# The political economy of growth and accountability under dictatorship

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| Year: | 2007 |
| Type | Thesis (doctoral) |
| University: | Instituto Juan March de Estudios e Investigaciones, Centro de Estudios Avanzados en Ciencias Sociales, Universidad Autónoma de Madrid, 2007. |
| City: | Madrid |
| Number of pages: | xii, 352 p., 4 h. |

Abstract: La tesis fue dirigida por Adam Przeworski y defendida en la Universidad Autónoma de Madrid. Se pregunta qué explica las diferencias entre dictaduras en cuanto al grado de organización política, de institucionalización política, de representación dentro de sus instituciones. Qué relación existe entre esas diferencias, la duración del régimen y el distinto grado de crecimiento económico. En la tesis juega un papel central un tipo especial de accountability, de responsabilidad política del dictador. No ante los ciudadanos sino consistente en su vulnerabilidad ante actores que les pueden exigir responsabilidades o que pueden derrocarles. Pueden ser militares, otros miembros en el poder, o movimientos ciudadanos. Esa vulnerabilidad es mayor cuanto más institucionalizada esté la dictadura porque mayores espacios de pluralismo existirán. Ello dependerá de la necesidad del régimen de contar con cooperación social para recaudar impuestos en caso de no disponer de recursos naturales o de no disponer de importante ayuda externa. La vulnerabilidad política está también asociada con mayores posibilidades de que el dictador tenga que rendir cuentas judicialmente una vez que sea depuesto. Ante esa doble vulnerabilidad política y judicial, el dictador promoverá el desarrollo económico, reducirá el consumo público y la extracción depredadora de rentas como forma de sobrevivir en el poder. La tesis desarrolla unos modelos formales muy elegantes e intelectualmente penetrantes y lleva a cabo un análisis econométrico sofisticado y riguroso de dictaduras en 139 países durante 550 periodos de gobierno dictatorial entre 1946 y el año 2000.

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# THE POLITICAL ECONOMY OF GROWTH AND ACCOUNTABILITY UNDER DICTATORSHIP

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*Als meus avis*

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# CHAPTER 1. INTRODUCTION

## 1.1. The study of dictatorships...and development

Nowadays, after three waves of democratization, most of the world's population still lives under some type of non-democratic regime. Indeed, the Freedom House (1997) classifies just 22% of all countries as having the set of political freedoms and civil liberties that would pertain to a full-fledged democracy (Mueller, 2003). Alternatively, according to the *ACLP* dataset,[1] which distinguishes democracies and dictatorships in a dichotomous variable, dictatorships still represented 40% of the regimes in 2002. Nonetheless, and despite this striking evidence, little attention has been paid to understand what determines the economic conditions and general welfare under which that population has to live.

Dictatorships, particularly the most grotesque and outrageous ones, have inspired almost as many novels as academic books. These literary portraits, although usually exaggerated, contain in most of the cases relevant clues about how certain decisions are made, how corrupt regimes emerge and which the factors that might bring about such political tragedy are. As it will be defended along this dissertation, political decisions affecting economic performance are a matter of the effectiveness of

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[1] Dataset originally developed by Przeworski *et al.* for the book *Democracy & Development* (2000), and subsequently updated. See also Cheibub and Gandhi (2004).

accountability, both political and judicial. The autocrats on these stories illustrate to some extent the conditions that may lead to the sabotage of such control. Thus, for instance, in *The Man of the People*, Chinua Achebe extraordinarily describes the subverting of post-colonial multi-party systems in Africa. By allegedly standing up for the true -pre-colonial- African traditions and values, as opposed to those of European influence of intellectuals, Minister Nanga gains popular trust and loyalty while he accumulates a fortune by diverting public funds. The common dependence of external sources of revenue appears very well reflected in Miguel A. Asturias' *El Señor Presidente* when the President urgently sends one of his closest collaborators to the United States to try to restore American financial aid to his regime. The eccentric Patriarch in García Márquez's book[2] sells the Caribbean Sea to the Americans, who helped him staying in power. *El Recurso del Método*, by Alejo Carpentier, introduces another key element to understand rulers' behavior, which is the dictators' capacity to escape punishment after leaving power by taking exile. There, the autocrat, called the Primer Magistrado, ends up fleeing his country with the help of US agents and settling in his mansion in Paris after toppled by a general strike. Likewise, Tomás Eloy Martínez's novel, *La Novela de Perón*, describes how the former Argentinean ruler writes his memories during his exile in Madrid under the francoist regime.

