve differences, bargain and advance in influence; as a result, dominant-party systems generate and maintain a cohesive leadership cadre (Brownlee, 2004; Geddes, 1999). Hence, the presence of institutions, unlike in the case of the citizen opposition, is expected to exert a negative effect on the likelihood of ruler replacement.

Note that growth does not enter the model in the form of independent variables as we are interested in the structural determinants of group force and how it affects development policy, not in the short-term relationship between economic performance and turmoil.

Table 1. Ways of leaving power and actors involved

Main actor involved	Number	Percentage (%)
Elite	246	60.1
Military	113	27.6
Masses/society	47	11.5
Foreign forces	3	0.73
Total	409	100

Results

Most (246, 60.1 percent) changes of ruler are promoted, or simply occur, within the regime elite. The second most common way in which autocrats are deposed is through a coup carried out by a rebel military faction. Of the changes of ruler, 27.6 percent (113) were carried out by factions within the armed forces.[13] Finally, revolutions, guerrilla warfare, mass movements and riots that lead to the collapse of states, regimes or governments appear to be much less frequent events. Only 47 out of the total of 409 changes in leadership (11.5 percent) were carried out by mass movements (violent or otherwise) or elections.[14] Table 1 summarizes the frequencies of this variable.

Table 2 shows the results of the multinomial models.[15] Column 1 reports the baseline model using the original codification. Column 2 presents the results using a new version of the dependent variable in which all cases of elections have been recoded and considered as changes from the bottom (citizens).[16] Column 3 incorporates the institutional dummies into our baseline model.[17]

To reduce the hazard of being replaced by members of the elite or power coalition, it is important to have access to resource rents. To keep the elites loyal, private goods must be delivered. Foreign aid is also helpful, although not significant. High ethnic fractionalization increases the hazard of being overthrown in the elite case, possibly because it defines clear lines along which alliances can be formed and alternative bases of support created. As expected, elite members and the armed forces may more effectively threaten civilian and military rulers (the two dummy variables are positive and significant) than monarchs. A higher proportion of democracies in the world seems also to weaken dictators; conversely, a higher proportion of dictatorships in the region improves the relative stability of the incumbent ruler. Military coups are also less likely in regimes surrounded by other dictatorships in the region. Being a new country after colonization reduces the likelihood of being replaced from within the elite or by the military, as predicted by the 'honeymoon' effect, although it is not significant in the latter case.

As for 'opposition-driven' changes, the results confirm once again our propositions. In this case the effect of ethnic fractionalization is negative since it may hinder coordination and collective action. Organizational structures inherited from the previous democratic regime increase the mobilization capacity of the opposition. Concerning international factors, a higher proportion of democracies in the world fosters civil opposition to dictatorship, while, again, a greater regional share of authoritarian systems hinders it.

As shown in the third column, institutionalization helps keep elites loyal, since it provides a space for privilege distribution, political conciliation and negotiation. The results also confirm another of our main propositions, namely, that regime institutional openness involves a greater level of mobilization capacity on the part of the opposition. The coefficients of the two dummies are positive, and that of 'multiple institutions' is significant at the 0.05 level.

