The Political Economy Of Dictators' Survival

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Abstract. This paper explores what makes dictators survive in power focusing on the strategies to buy-off loyalty. It is shown that dictators who are able to incorporate into the regime structure those he needs in order to stabilize his rule and some potential oppositors stay longer in power. To do so he resorts to the distribution of resources and, in case he need to incorporate larger sectors, to the creation of institutions. However, it is shown that the different actors that may oust the autocrat are conditioned by different considerations and, hence, variables. Deliver resources from commodity exports diminishes the probability of being deposed by the regime elite, while institutions prevent interventions both by the elite as well as the military. Society driven changes are avoided through the delivery of public goods as economic growth.

1.- Introduction[23]

In democratic systems there are clear and regulated mechanisms by which rulers and governments can be replaced. Citizens are empowered to do so when elections are held, while the opposition parties may resort to an *impeachment* or similar procedures in between election years. Dictatorships are characterized by the lack of these regular accountability mechanisms so political actors have to turn to more costly means to get rid of their undesired rulers. Dictators must face, then, what Wintrobe (1998) calls the *Dictator's Dilemma*, which makes reference to the lack of information that the dictator has about his actual level of support among the population. As a result, in the absence of routine ways to remove leaders, questions about constituency arise, in other words, one needs to identify which the potential sources of threat are, that is, which sectors or groups of the population may try to and could eventually seize power, and, after that, theorize about which their preferences are.

The previous literature on leadership duration did not make any separation between types or subsamples of rulers, neither it distinguished the ways by which those rulers where replaced aimed at providing concrete theories about the particular conditions that may stabilize or destabilize tenure. Some pieces just focused on the effects of time on hazard rates (Bienen and Van de Walle, 1991, 1992), whereas others concentrated on the size of the winning coalition making little reference to the conditions that may determine the broadness of that coalition (Bueno de Mesquita et al. 2002, 2003). In order to provide a general theory of dictators' duration, I begin by assuming that dictators must be distinguished from democratic rulers given the absolutely dissimilar institutions, strategies and factors that sustain them in power as outlined above.

Legitimacy issues are difficult to identify and to study in authoritarian regimes, whatever its kind. With the aim of avoiding a sterile debate on the sources of legitimacy –*à la* Weber- under non-democratic regimes I defend that the question should be addressed by appealing to the rational compliance of the political actors adopting thus a rational actor centered approach. That is to say, the considerations about the willingness to thrown a dictator out are based on an expected-benefit calculus made by the diverse groups. The underlying intuition is twofold: firstly, the relative capacities of agents or groups to overthrow the ruler are very dissimilar; secondly, and a as a result of the different levels of effectiveness of the agents and potential costs related to their respective accountability mechanisms, the goods the dictator will have to provide them in order to avoid being deposed will also differ in nature and quantity.

From this perspective, then, the distribution of goods to the various groups in the society becomes central to the theory of dictators' survival. In order to thwart any attempt of ouster, dictators resort to co-optation –or more generally, to buy off loyalty- and repression as primary means[24]. The early literature on authoritarian regimes tended to focus on the latter of the options, theorizing, thus, about the repressive, coercive and control capabilities of different types of regimes, and driven principally by the turning point

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[24] On co-optation see, for instance, Bertocchi and Spagat (2001). They apply the model to the case of post-Communist privatizations.

that the emergence of a new form of dictatorship represented: the totalitarian regime (see Arendt, 1951; Friedrich and Brzezinski, 1956; Schapiro, 1972; Kirkpatrick, 1982). Although common sense may lead us to think of dictatorships as characterized solely by repression, fear and even brutality, no dictator can survive only by means of sticks. They need some sort of support as well, and support has its price. Actually, all dictators use a combination of both methods to lengthen their tenure (Wintrobe, 1990, 1998; Gerhenson and Grossman, 2001).

Dictators do not rule alone, they build around them a more or less broad supporting coalition. This support is not free and must be rewarded, as said. So, my focus in this article will be on the first of the options, that is, the buying of loyalty, regarding repression as a more residual resource to be used against those not directly or indirectly co-opted by the regime. Consequently, we will have to pay attention to the type of resources that dictators have at their disposal to construct patronage networks as the key variable explaining their probabilities of remaining in power. As a result, dictatorships will differ basically in the type of goods distributed in exchange for support and the mechanisms by which they are delivered.

The rest of the paper is devoted to identify the following elements aimed at building a general theory of dictators' durability in power: 1) which groups of actors can pose a threat to the dictator's survival probabilities and by which means; 2) what kind of goods a dictator can use in order to buy rational-compliance with the regime, and 3) the preferences of these groups with regard to the goods the ruler may deliver so that they prefer to comply with the regime rather than replace it given their different effectiveness levels to do so.

To address the questions depicted above the paper is structured as follows: Section 2 identifies the methods by which dictators may be overthrown or substituted with the help of some historical examples. The third section is aimed at identifying the goods or policy preferences of the actors/groups that might try to overthrow the dictator if not properly rewarded. Section 4 presents, on the one hand, the variables that will be used to test the general theory of dictators' endurance specially those employed to identify the types of goods each group of potential opposition would accept in exchange for support. Secondly, the results of the empirical models are reported. Section 5 concludes.

2.- Threats to dictators and technologies for throwing leaders out

The distinction between different groups with unequal destabilizing capabilities and interests is generally missing in models about government turnover. The possibility of a coup by some elite members is the only option considered by some authors, while others only address the probability of a revolution occurring. But as Snyder correctly notes, "revolution is only one of a number of possible political trajectories of neopatrimonial regimes" (1992: 379) so he focuses on the ruler-military and ruler-elite relations as possible triggers for transition as well.

On the other hand, the ways in which dictators are overthrown, changed or simply substituted are not random but, rather, they are endogenous to the type of non-democratic regime and leadership existing in a given country. Indeed, as Bratton and Van de Walle state "regime type in turn influences both the likelihood that an opposition challenge will arise and the flexibility with which incumbents can respond" (1994: 454). And Geddes affirms, "different kinds of authoritarianism break down in characteristically different ways" (Geddes, 1999: 117). Concretely, Geddes' (1999) study focuses on authoritarian breakdown and the type of transition most likely to occur. She sees the form of transition as a result of the types of relations between factions within different authoritarian regimes. Using simple game theory she argues that, within the military, since most officers value the unity and capacity of the military as an institution more than being in power, military regimes tend to be more prone to hand power to civilians if it threatens the unity and cohesiveness of the "institution". Consequently, in this case, internal disagreements and splits usually lead to negotiated transitions. On the contrary, in personalist and single-party regimes intra-elite competition does not lead to giving power up. In these cases, according to Geddes, "the benefits of cooperation are sufficiently large to insure continued support from all factions" (1999b: 13). This is why personalist rulers do not hand power and prefer to fly the country and single-party rule is the most stable one.

My units of analysis are not authoritarian regimes as in Geddes (1999) -and some other analysis- but rulers, and concretely, dictators. And when a dictator is toppled it can be substituted either by a new autocrat or by a democratic leader. In fact, most of dictators are replaced by another dictator; according to the data only 36% of the authoritarian rulers that governed between 1946-2000 had a

democratic government as a successor[25]. From this perspective, then, transition is only one of different potential results of leader substitution. Therefore, another approach is needed. Somewhat departing from the scheme depicted by Snyder (1992, 1998), I follow an actor-centered approach aimed at developing a full comprehension of the underlying causes of dictators' survival. Similarly, Gallego (1998), although not making any distinction between types of rulers, distinguishes between unconstitutional and constitutional transfers, being the elites responsible for the former while the citizens carrying out the latter[26].

Turning to the concrete case of dictatorships, three actors can, in this view, try to oust the incumbent autocrat: the members of his elite or support coalition, the military, and the people (ordinary citizens). And each of them for different reasons to be described in the next section.

We define as *accountability mechanisms* the means by which each of the above groups may throw the incumbent ruler out, in other words, these mechanisms constitute the technologies for replacing leaders (Przeworski, 2003), which basically diverge in how costly they are[27].