Yet, one of the most interesting features of these novels is the way they accomplish to give us a picture of the three groups which constantly threaten dictators' position, namely, their closest collaborators, the military and the opposition. The dictators in *El Recurso del Método* and *La Fiesta del Rey Acab* (by Enrique Lafourcade) both face the challenge of revolutionary upheavals lead by students while, at the same time, must to keep an eye on his military officers, ministers, and even family members. Valle-Inclán's *Tirano Banderas* begins with the repression of a peasant attack over state troops and ends with the killing and posterior

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[2] *The Autumn of the Patriarch* (El Otoño del Patriarca).

decapitation of the tyrant by the rebels. In García Márquez's novel, the Patriarch is betrayed by his closest allies, his double and his preferred General. It is precisely a plot led by some captains that manages to eventually kill Rafael Trujillo as described with full detail in Vargas Llosa's *La Fiesta del Chivo*.

Yet, until very recently, the theoretical literature about non-democratic regimes has been mainly worried about the distinction between different types of regimes along alternative dimensions. The very first works were above all concerned about the rise and form of governance of the totalitarian regimes that appeared in the inter-war period. In this vein, the classic works by Arendt (1951) and Friedrich and Brzezinski (1956) provided in depth studies of the origins as well as listed the defining characteristics of those regimes.[3]

Posterior studies expanded the categories of non-democratic regimes but basically followed the same line of analysis based prominently on the form of government. Linz's (1970, 1975) work sought to fill the gap left by the previous authors offering a broad theory of 'authoritarianism' that was to be juxtaposed to that of totalitarianism. Although it was intended to be limited, Linz's concept and theory contains too much internal variability to be empirically useful as his development follows a characterization "by elimination" of those regimes not suitable to be classified as totalitarian.[4] Another branch of work tended to base their distinctions on variables such as the ideology for one-party

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[3] Friedrich and Brzezinski's (1956) theory proposed six main features characterizing totalitarian regimes: An ideology; a single party; a terrorist police; a communications monopoly; a weapons monopoly; and a centrally directed economy. On totalitarianism, see also Burch (1964), Schapiro (1972) and Unger (1974).

[4] The main features of his concept are quite vague and not totally exclusive: i) Presence of limited, not responsible, political pluralism; ii) absence of elaborate and guiding ideology; iii) absence of intensive or extensive political mobilization, and iv) a leader (or small group) that exercises power within formally ill-defined limits but actually quite predictable ones.

regimes as in the work by Tucker (1961),[5] or the degree of influence of the military on politics for military ones (Perlmutter, 1977; Nordlinger, 1977).

Finally, seeking to understand the conditions sustaining different types of authoritarian rule, some studies made us aware of the endogenous nature of authoritarianism, its different sub-varieties and degrees of institutionalization. It is the case of the studies by Huntington (1970) and O'Donnell (1973), which identified the causes of regime organization regarding the need of mobilization and the level of modernization, respectively. Similarly, some -more descriptive- contributions stressed the differences between traditional and modern forms of dictatorial regimes, defining totalitarian regimes as an extreme form of the latter (Perlmutter, 1981; Rubin, 1987; on modern tyranny see Chirot, 1994).

Nonetheless, if one is to study the variability existing in terms of economic performance and policy between dictatorships and autocrats, those sometimes blurred and overlapping typologies may be of little help. Many of those categories include so dissimilar regimes in terms of economic success and failure that show that something is missing on that particular respect.

Actually, the discussion about the relation between regimes and development was, by that time, far from clear as well, particularly the effect or role that authoritarian systems may have on economic growth.[6] Two completely opposite views dominated the theoretical debate. Some earlier theorists defended that dictatorial regimes would better promote growth than democracies would. In their opinion, non-democratic regimes could stimulate growth by restraining the short-termed pressures for immediate consumption -mainly in the form of redistribution- coming from myopic voters, labor unions, and other interest groups that may

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[5] His basic tipology includes fascist, communist and nationalist regimes.