Table 2. Dictators' modes of exit and their determinants: Multinomial logit

Dependent variable: WAYOUT									
Independent variables	Pr (Elite/coalition)			Pr (Military)			Pr (Masses/society)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Constant	–3.10***	–3.14***	–2.33***	–1.92*	–2.74**	–2.65**	–4.92***	–4.90***	–5.52***
	(0.739)	(0.749)	(0.763)	(1.15)	(1.16)	(1.23)	(1.64)	(1.49)	(1.75)
Resource-rich country	–0.309*	–0.331*	–0.302*	0.107	0.171	0.226	–0.769*	–0.636*	–0.528
	(0.180)	(0.183)	(0.182)	(0.236)	(0.236)	(0.239)	(0.420)	(0.370)	(0.430)
Aid per capita	–0.0008	–0.002	–0.0003	–0.001	–0.002	–0.001	–0.017*	–0.001	–0.016*
	(0.001)	(0.002)	(0.001)	(0.003)	(0.003)	(0.003)	(0.009)	(0.003)	(0.009)
Military ruler	0.821**	0.707*	0.494	1.96***	1.94***	1.77**	1.20	1.43*	0.684
	(0.381)	(0.381)	(0.438)	(0.745)	(0.738)	(0.802)	(0.813)	(0.796)	(0.868)
Civilian ruler	0.816**	0.724**	0.973**	1.66**	1.66**	2.19***	0.540	0.894	–0.038
	(0.370)	(0.369)	(0.409)	(0.737)	(0.734)	(0.772)	(0.810)	(0.785)	(0.815)
Democracies in the world	1.76*	1.69*	0.985	–1.98	–2.30	–3.05**	4.22**	3.80**	2.74
	(0.921)	(0.940)	(0.945)	(1.43)	(1.41)	(1.45)	(2.15)	(1.84)	(2.21)
Dictatorships in the region	–0.929**	–0.774*	–0.731*	–1.52**	–0.987	–0.506	–1.76*	–1.92**	–1.04
	(0.409)	(0.426)	(0.420)	(0.625)	(0.606)	(0.639)	(1.05)	(0.851)	(1.00)
Previously democracy	0.506**	0.293	0.272	0.008	–0.222	–0.300	1.27**	2.23***	1.19**
	(0.238)	(0.342)	(0.233)	(0.339)	(0.517)	(0.330)	(0.509)	(0.813)	(0.499)
Colony before			–0.601**			–0.412			–0.294
			(0.267)			(0.347)			(0.629)
Past transitions to dict.		0.170			–0.0005			–0.844*	
		(0.139)			(0.234)			(0.471)	
Ethnic fractionalization	0.524*	0.750**	0.588*	–0.071	–0.269	–0.105	–0.794	–1.73**	–1.44*
	(0.314)	(0.311)	(0.309)	(0.398)	(0.412)	(0.418)	(0.759)	(0.678)	(0.753)
Single institution			–1.11***			–1.10***			1.004
			(0.258)			(0.326)			(0.758)
Multiple institutions			–0.486**			–0.784**			1.48**
			(0.223)			(0.325)			(0.716)
Log duration	–0.458***	–0.449***	–0.283***	–0.313***	–0.351**	–0.178	0.501**	0.279	0.253
	(0.085)	(0.086)	(0.093)	(0.117)	(0.114)	(0.128)	(0.230)	(0.197)	(0.232)
Observations	3078 (1)			3078 (2)			3078 (3)		
LR-Chi2	170.16***			161.55***			199.92***		

Notes: Standard errors in parentheses. ***p < 0.01; **p < 0.05; *p < 0.10.

Mechanisms of accountability and growth

Let us now turn to per capita income growth. In order to keep the models as parsimonious as possible we include a few control variables besides our new predicted measures of group accountability. Controls include the log of GDP per capita, the countries' surface, the regional growth average (to control for external shocks), investment and the percentage of the population living in urban areas. Potential change in elite preferences has been controlled by introducing an interactive term, which is the result of multiplying the measure of elite strength by the log of GDP per capita and the value added of agriculture as a percentage of GDP. Our aim is to establish whether, at a certain threshold of development and industrialization, greater elite power exerts a positive effect on the growth rate of the economy.

As noted earlier, leaders influence development, particularly in autocratic settings (Jones and Olken, 2005). Consequently, as long as group strength affects dictators' autonomy, leaders or autocratic governments must become our unit of analysis, since they are where we find the highest level of variability. Therefore, we have run regression models taking leaders' spells as cross-sectional units. The dependent variable is the ruler/government spell's average rate of growth of per capita income. The independent variables have also been averaged. Our general measure of group strength is obtained by calculating the averaged predicted (log) odds of a seizure staged by each of the political actors using the models in Table 2.[18] The aim is to measure the credibility of the threat that each political group may represent. The models are estimated with the use of a between-groups panel data estimator, which exploits the cross-sectional information of the data by applying OLS to each unit's temporal averages of the variables, and so it reduces the importance of measurement error.

Table 3 presents the results of alternative model specifications as well as of the interactive models. Columns 1–3 present the baseline model and some extensions of it with a few extra control variables – to establish the robustness of the results – such as investment, natural resource dependence for revenue (mineral and energy depletion as a percentage of GNI) and debt service (as a percentage of GNI).[19] The coefficients of the controls are correctly signed: resource dependence strongly harms income growth, as does debt service. The effect of investment is positive and highly significant. The strong effect of the regional growth variable indicates the strong influence of regional trends and external shocks on domestic economies. Finally, the positive impact of GDP per capita indicates a process of divergence among countries, with those already rich becoming richer and the poor becoming relatively poorer as they experience lower growth rates (Quah, 1996).