Elites/support coalition may replace leaders through either formally or informally regulated ways, or by means of a *palace putsch*. Both ways are the least costly of the whole existing range of possibilities for obvious reasons: in the first case, no violence or struggle actually takes place, while in the second type of change, privileged access that coalition members have to the incumbent dictator as well as by their capacity to build their own support groups make it possible and more likely to occur. The former method is put in practice maybe foreseeing the potential struggles for power after dictator's death or retirement, or perhaps to ensure the continuation of a certain dynasty in power. For instance, the Somoza's dynasty ruled Nicaragua -with US support- for 43 years. The first Somoza was Anastasio, a Nicaraguan general and then president from 1937 to 1947 and from 1950 to 1956 when he was assassinated. Luis Somoza Debayle, Anastasio's eldest son, assumed the presidency under a provision in the constitution for the possible sudden death of his father, what actually occurred. Luis encouraged new leaders to emerge in the Liberal party and even had the constitution amended to keep his younger brother, Anastasio Somoza Debayle, from running for president in 1963. In Haiti, François 'Papa Doc' Duvalier declared himself "president for life", and rewrote the constitution after a rigged election to pass power onto his son Jean-Claude ('Baby Doc') Duvalier upon his death[28]. Under monarchy regimes, the successor is designed mainly by the rule, either written or traditionally transmitted, of inheritance principle[29]. In general, there is almost no room for uncertainty in these cases, although disputes may arise about who is the actual successor within the royal family. In Swaziland and after 61 years as monarch, Sobhuza died and Prince Makhosetive Dlamini was selected as his successor in 1982; he was crowned King Mswati III in 1986. Another formal (although maybe not written down) procedure of leadership change takes place within one-party regimes, and concretely, within the party elites. For example, during the PRI regime in Mexico, power struggles took place within the party in order to decide the next presidential candidate; once the candidate had been decided; the electoral "circus" was able to begin[30].

In other cases those pertaining to the ruling elite have turned to a coup or, specifically, a *palace putsch* in promoting instauration of either a new dictator or a more democratic regime. These outbreaks are usually the result of open struggles to take over the benefits of power. For instance, Park Chung-Hee (who took control of the power in 1961 taking part in the military junta, and was elected president in 1963) was assassinated on October 26, 1979 by Kim Jaekyu, the director of the Korean Central Intelligence Agency and long-time friend. Even in monarchy regimes, kings have to keep an eye on their closest relatives or collaborators who may be willing to seize power and its associated privileges. For example, Zahir Shah came to the throne at the age of 19, after the assassination of his father in November

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[25] Censored cases, that is, those still in power by the year 2000, are excluded.

[26] The reasons for each group are also different.

[27] By costs I mean not only the actual effort that those seizing power have to exert due to collective action problems, relative strength, etc. but also the material costs, such as the destruction of assets and killing that may be involved.

[28] On February 1986, Jean-Claude Duvalier left the country aboard a US Air Force plane and the military seized the power without any opposition.

[29] North Korea is unique among the world's communist regimes in its functioning as a "de-facto monarchy". The North Korea's leader, Kim Il-Sung, was succeeded by his son Kim Jong-il when he died at age 82 on July 8, 1994, in Pyongyang.

[30] On leadership change during the PRI regime see, for example, Cornelius and Craig (1991), Varela (1993), and Langston (2001).

1933, having previously served as a Cabinet minister. In a bloodless coup on July 17, 1973, Zahir Shah was deposed. The leader of the coup, Mohammad Daud Khan was in fact the king's brother-in-law and cousin who proclaimed Afghanistan a republic with him as its president.

Military coups are a more costly way to seize power since the rebellious faction may have problems of information and trust before the seizure (Geddes, 1999). On the other hand, peaceful military coups, in which just the threat to the use of force is enough to trigger the change, are the exception. For instance, leadership instability became common in Benin's post-colonial history, between 1960 and 1972, a succession of military coups brought about many changes of government. In 1963, following demonstrations by workers and students, the armed forces staged a successful coup, deposing the president Hubert Maga and putting Justin Ahomadegbé into power (in alliance with Apithy). The last of these coups brought to power Major Mathieu Kerekou as the head of a regime apparently professing strict Marxist-Leninist principles and policies.

Finally, regular citizens may also rebel against oppressive and corrupt dictators. This is by far the most costly way for replacing a leader and, most probably, the whole regime. However, the probability of a revolution (and massive riots, civil wars, etc.) is in general pretty remote (see the descriptive data below). Back in the 70s, Tullock (1974) stated that participation in such event is determined by personal gain or loss. All kind of collective action problems arise, then, that make broad popular movements very difficult to effectively organize. Although it is, therefore, a much less frequent event, dictators cannot just ignore the possibility of a broad popular backlash. In 1979, the Islamic Revolution, which constituted a true subversive popular movement, drove the dictator Mohammed Reza Pahlevi –the Shah- into exile[31]. In Cuba, Batista was so confident of his power that on May 15, 1955, he released Castro and the remaining survivors of the Moncada attack, hoping to dissuade some of his critics. However, by late 1955 student riots and anti-Batista demonstrations had become frequent to which the regime responded with a brutal repression. Due to their continued opposition of the dictator, the University of Havana was temporarily closed on November 30 1956. At last, the Cuban Revolution through a guerrilla war led by Fidel Castro and Ernesto Guevara ousted Batista in 1959.

3.- Buying off support. Actors and goods

As pointed out in the introductory section, the key assumption in this general theory of dictators' survival is that rulers must provide different groups with goods in exchange for their active or passive support or acquiescence. On the other hand, we assume that the effectiveness of the different groups to successfully get rid of the incumbent dictator varies. In order to make the intuition behind this argument clearer consider the following simple formal setting. Suppose there are only two groups in the society, an elite, ε, and the regular citizens, of size ψ, where $\varepsilon < \psi$. Assume that elite members have some kind of visible or invisible asset, namely, influence, that gives them a privileged access to the dictator, say, by means of family ties, or because they helped him in seizing power, and so on. If a *palace putsch* or a revolution occurs, those involved in carrying it out get all the benefits from power, *Y*, while those who did not take part in the power seizure get nothing[32]. The probabilities that each group carries out a successful ouster are *pj*, where $j = \varepsilon, \psi$, and, as pointed out before, $0 \leq p_\psi << p_\varepsilon \leq 1$[33]. Besides, suppose for simplicity that utility is linear in expected income, and the total amount of income existing in the economy is *Y*. If the putsch or revolution is successful, the winning group gets all the income minus a share θ_j that is destroyed due to the damage on assets and the instability brought about by the leadership replacement. As argued in the previous section, this cost is much higher when the actor that leads the dictator removal is the citizenry by means of a revolution, strikes, etc. If the attempt to seize power fails, what happens with probability (1-*pj*), members of the group involved get a punishment *L* –say, repression, execution,

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[31] See Ryszard Kapuscinski (1992) for an historical and journalistic in-depth analysis of the Shah's regime and the posterior Islamic Revolution.

[32] Suppose they fall in disgrace or are simply expropriated by the winner group.

[33] This implies that the probability that the ruler change comes from the elite is much higher than from popular mobilization. We will check this point empirically below.

expropriation, etc[34]. As a result, the expected utility for a member of group *j* of taking part in the power seizure is simply

$$EU_j(Seizure) = p_{\varepsilon,\psi} \frac{Y(1-\theta_j)}{\varepsilon,\psi} + (1-p_{\varepsilon,\psi}) \frac{L}{\varepsilon,\psi}$$

Knowing this, the dictator will have to make an offer to each of the groups if he wants to thwart any destabilizing attempt against his rule. Therefore, the reward, *R*, offered by the dictator must fulfill the following condition for each of the groups

$$p_{\varepsilon,\psi} \frac{Y(1-\theta_j)}{\varepsilon,\psi} + (1-p_{\varepsilon,\psi}) \frac{L}{\varepsilon,\psi} \leq \frac{R+y_j}{\varepsilon,\psi}$$

where *yj* stands for the initial income of each group. Since it can be assumed that the dictator is not going to offer more than it is strictly necessary if he wishes to maximize his own rents, we can equate both expressions and get the reward offer for each group *j* as a function of both *pj* and θ_j

$$R_j = p_j Y(1-\theta_j) + (1-p_j)L - y_j$$

From here we can easily extract that $\dfrac{\partial R_j}{\partial p_j} = Y(1-\theta_j) - L > 0$, in other words, the higher the

risk a group (*j*) may represent for ruler's survival, the higher must be the reward offered to it[35]. Therefore, and given that $p_\varepsilon > p_\psi$, the kind of reward delivered to the elite is expected to differ a lot from the type

delivered to the regular citizens[36]. On the other hand, we have also that $\dfrac{\partial R_j}{\partial \theta_j} = -pY < 0$, that is, the

higher the costs in terms of general wealth that the ouster may cause, the lower the reward offered by the dictator. Since, $\theta_\varepsilon < \theta_\psi$, we see again that the elites will receive a more direct and bigger type of good in order to assure its support than ordinary citizens.

On the other hand, group size considerations merit attention as well. Excludable goods are impossible to be delivered to the general population. If we add to this the fact just explored that elite members will receive a larger share of benefits we can conclude that the nature of the goods distributed to both groups will differ.