[6] See Przeworski and Limongi (1993) for an excellent review of the literature. See also Durham (1999).

undermine investments (Huntington, 1968). The underlying assumption behind those postulates was that states have a key role to play -and want to perform it- to improve the functioning of the economy in terms of efficiency, and that this role cannot be performed unless enough state autonomy is granted.

These arguments were soon proved to be extremely simple and naive since they overlooked the contradictions entailed in such a strong defense of state insulation. Although redistribution and rent-seeking by voters, unions or 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 (see, for instance, Olson, 1991; Przeworski, 1990). Consequently, property rights might be as at risk under such conditions as under redistributive democracy or, almost certainly, worse.

Recent research has shown that after controlling for the conditions under they exist, political regimes (democracy vs. dictatorship) exert no effect on the rate of economic growth (Przeworski *et al.* 2000). Nonetheless, concerning dictatorships, history provides us with numerous examples of successful and disastrous governments in terms of development. Indeed, there have been about 126 dictator spells, 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 percentage points. The question is then, why do some harm their economies and others do not? Is there any common set of constraints that help to explain those differences? If so, what factors bring them about?

These questions drive us directly to institutions, especially after assertions such as that of Douglas C. North, who put it like this: "I wish a much more fundamental role for institutions in societies; they are the underlying determinant of the long-run performance of economies" (1990: 107). The contention, although strong, left some aspects still open to debate. Much of the

discussion revolved around the identification of what institutions could matter for growth and through what specific mechanisms. New concepts such as 'governance', 'stability' or 'social cohesion' seemed to add to the old appeal to property rights a more political-economic layer (see, for a review, Keefer, 2004). The tautological trap repeated once again though; societies enjoying growth were those well governed, while those falling apart suffered from bad governance. Aware of this condition, scholars in the field began to examine the specific elements contained in such a general concept. Within the realm of political institutions, the discussion has been progressively narrowing towards a general, albeit tacit, recognition of the centrality of accountability as one "of the political foundations for economic development" (Bates, 2006: 31; see also, Przeworski, 2004a; Keefer, 2005).

Nevertheless, the empirical evidence has been hugely biased towards the study of democratic systems, where the institutions influencing accountability could be easily identified and empirically coded. Authoritarian regimes have been usually neglected or simply used as a residual category to which democratic variations could be compared. This dissertation is aimed at filling this gap. As Cheibub and Przeworski put it, "a finer-grain analysis, both of different democratic institutions and of different forms of dictatorship, is needed to identify the impact of politics" (1997: 121). We have chosen the second of the possibilities they point out for this dissertation.

## 1.2. Accountability, institutions and autocracy

Accountability, defined in broad terms, does not necessarily exclude authoritarian systems, although the mechanisms through which it is exercised may appear to us as only properly regulated under democratic systems. However, as both democratic as well as autocratic rulers can anticipate that certain bad 'actions' or policies will harm their reelection or their odds of retaining power

(Stimson, Mackuen and Erikson, 1995; Manin, Przeworski and Stokes, 1999), accountability may act as an effective constraint in both political regimes.

Accountability does not exist *per se*. Instead, it is a second-order institutional feature of political systems, that is, it is the result of the combination of some specific conditions and institutional arrangements (Przeworski, 2004a). Consequently, political systems, that is, concrete institutional frameworks, differ in the degree of political accountability they allow. According to Lederman, Loayza and Soares (2005), in democratic regimes, it depends on three main features of these systems: The degree of competition, the existence of checks and balances and the overall transparency of the system. But we know little about the features that make accountability vary under dictatorship. As pointed out when citing some of the novels about autocracies, dictators face opposition, and anticipating the results deliver policies or harshly repress. The logic of the whole process is the same than that taking place under democracy, but in these cases instead of measuring the effect of, say, electoral systems, we care about the potential occurrence of riots, revolutions and coups. As the mechanisms of accountability vary, so do their determinants.