We observe that, as predicted by the first hypothesis, the organizational capacity of the potential popular opposition always leads to higher growth rates as a consequence of increased efficacy in controlling the dictator's decisions and public goods delivery. For example, an increase in the odds from –3 to –2[20] involves a remarkable increase of 1.28 points in the expected growth rate, according to the results in column 1. In order to defuse such tension the ruler must resort to the delivery of public goods because private ones cannot reach the broader social sectors (Bueno de Mesquita et al., 2003). In the model in column 4, popular sector strength includes all cases of elections obtained from the second model in Table 1 after revision of the data. The size of the effect remains basically unaltered. These patterns seem consistent with what Haggard and Kaufman (1995: 36) proposed:

> A plausible hypothesis … is that authoritarian regimes are more vulnerable to economic downturns in middle-income capitalist countries. In such societies, wealth holders are more sharply differentiated from the political elite. Social groups hold substantial and independent organizational and material resources that are crucial to regime stability. The middle and working classes are politically relevant and there are lower barriers to collective action on the part of urbanized low-income groups. Countries fitting this description are also more likely to have prior histories of party politics, labor mobilization, and civic association.

As for the other two groups, the overall effect of military power on growth is positive and significant, which confirms hypothesis 3. It seems true, then, that in general the armed forces represent an oversight institution preventing widespread corruption and personalization that could lead to social turmoil. In column 5, though, our estimate of 'military threat' includes all cases in which a military junta or leader took power, regardless of whether it consisted of insiders involved in a plot or a putsch, members of a rival faction, or junior officers. The coefficient in this case is still positive, but not significant. Note, besides, that the impact of 'elite power' is now lower. This suggests

Table 3. Mechanisms of accountability and economic growth (1946–2000)

Independent variables	Dependent variable: Dictators' spells averaged per capita growth						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	–13.08***	–9.42***	–8.64**	–6.29**	–3.13	–21.29***	–5.23
	(4.55)	(3.35)	(3.44)	(3.14)	(2.59)	(8.06)	(7.40)
Log GDP per capita	1.74**	1.31**	0.888	0.951**	0.375	2.62**	1.69**
	(0.756)	(0.546)	(0.561)	(0.534)	(0.508)	(1.09)	(0.669)
Log agriculture (% GDP)							–2.62*
							(1.36)
Regional growth	0.298***	0.376***	0.315***	0.339***	0.327***	0.338***	0.293***
	(0.102)	(0.081)	(0.076)	(0.070)	(0.070)	(0.070)	(0.074)
Surface	7.54e–08	3.97e–07**	8.47e–09	3.30e–07*	2.60e–07	2.07e–07	2.10e–07
	(2.58e–07)	(1.84e–07)	(1.93e–07)	(1.77e–07)	(1.80e–07)	(1.80e–07)	(1.78e–07)
Urban population %	–0.332	0.158	0.521	0.151	0.268	0.321	–0.023
	(0.935)	(0.687)	(0.674)	(0.644)	(0.623)	(0.618)	(0.026)
Resource depletion (% GNI)		–0.055**	–0.052**				
		(0.022)	(0.026)				
Investment	0.152***		0.188***				
	(0.048)		(0.034)				
Debt service			–0.120*				
			(0.067)				
Mechanisms of accountability							
Elite power	–3.01***	–1.69***	–1.55***	–2.08***	–1.58**	–7.29***	1.35
	(0.842)	(0.548)	(0.525)	(0.590)	(0.640)	(2.59)	(1.19)
Elite power × log (GDP per capita)						0.805**	
						(0.336)	
Elite power × log agriculture							–1.02***
							(0.366)
Military threat	1.26**	0.802*	0.778*	1.24***	0.535		
	(0.638)	(0.416)	(0.431)	(0.430)	(0.594)		
Popular sector strength	1.28***	0.559**	0.816***	0.805***	0.784***	0.732***	0.849***
	(0.384)	(0.261)	(0.251)	(0.329)	(0.258)	(0.256)	(0.266)
Observations (spells)	2260 (294)	1909 (241)	1669 (222)	2521 (309)	2521 (309)	2521 (309)	2198 (278)
R^2	0.1108	0.1873	0.2972	0.1392	0.1273	0.1414	0.1932

Notes: Standard errors in parentheses. ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$.