The distinction between public and private goods will help to understand how loyalty is bought by different means from different groups. Indeed, according to Bueno de Mesquita et al. (1999, 2002, 2003) leaders produce a mixture of private and public goods attractive to their supporters. Private goods are distributed to the members of the winning coalition –the elite. These goods are excludable so it helps to fulfill the conditions posed mainly by p_j and θ_j. On the contrary, public goods benefit the whole population. As a result, we can generally state as main hypothesis that

Prob(Dictators' survival)=F(Private goods, public goods)

The above expression simply states that dictators' survival in power is a general function of the provision of both public and private goods to the different groups within the population that may threat them.

The next subsections are devoted to concretize the above statement by discussing the nature of these goods for each of the groups and how they are distributed.

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[34][34] We are thus assuming for simplicity that no exclusion can be made among group members when either delivering the gains from power or the costs of repression.

[35] Note that the parameter *L* has a negative sign in the partial derivative, however, if this punishment is assumed to imply a negative utility to the agents –what is logical-, then, the sign turns to be positive. Note, besides, that the effect of *Y* on the size of the reward is positive as well, so the higher the expected benefits derived from power, the higher the amount of goods delivered must be.

[36] If the threat posed by ordinary citizens is almost negligible, so will be the goods delivered to them which would allow the rise of predatory rulers who only care about his own enrichment and that of his cronies.

3.1.- The interests of the supporting coalition

The main risk for a dictator's survival stems from his own support or ruling elite. The issue goes back to Machivelli (1950 [1532]) who back in the sixteenth century noted that:

> "He who becomes prince by help of the nobility has greater difficulty in maintaining his power than he who is raised by the populace, for he is surrounded by those who think themselves his equals, and is thus unable to direct or command as he pleases" (page 36)

Certainly, there are always key groups backing a dictator and benefiting from their position. And no ruler can retain power without the support of some sectors. Bueno de Mesquita et al. (1999; 2003) refer to them as the 'winning coalition', that is, the "subset of the selectorate of sufficient size such that the subset's support endows the leadership with political power over the remainder of the selectorate as well as over the disenfranchised members of the society" (Bueno de Mesquita et al. 2003: 51)[37].

Gallego and Pitchik (1999), in their model on leadership turnover, call this subgroup the "kingmakers". This finite group of "kingmakers" is the key coalition whose support maintains the ruler in power; moreover, these are the people that after observing their payoff under leader's rule decide individually whether or not to withdraw their support. In case the leader is overthrown, it is assumed the new leader will have to be chosen from among the "kingmakers".

If including members into the regime network structures is an important variable determining its longevity, the opposite should be true as well. Dix (1982) states that 'regime narrowing' leading to elite divisions is one of the two key variables explaining the breakdown of many non-democratic regimes. Similarly, Snyder stresses that in cases like the neopatrimonial rulers of Iran, Nicaragua and Cuba "alienation of elites encouraged the formation of broad, multi-class revolutionary coalitions" (Snyder, 1992: 383). In his seminal work, O'Donnell and Schmitter stated that "there is no transition whose beginning is not the consequence -direct or indirect- of important divisions within the authoritarian regime itself" (1986: 19). Regarding the breakdown of communist one-party regimes, Kalyvas argues that "the key mechanism of decay was, therefore, the desertion of party officials because of a shift in the sources of their revenue and income (...), rather than the emergence of civil society and the resistance of ordinary citizens to the state" (1999: 339). To sum up, as Moore, we simply take regime elite or coalition to mean "arrangements in which ruling elites provide resources to social elites and groups in exchange for political support" (2004: 3).

Such an important and key support must be properly rewarded by the ruler satisfying the preferences of those in the elite to avoid that they give him the cold shoulder. *My hypothesis is that elite members' main interest is to get a share of the spoils, i.e., to get private goods in exchange for support.* As a result, "hard-liners" strength depends at that respect on whether they are able to develop deep patronage networks (Brownlee, 2002).

However, dictatorships may differ in the type and the way by which those rents are generated and distributed to their closest collaborators[38]. The nature of the resources of the country an its level of industrial development may determine both the minimum size of the elite required as well as the type of rents (private goods) the dictator can amass and distribute. When primary commodities abound, dictators can create big monopolies that can be distributed among the elite members, besides, revenues can be collected by taxing international trade without requiring an extensive and efficient tax administration, and export and import licenses delivered. An example will clarify this point. Just after declaring Martial Law in Philippines (1972), Ferdinand Marcos began the process of building around him a loyal elite of new oligarchs and co-opting some traditional ones. To do so, nonetheless, incentives and cash were needed. Marcos had at his disposal substantial resources coming from primary sectors that do not generally require a strong business class, modern administration and qualified workers. Sugar, coconuts, and grain (among others) all became monopolies under Marcos and were given to his cronies for private accumulation (Hawes, 1987; Thompson, 1998; Kang, 2002). Juan Ponce Enrile (the defense minister) and Eduardo Cojuangco, two of Marco's supporters, were able to monopolize the coconut industry; Marcos ordered

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[37] The selectorate is "a subset of the citizenry [that] has an institutionally legitimate right to participate in choosing the country's political leadership" (Bueno de Mesquita et al. 1999: 148).

[38] And, potentially, their most dangerous enemies.

through presidential decree all coconut processing companies to sell out or affiliate with UNICOM, of which Enrile was chairman of the Board (Bello et al. 1982). Other good sources of resources are oil and mineral wealth. Revenues from oil make the state turn into a distributive machine which must decide which social groups are to be favored in the process of oil-based rent-seeking (Smith, 2004). The evidence reported by Smith (1994), although referred to regimes and not to leaders (dictators), indicates that oil wealth is robustly associated with regimes' longer durations and lower levels of protest and civil war. In fact, Kuwait and Qatar have been ruled by the same dynasties[39] since the eighteenth and nineteenth centuries respectively. "In both states the transition to oil was accomplished through a tacit deal between the Amir and trading families, a trade of formal power for wealth. In exchange for receiving a sizable portion of oil revenues, the merchants renounced their historical claim to participate in decision making" (Crystal, 1989: 433).

When potential opposition groups are stronger and when a more industrialized economic environment precludes the distribution of direct rents via monopolies, trade licenses and graft, other strategies are required. One of them is to resort to institutions in order to manage likely elite conflict. On the other hand, the absence of easily obtainable rents from natural resources or primary commodity exports hinder the use of more direct and flexible patronage practices. In fact, Gandhi and Przeworski (2003) argue that "when dictators must co-opt larger groups within society, they turn to a second line of defense: parties and legislatures" (2003: 5). Juan Linz (1975) enumerates some of the functions of parties created by dictators: incorporation of the increasing opposition, socialization, in-cadration, conscientization, patronage and so on. Indeed, Schnytzer and Šušteršič (1998) find that the rents distributed to members were far more important than the popularity of policies and repression in determining party membership in communist one-party regimes. Through a one-party system not only perks and privileges are distributed, in addition "parties provide a site for political negotiation within the ruling elite that represents more than reliable patronage distribution. By offering a long term system for members to resolve differences and advance in influence, parties generate and maintain a cohesive leadership cadre" (Brownlee, 2004b: 7). The dominant party provides the different groups with the appropriate *arena* where to pursue their interests influencing policy decisions while allows the dictators to mobilize cooperation (Gandhi and Przeworski, 2003). In Egypt, for example, the rise of a young new business elite in the 90s posed a threat to Hosni Mubarak's ruling party, National Democratic Party. This new group proposed to create its own party that was to be called Future Party that would compete with the NDP. The party, however, never saw the light. Instead, the traditional NDP elite made room to accommodate this emerging group headed by Mubarak's son, Gamal Mubarak (Brownlee, 2004b). In 1977, Indonesia saw dissent and protest rise above all among students and Islamic groups. Suharto's regime, though, succeeded in incorporating protest leaders into GOLKAR, the regime party.

Let us summarize then the proposals of this subsection. Our general proposition is as follows

Prob(Elite seizure)=F(Commodities, Single-party, control variables)

i.e., the probability that the change of ruler is carried out from within the elite/supporting collation is primarily a negative function of private goods distribution embodied in the existence of exportable commodities and the presence of a single-party system, plus the effect of other control variables.

3.2.- When people take the streets…The interests and organizational capacity of citizens

Regular citizens do not have, in general, access to rents, namely, private goods. Their utility derives from income, but since in this income there are no rents, the only source of utility is the income obtained through production out of their capital endowments according to some function. Thus, the rate of growth of per capita income determines the public goods they may obtain from ruler's decisions since it determines their level of welfare. *So I hypothesize that income growth is one of the key determinants of the probability that a popular intervention against the incumbent dictator takes place.*

Similarly, as resource receipts, foreign aid and loans constitute an extra source of rents in the hands of the regime heads when other domestic sources of revenue are scarce[40]. Along the years, Jordan Hashemite dynasty has received funds from either British Administration, Arab oil producers and the United States. From 1973 to 1988, aid averaged 43 percent of the Jordan public budget (Moore, 2004). In Zambia, aid was equivalent to 32.7 percent of GNP by 1993 (Bratton and Van de Walle, 1997). There is,

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[39] The Sabahs and the al-Thani respectively.