We identify two general types of accountability. On the one hand, political accountability relates the rulers' policy choices with their chances of retaining power in the future. The underlying process is that accountability allows sanctioning politicians in case they adopt bad policies on behalf of their own interest. Sanctions imply, in this case, the losing of power. On the other hand, judicial accountability refers to the criminal sanctions that might be applied as a result of losing power. We consider here punishment in broad terms as we are interested in the dictators' utility once they are out of power.

Our principal contention is that political accountability is endogenous and, as a result, so are dictators' time horizons. Under this setting, Olson's (1993) general claim that a long term perspective is necessary for dictators to develop an 'encompassing' interest to promote growth may be flawed. 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 chances to retain power as well as the rate of growth of the economy. As a result, the political economic constraints affecting that decision will constitute the basic roots of the differences in performance across authoritarian governments and not an exogenous time horizon as in, for instance, Clague *et al.* (1996). The underlying logic gets altered, since for the encompassing interest -à la Olson- to appear, a high security in the rule is needed if the bandit has to become, in his own terms, "stationary". In this case, higher security should be related to a lower rate of graft and, hence, to higher growth rates. Nonetheless, in models with endogenously constrained politicians, commonly, rent accumulation will be moderated as long as the accountability constraint is binding. So in these cases, a more insulated (structurally stable) ruler will be able to increase his level of rent extraction, making growth rates shrink.

## 1.3. Plan of study

The problems and questions outlined above contain both a theoretical and an empirical component. This dissertation follows this general division as well, and its chapters can be divided into two main parts, the first of which includes four chapters and deals with the literature review, the theoretical concepts and model development; while the second one, including four chapters too, is mainly devoted to put under empirical scrutiny all what is proposed in the first part.

In Chapter 2 we introduce the basic theoretical and conceptual framework that underlies this research. We survey the alternative approaches to institutions and the main contributions relating them to economic development. Later we describe the causal frame adopted, define accountability, and defend the role that accountability may play in determining policy choices under

authoritarian regimes. The Chapter ends with a discussion about the literature on the predatory state aimed at identifying its main insights and shortcomings. We argue that the problem of models with exogenous time preferences is discussed by noting that in them one crucial part of the story is missing, namely, that dictators' own decisions with respect to policy affect their chances to remain in power in the future and get the benefits derived from it. On the other hand, models with endogenous time-preference rates tend to compare the optimal tax rate under the constrained and the unconstrained settings with the aim of comparing behavior under both of them. However, concrete comparative static exercises are frequently missing. To find empirical implications of political-economic models these exercises are essential though.

Chapter 3 develops the concepts and functions involved in our own general model, such as the accountability function and the post-exit value, which we first solve in general form. Later on we specialize the accountability function and explore the meaning and effect of each of its components. We introduce the concepts of security and sensitivity. We also develop extensive comparative static exercises with regard to the main parameters in the model with the help of numerical simulations. Moreover, we give detailed account of alternative functional forms for political accountability and the variations they entail.

The model in Chapters 3 is a purely economic one which helps to study the direction of the relations between variables. However, the parameters of the political accountability function are treated as exogenous and we only study the effects of their changes in value. Chapter 4 addresses the strategic interactions, previously neglected for the sake of simplicity, that shape the different levels of accountability to which dictators may be subject. To do so we introduce the alternative mechanisms of accountability present in authoritarian systems and the actors who may put them into practice and discuss what factors can determine the relative strength of each of them.

Chapters 5 and 6 are devoted to explore the empirical consequences and propositions of Chapter 4. In particular, Chapter

5 studies the sources of revenue of authoritarian regimes. Concretely, it tests the validity of the proposition which contends that dictatorial institutions serve to mobilize economic cooperation for the regime, permitting the collection of higher percentage of taxes for which compliance is most required. Accordingly, it is showed that dictatorial institutions are the result of the combination of two factors: Opposition strength and the availability of rents non requiring cooperation (such as foreign aid or oil revenues). On the other hand, Chapter 6 concentrates on the empirical analysis of political accountability. We study the conditions determining the different levels of dictators' security as well as sensitivity. We then move on to the institutional level. Formal institutions under dictatorship, as shown in the previous chapter, exist under certain conditions related as well to accountability. As a result, these institutions are themselves associated to certain degrees of accountability by affecting security and sensitivity.