Table 4. Regular and irregular leadership changes from within the elite

From within the elite …	Regular changes		Irregular changes	
	(1)	(2)	(1)	(2)
Constant	–7.12*** (1.49)	–7.25*** (1.41)	1.50 (2.38)	1.61 (2.40)
Oil-exporting country		–0.327 (0.454)		1.53** (0.739)
Oil/mineral-exporting country	–0.516 (0.322)		1.01** (0.513)	
Aid per capita	–0.100 (0.062)	–0.095 (0.068)	0.114 (0.161)	0.148 (0.135)
Log GDP per capita	0.231** (0.104)	0.230** (0.106)	–0.444** (0.212)	–0.513** (0.259)
Military ruler	2.49** (1.19)	2.52** (1.10)	–1.31 (1.02)	–0.924 (1.02)
Civilian ruler	2.75** (1.20)	2.83*** (1.09)	–0.234 (0.952)	0.096 (0.936)
Democracies in the world	2.98*** (1.08)	2.90** (1.14)	–8.18** (3.74)	–8.30** (3.38)
Colony before	–0.696** (0.336)	–0.718** (0.342)	–0.937 (0.688)	–0.876 (0.695)
Ethnic fractionalization	0.888** (0.419)	0.971** (0.416)	2.09*** (0.782)	2.06** (0.812)
Single institution	–1.39*** (0.390)	–1.39*** (0.378)	–0.996 (0.761)	–1.09* (0.600)
Multiple institutions	–0.438 (0.316)	–0.404 (0.273)	–0.453 (0.630)	–0.473 (0.621)
Log duration	–0.326** (0.143)	–0.329*** (0.119)	–0.284 (0.338)	–0.268 (0.252)
Observations	2320		2320	
LR-Chi2	142.34*** (1)		141.37*** (2)	

Notes: Standard errors in parentheses. ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$.

that our initial intuition and codification were right in considering those power seizures by top military officers inside the ruling coalition of military regimes as ousters from within the elite.[21]

When no interactive term is included in the models, the overall impact of elite strength on development is clearly negative and strong (see columns 1–4), as stated in hypothesis 2a. Elites' graft reduces the average growth by more than 1.5 points. Regardless of dictators' own preferences, rulers' accountability to their power coalition worsens the prospects for development. However, this situation can be reversed, as models in columns 6 and 7 make clear as a result of including the interaction between development and elite power (hypothesis 2b). So at a given point the effect of 'elite power' becomes positive.[22] The pattern is the same when one considers the interaction with the size of the agricultural sector. As this sector's weight within the economy increases (see column 4), so does the leverage of the landed elite in blocking development, as Acemoglu and Robinson (2000) claim.

The logic of elite interaction and its policy consequences that the growth regressions reveal can be better understood by disaggregating ruler replacements from within the core power coalition. Now we distinguish between: i) regulated changes and succession processes, peaceful resignations and withdrawals; and ii) changes due to factional conflict and rivalry, which result in forced resignations under threat, palace putsches, assassinations (by insiders) and cabinet coups.[23] In accordance with our argument, we expect that this second type of ouster is generally greed-driven, taking place in poor economies and natural resource-rich ones with the aim of capturing the benefits of power. This point is tested in Table 4, which shows the results obtained after we use this new refinement in our data just described.[24]

The results confirm our intuitions. The presence of natural resources (oil and minerals) or – to a lesser extent – abundant aid increase the risks of an irregular elite intervention, as larger benefits of power in the form of rents considerably augment the expected utility of launching a putsch to take over the state.[25] Furthermore, GDP per capita has a strong negative impact on the likelihood of such greed-motivated irregular takeovers, which is in line with our theoretical proposition

about underdevelopment and the prevalence of elite graft, rent-seeking and endemic political instability. Note again the stabilizing role that single institutions (such as single parties and legislatures) play. A higher proportion of democracies in the world (a *proxy* for foreign pressure) acts as a deterrent for elite coups, but it also fosters regular power transfers and withdrawals due to increased foreign pressure for greater institutionalization and competitiveness. Ethnic differences also foster elite rivalry.