[40] Aid may include budgetary support, security collaborations, concessionary loans, loan forgiveness, and financing of different kinds of development projects.

therefore, no problem in giving aid to non-democracies and corrupt countries. As Alesina and Dollar (2000) show, colonial past and political alliances are the major determinants of foreign aid[41]. For instance, they report that Portugal's share of aid going to countries that were its colonies is 99.6%, and that of France is 57%. Besides, there is some evidence that shows that more corrupt governments receive more foreign aid (see Alesina and Weder, 1999). As a result, thanks to foreign aid, the dictator may be able to distribute public goods to the population by carrying out, for instance, development projects actually funded by other countries.

The latest statements (linking public goods and dissent) are consistent with the existing approaches to the study of popular protests, dissent, and mobilization. Actually, the positive effect of low economic growth in fostering revolutionary outbreaks can be explained both appealing to the relative deprivation theory as well as by the rationalistic approach.

According to the relative deprivation theory, political dissent and violence result from the social frustration that appear when the outcomes experienced by individuals are inferior to those they expected to receive or felt that they would be entitled to receive (see Gurr, 1970; Feierabend, Feierabend and Gurr, 1972; Dudley and Miller, 1998; Davis, 1999 among many others). As Auvinen clearly puts it, "the regime's inability to provide economic and political goods is seen as a source of relative deprivation within population" (1997: 177).

On the other hand, according to the rational perspective, rebellion activities have a cost since citizens may devote both time and resources to them and face the risk of repression (Muller and Weede, 1990; Weede and Muller, 1998; Davis, 1999). As a consequence, high rates of economic growth increase the opportunity costs of those insurgent activities (Grossman, 1991).

In sum, it seems clear that, when broader sectors of society are considered, patronage networks are impossible to arrive to everybody in view of the fact that the resources in the hands of dictators are limited or even scarce, above all, if we consider that a proportion of them is devoted to self-enrichment. In this case only public goods may be effective in keeping the masses toothless. And economic growth, for all the reasons depicted above, is expected to be the most effective. In addition, foreign aid helps to reduce pressure on dictator's own budget constraint since it is an extra source of cash that can be delivered to society without affecting dictator's and his cronies' share of the spoils.

Bad economic performance may be a necessary but not a sufficient condition for general massive unrest to arise. We will need also to pay attention to other underlying conditions that may foster or hinder popular mobilization. In fact, resource mobilization theory has recently proposed a new way to study and understand protest movements and rebellion. Departing from the assumption that movement actions are rational, existing conflict will lead to the emergence of social movements if the changes in resources, group organization and opportunities for collective action exist (Jenkins, 1983). At this respect, the rise of what it has been called "electoral authoritarianism" and "hybrid regimes" –among many other names- may provide such movements with those opportunities stressed by these late approach. The international pressure exerted by democracies has had a big and positive effect on the creation of institutions in authoritarian systems in order to dribble this more hostile climate. "Thus the trend toward democracy has been accompanied by an even more dramatic trend toward pseudodemocracy" (Diamond, 2002: 27). These relatively new form of authoritarianism is characterized by allowing the opposition groups to organize into parties and a limited participation into elections (see Diamond, 2002)[42].

Alternatively, the structural approach stresses the role that some underlying factors within the countries may play on determining the levels of protest and/or violence. Of these factors, the most relevant is the level of ethnic dominance or competition. Ethnic dominance theory argues that the political and economic control of one hegemonic group may provoke the protest of smaller excluded groups[43]. In general, it is argued that higher ethnic fractionalization hinders broad popular collective action by increasing information costs and distrust between groups.

To sum up, as we did with the elite-driven replacement, we can summarize the propositions regarding popular-driven ruler change as follows

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[41] Using UN votes as proxy for political alliances.

[42] See Schedler (2002) for a full list of mechanisms used by the incumbent regime in order to manipulate the results of those elections and retain power so.

[43] As it can be easily noted, this is totally compatible with a possible sub-hypothesis derived from the relative deprivation approach mentioned above.

Prob(Popular seizure)=F(Income growth, aid, ethnic fractionalization, multi-party system, control variables)

therefore, rulers' survival with regard to citizens intervention depends positively on the provision of public goods (growth, foreign aid), organizational opportunities (multi-party system), and negatively on structural factors like ethnic composition.

3.3.- Military intervention: To stay or not in the barracks

Although in general they can be regarded as a part of the ruling elite in an authoritarian regime, the military are a rather "especial" group or conglomerate with its very particular preferences and goals. Consequently, it is worth considering them separately in order to better understand their motivations to intervene into politics.

As it has been outlined before, the military have the means to seize power since they have the control over the weapons of a country and the skills to use them "effectively". This, however, might be again a necessary but not a sufficient condition for military intervention in politics. As Luttwak (1969), Finer (1976 [1962]), Nordlinger (1977) and Brooker (2000) point out, there must exist some kind of opportunities or preconditions and the appropriate incentives to make that decision[44].

There is a large amount of empirical –both quantitative as qualitative[45]- literature about military intervention and it has identified an important amount of factors that may bring it about. I will only review the most important or most commonly included in the analysis since, generally, they are not focused just on the case of dictatorships but consider either type of regime, democratic or authoritarian.

In her seminal work, O'Kane (1981) identifies two main preconditions under which coups are more likely or unlikely to occur. The first one has to do with export of primary goods dependence in poor countries. That dependence makes the economy of a country more sensible to price crises and, hence, external shocks affecting growth and government revenue. The other factors are obstacles that may deter the occurrence of coups. Concretely, she cites three: the recent independence of a government which may generate a "honeymoon" effect; the past coups experience[46], and the presence of foreign troops because they cannot be fully neutralized by the conspirators. Londregan and Poole (1990) concentrate on the economic conditions for coups as well. They find a pronounced inverse relationship between coups and income (controlling for simultaneity) and also that high rates of economic growth also inhibit coup occurrence (see also Galetovic and Sanhueza, 2000). They also stress and demonstrate the influence of past coups as O'Kane (1981) did: "once the ice is broken, more coups follow" (Londregan and Poole, 1990: 152). Similarly, in a posterior work, O'Kane (1993) stresses again that the actual causes of coups are economic rather than political. She argues that specialization in and dependency on primary goods for export, exacerbated by poverty, are the most important explicative factors[47]. Note that according to these arguments the presence of exportable commodities may have a contradicting effect on the dictators' probabilities of retaining power: on the one hand, they may prevent elite intervention as stressed in section 3.1, but on the other hand, they may foster military coups.

Addressing the explicit preferences of the military as an institution, the early literature on military intervention affirmed that what the armed forces hate the most is social unrest and mobilization within the country (O'Donnell, 1973) and, generally, seize power with the purpose of reestablishing order thinking that the incumbent government is incapable to do so (Finer, 1976; Nordlinger, 1977). More recently, Galetovic and Sanhueza (2000) argue that coups attempts are more likely when there is widespread discontent against the incumbent ruler since it acts as a signal that people may comply with leadership change[48]. But through co-optation and leverage delivered by allowing political parties and

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[44] What Finer termed the 'disposition' and the 'opportunity' and Nordlinger the 'why' and 'when'.

[45] See, for instance, Andrews and Ra'anan (1969), Fitch (1977) for an in-depth study about Ecuador.

[46] As she asserts "in general, where no precedent has been set, it can be expected that potential conspirators will at first try less drastic measures" (O'Kane, 1981: 295).

[47] As in her 1981 article (an others), she suggests that the presence of obstacles have a negative effect on the probability of coup occurrence. In this article (1993) she focuses on two obstacles: the absence of previous coups as Londregan and Poole (1990) and the presence of foreign troops since independence.

[48] Their empirical evidence shows that higher levels of popular unrest, measured as the sum of riots, demonstrations and strikes in a given year, increase the likelihood of coups.

higher growth (Johnson, Slater and McGowan, 1984), the opposition can be to some extent controlled, avoiding, thus, riots and massive protests (Escribà-Folch, 2003) and, thus, helping to keep the military into the barracks. Similarly, as Jackman puts it, "this suggests that one-party dominance is probably an integrative force" (1978: 1273).

All in all, military intervention to throw incumbent dictators out is motivated by the following factors

Prob(Military intervention)=F(commodities, social unrest, past instability, control variables)

so militarily headed ruler changes are a function of the existence of commodity exports (in this case, positive), potential social unrest that can be alleviated through regime institutions and growth, and the accumulation of past political turbulence.