Chapter 7 analyses the other type of accountability considered in this study, the judicial accountability, which relates to the post-exit utility dictators' get. After describing the alternative scenarios a dictator may encounter after being unseated, we present the data specifically constructed for this chapter. We also propose a simple model to account for the alternative results based on the strength of the regime (or the opposition) and the international context. We then test them and analyze, as in Chapter 6, how institutions relate to this dimension of accountability.

Chapter 8 deals with economic growth. After taking a look to the increasing income disparities among authoritarian regimes, again, the empirical analysis first deals with the political-economic determinants of growth at the leadership (or government) level. The variables shown in previous chapters to increase security are proved there to harm growth, whereas those variables making dictators insensitive are proved to be detrimental as well. The same models are then applied to study government consumption, obtaining consistent results. We then examine the effects dictatorial institutions have on both variables using Heckman's

two-step method. As formal institutions are associated with different levels of accountability, they are expected -and proved- to have a net effect on both growth and public consumption. In the last pat of the Chapter, we offer some tentative evidence about the effect that the alternative mechanisms of accountability have on income growth.

Finally, Chapter 9 summarizes the main findings drawn from this dissertation.

## 1.4. A note on the data

We use in this dissertation a huge dataset resulting from merging different previously existing ones and creating a few new variables. Our main data source has been the *ACLP* dataset, which was developed by Przeworski *et al.* for the writing of the book *Democracy & Development* (2000), which has been regularly updated. This dataset includes several institutional variables to which Gandhi (2004) added the classification of dictatorial institutions we use here. The political data were extended from Przeworski *et al.* by José Antonio Cheibub and Jennifer Gandhi (2004). The period covered is very extensive and goes from 1946 (or the year of independence from colonial rule) to 2000.

Given that this study concentrates on dictatorial regimes, we needed a classification from which we could choose those regimes of our interest. We take the classification developed by Przeworski *et al.* (2000), which contains a dichotomous classification of political regimes. After splitting the dataset by taking only those country-year units classified as dictatorships, our sample consists of 139 countries, and 550 different spells of continuous rule under the same dictator or authoritarian government. We consider, when taking rulers as units of analysis, effective heads of government, that is: 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 the sources indicate the nominal head is a puppet figure (see Cheibub and Gandhi, 2004).

Data on economic growth and income are taken from Penn World Tables 5.6 and cover the 1950-2000 period. Other economic and demographic series are taken from the *World Development Indicators* (World Bank, 2002), some of its variables though -such as tax revenues- are only available from 1970 to 2000.

The Appendix to this thesis reports a detailed description of all the variables used and the sources from which they were compiled. It also included some notes on how the two new variables constructed for this research (dictators' mode of exit and rulers' post-exit fate) were coded.

# CHAPTER 2. INSTITUTIONALISM, ENDOGENEITY AND PERFORMANCE

## 2.1. The study of institutions in contemporary political science

Recent research in political science and, especially, in the subfield of comparative politics has turned to examine the origins, the stability, as well as economic effects of all kinds of political institutions. Institutionalism is, at this respect, as Diermeier and Krehbiel assert, "more of a method than a mission" (2003: 124). From war initiation and duration, to electoral turnout, from economic growth to citizens' political participation, from tax revenues to expenditures, in almost all imaginable variables, scholars have detected an institutional determinant, either legislatures, political regimes or electoral systems, and so on.

In the last two decades, institutional analysis has become the most prominent branch in political science and a fashionable and expanding one in economics. This new wave of literature, known as "new institutionalism", although does not constitute a unified body of research and thought, appeared with the aim of overcoming the problems and shortcomings of both "traditional" institutionalism as well as behavioralism (Hall and Taylor, 1996; Peters, 1999).

With respect to the former, neoinstitutionalists, as behavioralists did, avoid relying on structuralism and legalism and refuse to attach any normative conclusion or goal to their work (Peters, 1999). With regard to behavioralism, the institutionalist critique focuses on its treatment of preferences and their

aggregation (Immergut, 1998). Next sections are devoted to describe the main features and compare the different approaches identified within the neoinstitutionalist "school".