Conclusions

It is generally argued that rulers are responsive to the interests of those groups whose support is essential for their remaining in power. This contention, albeit generally accepted, has not received comparative empirical validation for the case of dictatorships. We argue that dictators maximize rents conditional on staying in power. Therefore, given the lack of regular mechanisms of accountability, such as elections, the threat of a coup will act as a constraint to rulers' decisions because it determines how realistic the likelihood is of losing power due to rent-extraction. Accountability acts, then, even under authoritarianism, as an anticipation mechanism since rulers foresee that excessive predation may trigger the staging of a coup or a revolt.

We predicted that greater strength of civil opposition forces would be beneficial for growth as it increases the level of the accountability of dictators. In contrast, elite power was expected to exert a negative effect on economic performance due to increased rent-seeking. We have also taken into account the possibility that a high level of modernization may induce a change in the incentives of elite members such that their greater power could translate into higher growth rates. Finally, military threat, acting as a monitoring force willing to suppress or control social unrest, is predicted to lead the autocrat to adopt better development policies.

Through the construction of a new variable that codes dictators' modes of exit, we have been able to estimate the average odds that a given political group (the elite, the military or the opposition) will replace the incumbent dictatorial government, which gives us a general measure of their organizational strength. This capacity to pose a credible threat has been proven to have an important effect on economic growth under authoritarian government. The results show that a stronger citizen opposition or a greater military threat compels the ruler to reduce rent-extraction and improve economic growth rates. In contrast, elite power is negative for growth, although it turns positive when the country reaches a certain level of industrialization.

Appendix: Codebook

- Single institution: Coded 1 if either one political party (including fronts), or a legislature or both exist, 0 otherwise. Compiled from Przeworski et al. (2000) and Gandhi (2008).
- Multiple institutions: Coded 1 if more than one political party exists, 0 otherwise. Compiled from Przeworski et al. (2000) and Gandhi (2008).
- Civilian: Coded 1 if the effective head of government is civilian, and 0 if the head is either from the military or a monarch. Compiled from Bank's *Political Handbook* and Przeworski et al. (2000).
- Military: Coded 1 if the effective head is or ever was a member of the military by profession, 0 if civilian or monarch. Retired members of the military are coded as 'military' = 1. Heads of guerrilla movements are not coded as 'military'. Compiled from Bank's *Political Handbook* and Przeworski et al. (2000).
- Democracy before: Dummy variable coded 1 if the previous regime was democratic, 0 otherwise.
- Colony before: Dummy variable coded 1 if the previous regime was a colony, 0 otherwise.