4.- Empirical analysis: Dictators' survival

4.1.- A first look at the data. Descriptive patterns

During the long period covered by the data (1946/1950-2000), the world has had to put up with about 520 dictators. 279 were civilians, 200 were military and 41 were monarchs[49]. Just to clarify, I consider "dictator's rule" the years of continuous rule under the same dictator[50]. The average duration of these rules has been 18.76 (between s.d.=12.33). The civilian leaders lasted 17.5 years on average (s.d.=11.2), the military rulers lasted 16 years (s.d.=11) and the monarchs 29 (s.d.=13.6). Turning to regime institutions, dictators that ruled in single-party regimes stay on average 22 years in office (s.d.=11.8); those who permit controlled multi-party systems rule on average for 16.3 years (s.d.=11.3), and those without any of these institutional arrangements last 14.8 years on average (s.d.=12.9)[51].

To get an idea of what is going on with regard to dictators' survival, we can check what the main characteristics are of some of those who have stayed for the longest time in power. Table 4.1 summarizes that information.

[Table 4.1 about here]

As it has been stressed in the theoretical review on security and survival of dictators, some kind of patronage network is essential to maintain power for so long. The conditions and institutions under which the most enduring dictators ruled help to make this point clear. Most of them developed single-party or multi-party regimes through which privileges could be delivered and even certain access to power and, at the same time, control over opposition groups could be established. Kim Il Sung in North Korea (46 years in power), Mao in China (33 years), Castro in Cuba (46 years) among others are clear examples of rulers that governed with strong parties. In other cases, the presence of a weaker single party was largely due to the disposal of resources through the export of primary commodities or oil, which permitted the development of deep patronage networks. In case these two sources are not important enough, foreign aid may provide the dictator with the rest of the resources he needed to get their own rents and deliver the rest to the members of the power coalition. Look at the cases of king Hussein of Jordan and Taufa'ahau Tupou IV (king of Tonga); both were long-lasting monarchies without political parties, both exported some kind of commodity, but also receive a huge amount of foreign aid that completed the quantity of rents necessary to retain power. Hence, there is in all the cases listed some kind of combination that assures the dictator enough resources to buy off loyalty.

4.2.- The variables and methodology

The aim of this article is to study dictators' stability/durability in power, not regimes' survival; therefore, our dependent variable is ruler turnover, *HEADOUT*, so that a 1 has been coded the

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[49] The numbers may vary depending on the availability of information.

[50] When using the term "dictator" I am referring to both those that ruled individually as well as those regimes characterized by collective rule such as National Salvation Councils, Military Juntas, etc.

[51] The dataset covers the period 1950-2000, although some countries enter the sample even before. As a result, the variable *TENURE* which reports the number of years a ruler has been in power may be right-censored, that is, we consider the years in office until 2000, although the leader may be still in power.

year a leader is overthrown or he simply leaves power, while the years in which no change occurred have a zero. The empirical models, then, are aimed at estimating the probability that such a change takes place. Again, the units of analysis are dictators[52].

Following the theoretical sections the independent variables used in the econometric models try to capture the existence of resources in the hands of the dictators through which they can build the above-mentioned deep patronage networks that allow them to stay longer in power, distinguishing between private and public goods as well. Some other control variables directly related to leadership instability have been also included when running the baseline models.

Resources are a relatively easy way to get rents to bribe and buy off loyalty so they are an excellent proxy for private goods. The export of these commodities permits the regime to get more revenue through international taxes as well as allows creating monopolies that are delivered to their loyal relatives and elite members. Capturing this option I include the variable *PRIMCOMEX* on the right-hand side of the models[53]. This is a dummy variable coded one if the country is a primary commodity exporting one so the average ratio of non-fuel primary products exports in 1990-1993 exceeded 50% of total exports, 0 otherwise. In a similar way, oil permits to get a lot of resources without having to tax people. The variable *OIL* indicates an oil-producing country. It is a dummy variable coded 1 if the average ratio of fuel exports to total exports in 1990-1993 exceeded 50%, 0 otherwise. This variable is time invariant[54].

As noted in section 3.1 when dictators must co-opt larger groups within society, they turn to a second kind of strategy: creating institutions. Here, then, we use: on the one hand, *SINGLEPARTY*, which is a dummy variable, coded 1 if only one political party exists, 0 otherwise (Fronts are considered as a single party). On the other hand, *MULTIPARTY*, which is a dummy as well, though in this case coded 1 if more than one political party exists, 0 otherwise[55]. Note that *MULTIPARTY* is expected to have a positive effect on ruler change carried out by the masses since it provides opposition groups with a higher organizational capacity. As Huntington put it "liberalized authoritarianism is not a stable equilibrium. The halfway house does not stand" (Huntington, 1991: 137 cited in Brownlee, 2004a). Nonetheless, by reducing the level of protests, the effect of the variable may be negative, above all in the case of military intervention.

Foreign aid provides the regime leaders with an alternative source for obtaining rents through which rent seeking is fostered (Svensson, 2000) and loyalty can be bought off from broader sectors of society through the delivery of public goods. I mainly use aid per capita, *AIDPC*, since it is the variable for which the data is more complete[56]. As said above, *GROWTH* (per capita income growth), primarily reflects the welfare of the citizens (see Gallego, 1996 and 1998) so it is the main public good under interest[57]. In fact, economic performance has been used as a proxy to capture relative deprivation but also to test rationality based models (see section 3.2). So it is expected that higher rates of growth will reduce the probabilities of leadership turnover.

Ethnic divisions are also supposed to create instability and foster popular dissent according to the structural approach or to hinder it by making collective action more difficult (see section 3.2), so the variable *ETHFRAC*, i.e., ethnic fractionalization has been included as independent variable. *ETHFRAC* measures the probability that two randomly selected persons from a given country will *not* belong to the same ethno-linguistic group.

To account for inherited instability (see Przeworski, 2004), a variable, *PASTAUT*, which counts the number of times democracy died in the past, has been included[58]. Indeed, analyzing military coups

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[52] They 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) military or other figure when sources indicate nominal head is puppet figure. See Cheibub and Gandhi (2004).

[53] Remember that the effect of this variable may be positive for the case of military intervention (see section 3.3).

[54] Both variables have been taken from IMF (1999) and been updated.

[55] Multiple parties exist only within a legislature. Source: ACLP dataset developed by Przeworski et al. (2000) for their book *Democracy & Development*. The dataset has been updated.

[56] The variable is taken from the *World Development Indicators* (World Bank, various years).

[57] See also Gasiorowski (1995) for an analysis of economic crises on regime change.

[58] Source: ACLP.

occurrence, O'Kane (1981, 1993) and Londregan and Poole (1990) already stressed the importance of past instability, showing that past coups is an important variable explaining the current likelihood of such kind of military intervention.

The individual characteristics of the ruler have been accounted by including two dummies: *MILITARY*, which is coded 1 if the effective head is or ever was a member of the military by profession, 0 if civilian or monarchy. And *CIVILIAN*, which is coded 1 if the effective head of government is civilian and 0 if the head is of either the military or of monarchy[59].

The dichotomous nature of the dependent variable and the goal of this study make the use of event history analysis the most suitable technique in this case. As stated above, in this chapter the event in question is, generally speaking, dictator change. Although we can thing as leadership change processes as continuous in nature, the data used are discrete so models for binary dependent variables can be used as well in estimating the coefficients. Discrete-time data with a binary dependent variable conveys the same information as the duration time (Box-Steffensmeier and Jones, 2004). For this reason, and to check the robustness of the results both discrete-time as well as continuous-time models have been employed and reported in the tables below.

In the case of discrete-time models, both logistic as well as complementary log-logistic regressions have been used. As the complementary log-log function is asymmetric, in datasets with few 'ones' (that is, failures) results could differ between them.

In this cases duration dependency, *h(t)*, may become a problem to be handled. The most general way to do so is by the inclusion of temporal dummy variables for the *j* time points (Han and Hausman, 1990; Beck, Katz and Tucker, 1998). This approach, although general, may reduce dramatically the number of degrees of freedom and generate a big number of coefficients difficult to interpret. The second way to deal with duration dependency is through the transformation of the time values what can lead to a finer characterization of the underlying process. A common transformation at this respect is to use the log of the trend or different polynomials –such as cubic transformations- (Box-Steffensmeier and Jones, 2004).

Regarding continuous-time parametric models, the tests have been performed using the Weibull function. In this kind of model the baseline hazard can be monotonically decreasing, monotonically increasing or even flat with respect to time.