### 2.1.1. The three new institutionalisms

As remarked above, this "new" general theoretical core is not homogeneous, instead, it can be divided into at least three alternative approaches: Historical institutionalism, rational-choice institutionalism, and sociological institutionalism; although there exist numerous border crossers especially from the "analytic narratives" approach who combine rational-choice theory with in-depth historical context study and analysis of the selected cases (see Bates *et al.*, 1998).

*Historical institutionalism* aimed at remedying the deficiencies, principally, of the structuralist approach and group theory, which dominated political science during the 60s and the 70s (Hall and Taylor, 1996). Historical institutionalism concentrates on studying how institutions emerge and relate to concrete temporal processes by analyzing macro contexts and developing hypotheses about "the combined effects of institutions and processes" (Pierson and Skocpol, 2002: 696). Hall and Taylor (1996) identify four distinctive features of this school: i) Scholars in this branch "tend to conceptualize the relationship between institutions and individual behavior in relatively broad terms" (1996: 938); ii) they emphasize "the asymmetries of power" related to the functioning and development of institutions; iii) they pay special attention to time and the contingencies of history and, concretely, to path dependence processes, unintended consequences, and feedback effects in the development of institutions and their effects, and iv) they are concerned to integrate to institutional analysis the role that ideas and culture may play from a more interpretativist point of view (Immergut, 1998). Thus, in Pierson and Skocpol's words, "historical institutionalists make visible and understandable the overarching

contexts and interacting processes that shape and reshape states, politics, and public policymaking" (1999: 693).

On the other hand, *rational-choice institutionalism*, which developed at the same time as historical institutionalism did, is basically aimed at providing the microfoundations of institutional analysis in studying the effects of institutions, why they are necessary, and the endogenous choice of a particular set of them (Weingast, 1999). To do so, rational-choice institutionalists depart from a broad set of behavioral assumptions: The actors under study have fixed set of preferences or tastes, and by means of their instrumental choices they seek to maximize the attainment of those preferences (Hall and Taylor, 1996). As a result, strategic interaction becomes a key part in order to understand the determination and feasibility of certain political outcomes under conditions of interdependence. Under these premises, it is generally believed that rational-choice theorists embrace a functional view of institutions (Thelen, 1999), that is, "they begin by using deduction to arrive at a stylized specification of the functions that an institution performs" (Hall and Taylor, 1996: 945).

Finally, *sociological institutionalism*, which developed from organization theory, stresses how institutional forms and procedures respond to culturally-specific practices, according to the more general ones guiding different societies (Hall and Taylor, 1996). Thus, the creation of meaning and the relevance of values enter the research agenda (Peters, 1999). Therefore, according to sociological institutionalists, institutions are not just formal rules and norms; they should also include values, culture, symbol systems and conceptual frames into their definition. As a result, socialization plays a determinant role in understanding the effect that institutions may have on individual behavior.

*2.1.2. Coincidences and divergences*

These three major branches just defined share a common theoretical core, as Immergut (1998) stresses. The first coincidence is based on their common point of departure, that is, their lack of trust on observed behavior as the unique source of analysis. Specifically, neoinstitutionalists distinguish between 'expressed' and 'real' preferences, since equal preferences under different institutional conditions may give rise to different outcomes or choices. Secondly, as opposed to behavioralists, the neoinstitutionalist approach criticizes the assumption that preferences can be aggregated. Mechanisms of aggregation may have collateral effects on interests such as reshaping or constraining the feasible set of them. According to this new consideration of political behavior, political processes may affect and alter collective decision making, that is, the methods for interest aggregation matter. In Diermeier and Krehbiel's words, "the aim of contemporary institutionalism is to guide inquiry into which of many more-or-less stable features of collective choice settings are essential to understanding collective choice behavior and outcomes" (2003: 124).