- Democracy share in the world: Percentage of democratic regimes in the current year (other than the regime under consideration) in the world. Data from Przeworski et al. (2000).
- Regional share of dictatorships: Regional proportion of dictatorships in the current year.
- Resource-rich country: Coded 1 if either the average ratio of fuel exports to total exports or the average ratio of non-fuel primary products exports in 1990–3 exceeded 50 percent of total exports, 0 otherwise. Constructed from Przeworski et al. (2000).
- Past transitions to dictatorship: Sum of past transitions to authoritarianism in a country. If any occurred before 1946, this variable was coded 1 in 1946. Compiled from Przeworski et al. (2000).
- Aid: Foreign aid per capita. Data from World Bank's *World Development Indicators* (World Bank, 2002; henceforth WDI).
- Ethnic fractionalization: Index of ethnic fractionalization that measures the probability that two randomly selected persons from a given country will not belong to the same ethno-linguistic group. Compiled from Przeworski et al. (2000).
- Agriculture: Agricultural sector value added as a percentage of GDP. Data from WDI.
- Surface: Country's surface area in square kilometers. Data from WDI.
- Resource depletion: Mineral and energy depletion as a percentage of GNI. Data from WDI.
- Debt service as a percentage of GNI. Data from WDI.
- Urban population: Percentage of the total population living in urban areas. Data from WDI.
- Investment: Real investment share of GDP (in 1985 international prices). Data from *Penn World Table 5.6*.
- Log of GDP per capita: Logarithm of real GDP per capita in 1985 international prices. Data from *Penn World Tables 5.6.*
- Per capita income growth: Rate of growth of real GDP per capita. Data from PWT.
- WAYOUT: This variable distinguishes the means by which the dictator has been replaced and the political actor involved. The sources are historical, that is, country studies, historical databases (e.g. *Keesing's Record of World Events*), yearbooks an so on. The following rules have been applied for the codification:
    - We focus on the group responsible for changing the ruler or deciding to change it. As a result, changes due to revolutions, civil wars, strikes or riots and demonstrations have been coded as changes carried out by the masses or citizens.
    - If changes take place as a result of a military coup, they are coded as military interventions even though they may have been preceded by social unrest.
    - In the case of military rulers, the distinction between coups and elite changes is valid as well. Elite-driven change occurs when those who promoted and carried it out were close collaborators of the incumbent ruler, or, in the case of collective rule, were members of the military junta or Council of National Salvation. As a result, coups against military rule are considered to be coups staged by factions of the military not included in power coalitions for such reasons as ethnicity, territorial divisions, rank and so on.
    - If the ruler is either a civilian or a monarch, a coup is considered to occur if members of the armed forces take power.
    - Leaders who died in power are not generally coded, as is true also of assassinations carried out by outsiders.
    - Domestic actors have been given priority. So instances of collaboration between domestic and foreign actors have been coded as if only the domestic actor was involved. Consequently, in the data set just three leaders were toppled almost wholly by foreign actors: Idi Amin (Uganda) was toppled by Tanzanian troops in 1979; Pol Pot (Democratic Kampuchea) was ousted by a Vietnamese invasion; and Manuel Antonio Noriega (Panama) by a US intervention.

Notes

1 This threshold is usually also determined by informational asymmetries and exogenous conditions. For good reviews, see Przeworski (2003) and Persson and Tabellini (2000).
2 For an excellent review of the literature, see Przeworski and Limongi (1993).
3 For a review, see Keefer (2004).
4 These authors also find that the leadership effect is especially important among autocrats ruling without a legislature. Leaders (their turnover and stability), especially autocrats, have also been found to matter for trade relations (McGillivray and Smith, 2004) and war initiation (Chiozza and Goemans, 2003).
5 Chiozza and Goemans (2003) show that more insecure leaders are also less prone to initiate a crisis.
6 Our original codification includes as removal by citizens three cases in which elections were held and the incumbent was defeated, leading to the end of his regime: Kenneth Kaunda (Zambia), who lost an election in 1991, and Muhammad Fareed Didi (Maldives) and Hastings Kamuzu Banda (Malawi), who lost referendums in 1968 and 1993, respectively. There were other cases in which elections were eventually held, but we originally coded those cases as elite pacts (or peaceful replacement) given that in most of them the ruler had previously totally or partially withdrawn from power, had already agreed to a gradual transition, or had handed power to some sort of National Conference in charge of leading the transition process, or the democratic transition was already ongoing. We change this coding rule below and code all these cases in which elections were held and the incumbent dictator ran for election and lost as citizen-driven changes; we then re-estimate our models and establish whether the results vary.
7 See the appendix for more details. We consider to be dictators those rulers who are the effective heads of government: 1) general-secretaries of the Communist Party in communist dictatorships, except in the case of Deng Xiaoping in China; 2) kings, presidents and de facto rulers in non-communist dictatorships, except in the cases of Singapore, Malaysia, Cambodia, Laos and Myanmar, where the effective head is sometimes the prime minister; and 3) a military or other figure when sources indicate that the nominal head is a puppet figure (see Cheibub and Gandhi, 2004). The definition and data on dictatorship are taken from Przeworski et al. (2000).
8 Using a binary logit would not allow us to differentiate the different effects of the same variables on the alternative ways of exit as the coefficients would be reflecting an average effect of how factors affect three quite different outcomes. For example, we may find that a variable is not significant because it has opposing effects on a change from the elite and a military coup.
9 Including polynomial transformations and clustering for ruler spell yields almost identical results.
10 Some leaders' lack of confidence in the military, reflecting that vulnerability, led them to create personal guards or militias (directly appointed by them) in order to reduce their dependence on the military and to undermine its cohesion. For instance, in Grenada in 1970 Eric Gairy formed the paramilitary group known as the 'Mongoose Gang' to face the opposition headed by the New Jewel Movement. In 1958, Papa Doc Duvalier (Haiti's former President for Life) created the Tontons Macoutes (Bogeymen) who were organized as a private militia used to terrorize and murder opponents. Another clear example is Saddam's Iraqi Republican Guard, created in the early 1980s, which served as the core around which an elite offensive force was built. All of the Republican Guard Force Command troops were volunteers.
11 The process may be similar to that just outlined for the elites, so the variable used is the same, 'colony before'.
12 Support for opposition groups may also come in a more direct way from democratic governments as well as non-governmental organizations. Solidarity, the trade union that headed the anti-communist opposition in Poland in the 1980s, was financially aided by American trade unions; at the same time, international agencies refused to grant Poland economic aid until it legalized Solidarity. Likewise, the US administration had been training and funding anti-Saddam groups such as the Iraqi National Accord and the Iraqi National Congress before invasion.
13 These percentages include the three cases in which autocrats were ousted by foreign troops, so the total number of cases is 409 (see the appendix).
14 Some military interventions were actually triggered by the previous existence of different kinds of social unrest, but they have been coded as coups since the actor that finally ousted the ruler was the armed forces.