4.3.- Distribution of goods and survival in power. A general model

I now proceed by testing the general survival hypotheses proposed which stress the key role that resources/goods play in extending dictators' tenure. Table 4.2 reports the results of the estimations of the baseline using both continuous time parametric models and discrete-time models. For the discrete-time regressions different functional forms for the baseline hazard function have been specified and reported in the results.

As it can be checked out, all the coefficients estimated are very similar whatever the estimation method used and all the variables have the predicted signs[60], showing that goods delivery increases the survival probabilities of dictators, while past instability decreases it. The oil dummy is not significant in any model because it is highly correlated with the type of head dummies, since most of oil exporting countries are ruled by long-lasting monarchies, e.g., Saudi Arabia, Kuwait, etc. The rest of the variables capturing the buying of support have negative and significant coefficients.

For the discrete-time models, two duration dependency specifications have been used: log transformation, and cubic transformation. After running rudimentary log-likelihood ratio tests it seems that both cubic and log transformation are more appropriate for the probability estimation, especially the cubic one.

[Table 4.2 about here]

For the discrete time models and in order to clarify the results table 4.3 shows both the marginal and discrete changes of the different variables fixing the rest at their average values. With a proportional transition rate model, the effect of a covariate can be easily interpreted as the percentage change in the rate, given that only one of these covariate changes its value. Table 4.3 reports these percentage changes as well.

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[59] Source: Cheibub and Gandhi (2004). Monarch is, then, the reference category.
[60] They are not odds ratios neither hazard ratios.

From the continuous time models, hence, we see that the rate of turnover is 25% lower for dictators that have primary commodity at their disposal to be exported, deliver licenses and monopolies, get tax revenues from international trade an so on. For oil exporter countries that rate is a 13% lower. The strongest effect is found to be in the institutional settings that a regime can create. Dictators ruling single-party regimes face much fewer risks, as their rate of overthrowing is 70% lower as compared to those without that concrete organizational structure. That percentage is of 48% for leaders that rule multi-party dictatorial systems. The negative effects of both past instability and ethnic fractionalization are clear too, as well as the extreme increase in the rate of hazard for civilian and military leaders compared to monarchs.

[Table 4.3 about here]

The effects seem very small for the *AIDPC* and *GROWTH* variables, but it is just because of the way they are measured. Aid is measured in dollars per capita, so a one-dollar increase in aid reduces the rate of failure in 0.5 percentage points and, therefore, ten dollars reduce the rate a 5%. Regarding economic growth, its effect is also very important, since growing just one point more reduces the risks in more than 3 points.

For the discrete-time models the effects are very similar in the different proves carried out. In the '0->1' column we see the change in the probability of failure when the variable goes from 0 to 1 (keeping the rest at their mean values), so it is especially useful for the dummy variables. For instance, when the rest of the variables are at their means, having commodities to export reduces the probabilities in 0.02. Again, one of the strongest effects is for the single-party variable. Ruling under this kind of regime reduces the probabilities in 0.079 points.

In the first column the marginal effects are reported and the last one shows the changes around the mean values of the variables[61]. So the marginal increase in the probability when the level of ethnic fractionalization increases is 0.04, and 0.01 for past instability. Remind that these effects are computed fixing the other variables at their mean values -including the duration ones-, so their actual importance may change a lot depending on the underlying conditions. For instance, the marginal effect of exporting primary commodities almost doubles (-0.038) when aid is very low and there are no parties, and almost doubles again (-0.0705) if economic growth is very low too. The effect of having a single-party also increases to -0.087 (from 0.079) if that dictator does not have rents coming from exports of commodities or oil. The effect becomes even higher when other sources of rents such as aid are at very low levels: -0.107 (marginal effect=0.111). So party structures are more important as the sources of what may be called "easy rents" get scarce what is consistent with our predictions (see section 3.1).

4.4.- Different ways of being toppled, different actors involved

Not all dictators' tenures finish in the same way. As stressed in section 2 some are overthrown through violent mass movements or revolutions, others just by military coups, others by the members of their own power coalition or political elite. So there are more actors involved in the leadership change process and not all of them are influenced by the same considerations and, hence, variables (Gallego, 1996, 1998). So in this section the objective is to see how the variables in the baseline model may have different effects depending on the way the ruler is actually overthrown departing from the assumptions and hypothesis depicted throughout section 3.

Table 2.4 reports the frequencies of the variable *WAYOUT*[62]. The coding has been made regarding which actor has been the main one involved in the leadership change: the power elite, the military, the 'people' or any foreign actor[63]. Recall that our main assumption in the theoretical model in section 3 was

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[61] The probability changes in the discrete time models have been calculated using the Spost commands, see Long and Freese (2001).

[62] See the appendix for some details about the construction of this variable.

[63] It has been given, however, priority to the domestic actors. So where there has been collaboration between domestic and foreign actors I have coded as if only the domestic actor was involved. Consequently, in the dataset there are just three leaders toppled almost purely by foreign actors; in this cases the key role was played by the external forces: Idi Amin (Uganda), Pol Pot (Democratic Kampuchea, by then) and Manuel Antonio Noriega (Panama). Amin was toppled by Tanzanian troops in 1979; Pol Pot was ousted after a Vietnamese invasion, and Noriega by a US invasion (called Operation Just Cause). Leaders that died in power are not generally coded unless succession was already established.

that , that is, that the probability of being toppled or replaced by the elite is much higher that being overthrown by a revolutionary movement. Indeed, as it can be seen, most of ruler changes, 60.05% (242), are promoted or simply occur within the regime elite. These changes can be violent or relatively peaceful depending on whether the level of institutionalization of the regime is high or some kind of explicit or implicit rule regulates that process. Actually, 56 out of the 242 changes (23.14%) that took place within the elite were explicitly violent or because of some factional conflict within the coalition.

[Table 4.4 about here]

The second most common way to get rid of autocrats is the military coup. 27.54% (111) of the ruler changes were carried out by the armed forces. Instead, revolutions, guerrilla warfare, mass movements and riots that lead to the collapse of states, regimes or governments are much less frequent. Only 47 out of 403 (11.66%) of the changes in leadership were carried out by mass movements, either violent or not. As Goodwin argues these movements use to be "(1) multiclass movements that were unified by (2) widespread anger against state authorities (…)" (1994: 582). It is worth mention also that 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.

How do the variables used in the baseline model affect the probabilities of these various types of leader change to take place? It is expected that different agents will have different interests with regarding to the kind of benefits they want to get from the regime given their different effectiveness in posing a credible threat on rulers' stability as it was argued in the theoretical section (3). To test this hypothesis, multinomial logistic models have been run in which the dependent variable is the way of rulers' exit (*WAYOUT*). Each dictator is then in one of five sates (j): in office ($j=0$); removed by the elite ($j=1$); removed by the military ($j=2$); toppled by the masses/society ($j=3$) or ousted by foreign forces ($j=4$). The independent variables are the same that were used in the baseline duration model. Given the existence of different duration patterns between the exit modes, the duration dependence effect ($h(t)$) has been modeled in two different ways. For one model (left-hand side) the logarithmic transformation has been applied, while for the other, the cubic transformation.

The results are shown in table 4.5. The estimates for the foreign intervention mode of exit have been omitted due to their lack of relevance. The conditions and calculations triggering the intervention of foreign countries are out of the scope of this study and the variables we are interested in[64]; besides, there are only three genuine cases in the dataset used in the empirical analysis.

[Table 4.5 about here]

The necessity to differentiate *exit modes* is, given the results, out of doubt. Some variables are important in decreasing or increasing the hazard of exit depending on what kind of actor is principally involved in the change of ruler whereas others have different signs depending on the type of actor.

To reduce the hazard of being threatened by the members of the elite or power coalition having deliverable resources is the key factor. To keep the elites' loyalty private goods must be delivered in some form, either direct or indirect. In the 'direct' way, the firms and agencies that export primary commodities can be put in hands of close collaborators. For example, during Habyarimana's rule (1973-1994) in Rwanda, the main members of the Akazu (the presidential clan) were in charge of the Ocir-café and Ocir-thé, the coffee and tea agencies (Verwimp, 2003). On the other hand, crops and commodities in general exports can be easily taxed increasing the revenue at the rulers' disposal and, thus, their capacity to distribute rents to buy off loyalty. Taking the same example, coffee exports represented 60-80% of the revenue in Rwanda during the Habyarimana regime. This is why the variable *PRIMCOMEX* is highly significant in this case but it was not so much in the general model reported in table 4.2, since this variable is especially important for explaining just one type of exit[65]. Obviously, oil exports are most probably the easiest way to get large amounts of revenues from non-domestic sources[66]. Resources coming from abroad in the form of aid are also helpful although not significant.

Once they have got firms in key sectors, economic growth will help these elites to enrich if the sector is a dynamic investment-demanding one, so this is why this variable is significant but not at a very high level.