As Thelen (1999) points out, the differences between these major approaches to the study of institutions are substantial and have to do with both the theoretical goals of their research as well as the conceptual approach to the existing puzzles. The first major difference between both schools is also one of the most controversial. It lies on the generally held consideration that rational-choice theorists are more involved in general -or even universal- theory building than historical institutionalists are. The latter are often accused of working "at the level of mid-range theory" (Thelen, 1999: 373) due to their focus on a very limited range of cases. This translates into differences in the process of hypothesis building. Historical institutionalists are prone to begin their research with the questions posed by an existing empirical puzzle involving one or more cases. This fact makes historical institutionalists become specially inclined to base their selection

on the dependent variable, i.e., selecting cases where the phenomena under study have occurred, while ruling out those where they did not (King, Keohane and Verba, 1994). On the contrary, hypothesis building is a more systematic and deductive process for rational-choice institutionalists. The uniformity in preferences combined with the variability in constraints and informational availability, allows these theorists to put a greater emphasis on the use of counterfactuals. Counterfactual analysis is made possible in game theory by the study of what has been termed 'off-the-path behavior' (Weingast, 1996), which emphasizes the role that what we do not observe plays in determining what is actually observed.

Nonetheless, the crucial difference between both bodies of literature lies on, according to Thelen and Steinmo (1992), the treatment of preferences and their formation. Hence, it is generally defended that rational-choice theorists treat preferences as exogenous, while historical institutionalists treat them as endogenous. This contrast, however, is progressively blurring by new contributions in the rational-choice school that are well aware of the necessity to complete the assumptions of rationality with a cultural knowledge of the particular settings (Bates *et al.* 1998). Accordingly, norms and culture can also play an important role on rational-choice theory building about political outcomes (Thelen, 1999), e.g., some argue that they may work as signals in games of incomplete information, or as focal points that serve to study which of the alternative equilibria will be actually chosen.

Another point of divergence between both schools often cited concerns the general view of institutions. Rational-choice practitioners tend to study institutions from a functional point of view, to sum up, "institutions develop because of their capacity to solve certain collective problems" (Pierson and Skocpol, 2002: 708). Alternatively, historical institutionalists criticize this way of proceeding because it may neglect the existence of long-term effects, of temporal gaps between actions and consequences, of feedback effects, and of unintended consequences.

## 2.2. Institutions and economic development

*2.2.1. An overview of the debate*

There are two main contenders claiming for themselves a better explanatory power to account for the cross-country disparities in long-run economic performance and well-being: The geography theory and the institutional approach. The third alternative is the cultural view, although to date it has received little empirical validation.[1] On the one hand, the so-called 'geography theory' states that ecological zones are the main determinant of long-run development through different mechanisms. Concretely, in its simplest and earliest version, going back to Montesquieu (1989 [1748]), climate would affect development by exerting a constant effect on work effort and productivity. To these general arguments, posterior studies have added the effects of technological availability and diseases in lowering the growth potential of tropical zones (Bloom and Sachs, 1998).

In contrast, the institutionalist approach emerged principally as a response to the challenge launched by North's (1990, 1997) contributions, in which he claimed: "I wish to assert a much more fundamental role for institutions in societies; they are the underlying determinant of the long-run performance of economies" (1990: 107). According to this new framework, institutions would affect growth because they would determine how big both the costs of transaction and those of transformation might be. Przeworski (2004b) summarizes the central claim of new institutionalism with regard to economic development in two basic propositions: a) Institutions matter, and b) institutions are endogenous.

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[1] Weber (1930) was the first in proposing this link in his seminal work *The Protestant Ethic and the Spirit of Capitalism*, where he defended a relation between the beliefs of Protestantism and the development of capitalism. For a recent and alternative contribution on this tradition, see Barro and McCleary (2003).

The number of papers and articles attempting to empirically prove such contention is by now overwhelming. Following Aron (2000), these contributions can be classified according to their empirical approach to institutions and how they measure institutions. First, a huge branch of literature has devoted to evaluate the effect of institutions by taking alternative measures of the quality of formal and informal institutions. Measures consisting of subjective ratings of risk compiled by private firms such as BERI, BI and ICRG[2] were found to have a strong impact on growth and investment (see, among many others, Knack and Keefer, 1995; Barro, 1996; Clague *et al.*, 1996; Lane and Tornell, 1996).