15 The estimates for the foreign intervention mode of exit in the multivariate models have been omitted. The conditions triggering the intervention of foreign countries are beyond the scope of this study.
16 According to our coding, there were few (13) cases of dictators being defeated in elections: Kenneth Kaunda (Zambia, 1991), Nicolas Brathwaite (Grenada, 1984), Desmond Hoyte (Guyana, 1992), Ismet Inonu (Turkey, 1950), Sitiveni Rabuka (Fiji, 1999), Muhammad Fareed Didi (Maldives, 1968), Abel Muzorewa (Zimbabwe, 1980), Wolfgang Larrazabal Ugueto (Venezuela, 1958), Aristides Pereira (Cape Verde, 1991), André Kolingba (Central African Republic, 1993), Hastings Kamuzu Banda (Malawi, 1993), Abdou Diouf (Senegal, 2000) and Frederik de Klerk (South Africa, 1994).
17 Using the alternative dependent variable incorporating all elections as citizen-driven removals yields very similar results, so they are not reported.
18 The use of the predicted log odds permits us to increase the variability of the variable. Besides, in contrast to the probability construct, the predicted odds are also linear in the covariates.
19 The results of our baseline models are robust to the inclusion of the variables used to estimate dictators' survival in Table 2. All of them (excepting ethnic fractionalization) are not significant, so indicating that their effect on growth goes basically through their impact on groups' threatening capacity.
20 This means an increase in the structural probability of a mass movement from approximately 0.04 to 0.11.
21 Cases like that of Michael Micombero (President of Burundi, 1966–76) who was overthrown in a coup by Deputy Chief of Staff Jean-Baptiste Bagaza, a lieutenant colonel and second in command to the president, member of the same clan and political faction, and cousin of the president. Our coding rule does not result in an undercount of coups: we identified 113 military coups, and 60 putsches or coups from within the elite, including those in military regimes. Furthermore, among military rulers we have identified 51 military coups and 16 putsches or 'forced resignations' from within the elite.
22 In the case of model 6 it occurs when the log of GDP per capita is higher than 9, that is, when GDP per capita is higher than $8500.
23 According to our data there were 60 irregular power transfers from within the elite.
24 The results for the other two categories (military and popular interventions) are not reported.
25 Note that, on the contrary, those variables reduce the likelihood of a ruler leaving power peacefully as they foster the personalization and under-institutionalization of politics. The variable 'oil' is coded 1 if the average ratio of fuel exports to total exports in 1990–3 exceeded 50 percent, 0 otherwise. The variable 'oil or minerals' takes the value of 1 if 'oil' equals 1 or if the average ratio of ore and mineral exports exceeded 50 percent of total merchandise exports, 0 otherwise.

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Biographical note

Abel Escribà-Folch is a Visiting Professor in the Department of Political Science at the Universitat Pompeu Fabra. His research interests include economic sanctions, authoritarian institutions and foreign policy affecting dictators' survival. His work has been published or is forthcoming in *International Studies Quarterly*, *Journal of Peace Research*, *European Journal of Political Research* and *Comparative Political Studies*, among others.