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[64] See, for example, Bueno de Mesquita and Siverson (1995).

[65] Besides, it has a positive effect on military interventions as it will be commented below.

[66] As in the general model in the previous section the oil dummy is not significant because the dummy on the type of head mainly captures its effect.

However, maybe the best defensive 'trench' a ruler can rely on to keep the coalition loyal is the single-party system. The coefficients are -1.18 and −1.13 and are highly significant at the statistical level in both models. The single party provides a place for political conciliation within the ruling elite that represents more than simply patronage distribution. The party, thus, offers a long-term system for members to resolve differences and advance in influence what actually creates cohesion and dependence on the current leader/system (Brownlee, 2004a). Less developed party structures may serve as a more organized way through which to deliver perks and privileges. Note that, although somewhat decreasing the transition hazard, the multi-party regimes dummy does not have a significant effect on the "elite driven" exit since the regime elite is co-opted and organizes principally into the 'regime official party' no the other ones allowed to the opposition to create them.

Ethnic fractionalization increases the hazard of overthrown in the elite case possibly because it defines clear lines along which alliances can be defined creating alternative bases of support. Past instability has also a strong positive effect on the probability of being deposed by the dictator's coalition.

As outlined in the theoretical section (3.3) what the armed forces hate the most is social unrest and mobilization within the country and, generally, seize power to reestablish order (O'Donnell, 1973; Finer, 1976; Nordlinger, 1977). Consequently, co-optation and leverage by political parties and higher growth, the opposition can be to some extent controlled, avoiding, thus, riots and massive protests what would explain the negative signs of both variables. An alternative explanation of this result would appeal to the military own calculations given that a stronger opposition organized in parties is capable to resist better the attempt of the military to seize power, augmenting the costs of repression. On the other hand, note that the effect of *PRICOMEX* is positive although not significant; this is consistent those studies that stressed external dependence as a cause of coups (see section 3.3). Per capita growth is only slightly significant and negative because it reduces the level of popular dissent.

Turning to the 'society driven' ruler change, the results confirm the theoretical predictions about the importance of public goods and the organizational capacities again. In this case, five variables are significant: foreign aid, growth, ethnic fractionalization, multi-party system and past instability. Not being direct clients of the patronage networks developed by the dictators, only extensive benefits in the form of public goods or aid can reduce the potential anger of the people. Aid represents an extra source of cash for the ruler, who may then carry out some policies without affecting the proportion of rents he keeps for his self-enrichment. On the other hand, ethnic fractionalization decreases the hazard of a mass rebellion driven ouster since it may hinder collective action establishing dividing lines on people's identifications that could be manipulated by a dictator willing to apply a divide and rule strategy (see Acemoglu, Robinson and Verdier, 2004, and, specially, Padró-i-Miquel, 2004). This is what Saddam Hussein did in Iraq; favoring always the Sunnis minority, group to which he belongs. The opposite effect may have the existence of multiple parties which ease the organization of the opposition groups and, hence, effective collective action directed against the ruling elite. Thus, although the overall effect of this variable on dictators' survival is negative (see table 4.2), when differentiating between types of exit it turns to have a positive and significant effect on mass driven overthrown likelihood.

An alternative although very similar model is presented in table 2.7. In this specification two variables are included: first, *ELECTION*, which is a dummy variable coded 1 if the effective head of government was directly elected in an election, plebiscite, or referendum from the year of his first election, 0 otherwise. The second one, *ACCHEAD*, tries to better account for past instability than *PASTAUT*[67]. The former is number of changes of effective heads of government accumulated during the life of a particular regime, so it focuses on dictator changes not in regime changes as *PASTAUT* does.

The hypothesis with regard to an elected ruler is that these elections will be helpful in avoiding elite driven ruler changes since they may permit the leader to show to potential rivals within the elite and plotters the amount of support he actually has as well as derive some kind of legitimacy from this democratic "mask". Any rival within the elite would calculate the costs and the success chances of seizing power toppling the incumbent, if this has been "elected", that rival will consider more costly to get rid of the current dictator and stabilize himself in power.

There are only slight changes with respect to the results of table 4.5 but some merit comment. The variable on elections is significant (at the .10 level) only for elite driven exits what confirms what we expected. *ACCHEAD* is only significant for changes carried out through military coups. As Londregan and

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[67] The source of both variables is ACLP.

Poole put it "once the ice is broken, more coups follow" (1990: 152). Instability in leadership triggers, thus, military intervention that will try to handle that inherited pattern.

[Table 4.6 about here]

Regarding the variables that were already in the model the changes clarify some patterns. The export of commodities continues to be important only in preventing elite driven changes in leadership (β=-0.498). And foreign aid is again only significant for mass driven exits. Economic growth is no longer significant for military driven changes, although in the previous model it was only very slightly significant and only in the specification that modeled duration as a logarithm. So growth has a very strong effect in preventing massive outbreaks directed to change the ruler or the whole regime; but it is only slightly important in reducing the probability of an elite driven putsch. What this is telling us is then that economic performance is very important for dictators accountability when the masses or in general the society is the agent who keeps them accountable; if that agent is the regime elite -or support collation- the leader may be only accountable for economic performance under very specific conditions. Finally, ethnic fractionalization is not significant in predicting mass driven changes as it were in the previous model; nevertheless, the estimated coefficient is still negative and high (-1.18). The rest of the effects remain the same what proves their robustness.

4.5.- Types of Dictators and security in power

The models above reported showed that royal rulers are the most stable ones. The coefficients for military and civilian rulers are in all the specifications positive and significant for the 'elite driven' changes and military coups. Instead, they are not significant for citizen lead changes. The coefficients for civilian leaders are especially high (3.85 and 4.33) for the replacement type due to military intervention. Military replace civilian rulers when they think the latter are incapable to effectively rule the country.

Using the models thus far reported (both in continuous and discrete time) the probability of exit has been calculated for the whole sample. On average, military leaders are the ones that face a highest exit probability, 0.122. Civilian dictators face an average probability of 0.084, and monarchs an average probability of 0.039. Regarding the different ways of exit, the means of the predicted probabilities -as estimated in the model in the previous section- are summarized in table 2.8.

[Table 4.7 about here]

Military seem to be, definitively, the most insecure dictators, while monarchs are the most stable ones. They face higher risks of being deposed both by the military elite as well as by other factions within the armed forces. For civilian leaders, the main threat comes from within the elite/coalition as well as for monarchs. For all cases, being toppled by the masses is the most remote possibility.

5.- Conclusions

Dictators need to deliver different types of goods to buy off loyalty and then remain in power for longer time. To get and deliver such rents there are different alternatives a dictator can employ. It is assumed that he will choose the simplest and cheapest possible so as to avoid being toppled by the various actors. Since the threat posed by the elite members is more important, the amount and nature of resources distributed among them differs from the goods delivered to regular citizens whose welfare depends mainly on income growth.

Exportable commodities permit to tax international transactions as well as delivering factories and agencies to those that are supposed to support you. When the number of those a dictator must 'buy' is bigger, other strategies are needed. In this case, the creation of single-party and multi-party regimes permits to create a stable structure through which privileges can be delivered, limited access to power offered, and provide the elite and opposition leaders a site to negotiate and pact.

The empirical part has showed that all these elements help to stabilize tenure and, thus, retard the exit of the leader. Besides, the model has been used to see whether various ways of exit or ouster are determined by different variables. The rent delivery sources and structures are a key element in reducing the probabilities of being ousted by the ruler's own elite. To avoid military intervention, the variables that reduce social unrest easing mass control are the most effective in reducing hazards. While general measures of welfare and collective action explain the likelihood of a mass driven change in ruler.

All these estimations have permitted to assert that military dictators are in general the most insecure ones, while monarchs are the ones who stay longest in power. But when distinguishing between

the degrees of institutionalization, it turns out that civilian dictators ruling without any party in the system are actually the most insecure ones.

Appendix

The variable *WAYOUT* distinguishes the means by which the dictator has been replaced focusing on the actors involved in that change. The sources are historical, i.e., country studies, historical databases (such as the *Keesings Contemporary Archives*), yearbooks, etc.

The following rules have been basically applied:

-Focus on what group is responsible for changing the ruler or decide 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 by a military coup they are coded as military interventions even though they may have been preceded by social unrest.

-For the case of military rulers, the distinction between coups and elite changes is valid as well. It has been considered an elite driven change when those who promoted and carried it out where close collaborators of the incumbent ruler, or, in case of collective rule, were members of the Military Junta or Council of National Salvation –or whatever name-. As a result, coups against military rule are considered to be those staged by factions of the armed rule not included in the power coalitions by reasons such that of ethnicity, territorial divisions, etc.

-If the ruler is either civilian or monarch, the identification of coups is easy. They are considered so if members of the armed forces take over power. Also note that we do not consider rulers who come to power as head of guerilla movements as military.

-Leaders that died in power are not generally coded unless succession was already established.

-It has been given, however, priority to the domestic actors. So where there has been collaboration between domestic and foreign actors I have coded as if only the domestic actor was involved. Consequently, in the dataset there are just three leaders toppled almost purely by foreign actors; in these cases the key role was played by the external forces: Idi Amin (Uganda), Pol Pot (Democratic Kampuchea, by then) and Manuel Antonio Noriega (Panama). Amin was toppled by Tanzanian troops in 1979; Pol Pot was ousted after a Vietnamese invasion, and Noriega by a US invasion (called Operation Just Cause).

Table 4.1.- Long-lasting dictators characteristics

Dictator	Years in power	Institutions	Resources	Aid per capita	Oil exporter
Haile Selassie	44	Single-party	Primary commodity	1.164	No
Etienne Eyadema	34	Single and multi-party	Primary commodity	32.003	No
Albert-Bernard Bongo	34	Multiple parties	--	76.926	Yes
Hussein bin Talal	47	Monarchy	Phosphates	167.97	No
Mobutu Sese Seko	32	Single-party	Primary commodity	9.866	No
Sobhuza II	61	Monarchy/ party	Primary commodity	42.32	No
Kim Il Sung	46	Single-party	--	.7572	No
Taufa'ahau Tupou IV	36	Monarchy	--	180.51	No

[a] Average of aid per capita received during the whole dictator's period in power.

Table 4.2.- Dictators' security: discrete-time and continuous time models coefficients

Independent variables	Weibull	Logit	Logit	C Log-log	C Log-log
			Failure: *HEADOUT*		
PRIMCOMEX	-.287*	-.277*	-.283*	-.276*	-.280*
	(.150)	(.161)	(.163)	(.150)	(.151)
OIL	-.145	-.168	-.127	-.164	-.128
	(.231)	(.246)	(.246)	(.232)	(.230)
MILITARY	1.10***	.957***	1.27***	.928***	1.22***
	(.325)	(.338)	(.370)	(.325)	(.355)
CIVILIAN	1.25***	1.09***	1.43***	1.06***	1.38***
	(.342)	(.356)	(.386)	(.343)	(.372)
AIDPC	-.004***	-.004**	-.004**	-.004**	-.004**
	(.001)	(.001)	(.001)	(.001)	(.001)
SINGLEPARTY	-1.22***	-1.06***	-1.01***	-1.01***	-.967***
	(.206)	(.218)	(.219)	(.207)	(.208)
MULTI-PARTY	-.663***	-.483**	-.510**	-.460**	-.483**
	(.191)	(.205)	(.205)	(.191)	(.191)
GROWTH	-.030***	-.031***	-.030***	-.028***	-.026***
	(.008)	(.009)	(.009)	(.008)	(.008)
ETHFRAC	.591**	.558**	.575**	.517**	.529**
	(.233)	(.253)	(.254)	(.235)	(.236)
PASTAUT	.128*	.153*	.156*	.130*	.132*
	(.072)	(.083)	(.083)	(.073)	(.072)
DURATION			-.117***		-.109***
			(.043)		(.040)
DURATION2			.005**		.005**
			(.002)		(.002)
DURATION3			-.00005*		-.00005*
			(.00003)		(.00003)
LOG DURATION		-.138*		-.129*	
		(.081)		(.075)	
ln_p	.117**				
Log likelihood	-380.97	-731.51	-727.37	-731.38	-727.32
Observations	2492	2525	2525	2525	2525

Standard errors in parentheses. ***p<.01   **p<.05   *p<.10

Table 4.3.- Coefficient effects and predicted probabilities

Independent variables	Continuous time	Discrete time		
	% Change	Marginal effect	0->1	-+1/2
PRIMCOMEX	-24.95	-0.02	-0.02	-0.02
OIL	-13.49	-0.008	-0.008	-0.008
MILITARY	250.87	0.0893	0.1018	0.0927
CIVILIAN	201.74	0.1005	0.1119	0.1054
SINGLEPARTY	-70.47	-0.0817	-0.0791	-0.0835
MULTIPARTY	-48.46	-0.0511	-0.0479	-0.0513
AIDPC	-0.5	-0.0003		-0.0003
GROWTH	-3.01	-0.0021		-0.0021
ETHFRAC	80.69	0.0402		0.0405
PASTAUT	13.76	0.0109		0.0109

Table 4.4.- Ways of leaving power and actors involved

	Number	Percentage (%)
Main actor involved		
Elite/coalition	242	60.05
Military	111	27.54
Masses/society	47	11.66
Foreign forces	3	0.74
Total	403	100

Table 4.5.- A multinomial logistic model: modes of exit and agents involved

	Actor involved (exit mode)					
Independent variables	Elite/coalition		Military		Masses/society	
PRIMCOMEX	-.453**	-.454**	.130	.135	-.590	-.643
	(.225)	(.228)	(.257)	(.259)	(.571)	(.585)
OIL	-.344	-.285	-.249	-.229	-.530	-.513
	(.374)	(.371)	(.446)	(.443)	(.847)	(.848)
AIDPC	-.002	-.002	-.004	-.004	-.025*	-.024*
	(.002)	(.002)	(.003)	(.003)	(.013)	(.013)
MILITARY	.979*	1.33**	2.57**	3.33**	.747	.906
	(.507)	(.560)	(1.06)	(1.35)	(.866)	(.975)
CIVILIAN	1.23**	1.61***	3.08***	3.85***	-.531	-.320
	(.532)	(.583)	(1.08)	(1.37)	(.943)	(1.05)
SINGLEPARTY	-1.18***	-1.13***	-1.50***	-1.43***	.067	.265
	(.320)	(.321)	(.358)	(.361)	(.833)	(.863)
MULTIPARTY	-.329	-.345	-1.38***	-1.41***	1.25	1.35*
	(.273)	(.272)	(.358)	(.359)	(.810)	(.823)
GROWTH	-.025*	-.024*	-.025*	-.023	-.104***	-.101***
	(.013)	(.013)	(.015)	(.015)	(.031)	(.032)
ETHFRAC	1.15***	1.16***	.494	.516	-1.77**	-1.69*
	(.355)	(.358)	(.412)	(.414)	(.908)	(.923)
PASTAUT	.274***	.276***	-.198	-.189	.514**	.539**
	(.102)	(.102)	(.165)	(.165)	(.260)	(.258)
LOG DURATION	-.299***		-.184		.640**	
	(.111)		(.137)		(.315)	
DURATION		-.169***		-.152**		.075
		(.061)		(.074)		(.152)
DURATION2		.007**		.007*		-.00003
		(.003)		(.004)		(.007)
DURATION3		-.00006		-.00006		-.00001
		(-.00004)		(-.00005)		(.0001)
Log likelihood	-858.313				-846.301	
Observations			2525			

Standard errors in parentheses. ***p<.01 **p<.05 *p<.10

Table 4.6.- A multinomial logistic model: extended version

Independent variables	Actor involved (exit mode)					
	Elite/coalition		Military		Masses/society	
	Coeff.	s.e.	Coeff.	s.e.	Coeff.	s.e.
PRIMCOMEX	-.498**	.237	.244	.278	-.458	.625
OIL	-.285	.376	.020	.453	-.441	.867
AIDPC	-.003	.002	-.005	.003	-.021*	.012
MILITARY	1.66***	.574	3.57**	1.60	1.27	.992
CIVILIAN	1.85***	.610	4.33***	1.62	-.020	1.11
SINGLEPARTY	-1.34***	.319	-1.56***	.359	.131	.823
MULTIPARTY	-.387	.285	-1.69***	.384	1.31*	.797
GROWTH	-.025*	.013	-.016	.015	-.107***	.031
ETHFRAC	1.09***	.368	.445	.436	-1.18	.938
ELECTION	-.421*	.253	.070	.297	-.602	.603
ACCHEAD	.026	.027	.110***	.030	-.064	.103
DURATION	-.075**	.031	-.055	.040	.084	.076
DURATION2	.001***	.0007	.002**	.001	-.001	.001
Log likelihood	-813.319					
Observations	2435					

***$p<.01$ **$p<.05$ *$p<.10$

Table 4.7.- Average predicted probabilities of exit and types of dictator

	Overall	*Elite/Coalition*	*Military*	*Masses/society*	*N*
Civilian	0.084	0.039	0.033	0.004	1134
Military	0.122	0.065	0.039	0.012	1035
Monarch	0.039	0.017	0.002	0.005	356

Note: the probabilities for the different types of exit have been calculated using the model in table 4.7.

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