Second, an even bigger amount of research concentrated on other measures which described some social or political attributes of institutions with a potential effect on economic performance. Among them, scholars have paid special attention to political stability, as it is generally assumed to alter long-term decisions such as investments and the expected returns of economic activities (Carmignani, 2003). These studies relied too heavily on datasets such as Banks' (various years) and Taylor and Jodice's (1988) to construct aggregated measures of political instability essentially consisting of the sum of numbers of protests, coups or changes in the executive, that were added on the right-hand side of numerous growth regressions as proxies for institutions (see, for example, Alesina and Rodrik, 1994; Persson and Tabellini, 1994; Alesina *et al.*, 1996; Hassan and Sarna, 1996). Other studies tended to focus on some other social characteristics of the countries under study which, through not clear mechanisms, were often regarded as being potential determinants of growth rates. Such features included measures of the degree of ethnic diversity (Easterly and Levine, 1997), religious composition (Barro, 1996), colonial legacies, or social development (Temple and Johnson, 1998).

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[2] Business Environment Risk Intelligence, Business International, and International Country Risk Guide, respectively.

Following this line of research, the first claim of institutionalism (as summed up by Przeworski), i.e., institutions matter, was assumed to be out of any doubt; but the second one, the endogeneity of institutions was almost completely neglected, so even the first claim could be flawed. A second wave of research defending the geography theory took advantage of this evident weakness. More sophisticated and new versions of this theory argued that tropical areas had an initial advantage that vanished when agricultural technologies developed and favored more temperate zones (Sachs, 2001). These underlying conditions would also affect the institutional designs in different areas, hence, amplifying its preliminary effect.

The response from the institutionalist side was fast and relied on a new methodology to prove its point, instrumental variables. Possibly, the strongest piece of evidence supporting the institutional approach is the paper by Acemoglu, Johnson and Robinson (2002) in which they argue that a "reversal of fortunes" occurred among world economies, that is, countries that were wealthier in 1500 are currently less developed. The basic argument is as follows: The conditions that European found during colonization shaped the type of institutions they developed there; hence, "poor regions were sparsely populated, and this enabled or induced Europeans to settle in large numbers and develop institutions encouraging investment" (2002: 1235). The institutions they refer to are those they call 'institutions of private property', which ensure property rights for a broad cross-section of society. Bad institutions are the extractive ones. Likewise, Engerman and Sokoloff (1994, 2005, among others) defend the existence of a reversal for the American continent. According to them, in those areas suitable for sugar and other crops cultivation, with slaved labor force used in production and where there existed large concentrations of natives, European settlers were able to establish large latifundia and highly elitist institutions that permitted to impose economic and political dominance over the mass of the population.

Criticisms to the Acemoglu, Johnson and Robinson's (2002) paper have mushroomed though. One of the most suggesting points has been launched by Glaeser *et al.* (2004) who argue that human capital is a much more basic source of growth than institutions are. Accordingly, what European settlers brought to the Americas were not only their institutions but also their human capital. This is fatal for Acemoglu *et al.*'s analysis. As Przeworski notes, it means that "since the impact of the instrument (settler mortality) on development is not exhausted by their impact on institutions, the instrument is correlated with error in the growth equation and the estimates are still biased" (2004a:12). On the contrary, Rodrik, Subramanian and Trebbi (2004) support the institutional approach by finding that -using the same instrument as Acemoglu *et al.* (2002) - when institutions are controlled for conventional measures of geography, geography has, at best, weak direct effects on incomes, although it has a strong indirect effect on the quality of institutions.[3]

More recent contributions by Przeworski (2004a, 2004c), using a new dataset developed by Maddison (2003), cast serious doubts on the institutional approach based on the defense made by the reversal of fortunes argument. He shows that the only major reversal consisted of four British offshoots (like Australia or Canada) passing the income levels of the rest of the world. So it seems that we should conclude that the question "do institutions matter?" does not have a clear answer in the existing literature yet.

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[3] On the other hand, in a more technical criticism to Acemoglu et al.'s paper, Albouy (2004) points to possible inconsistencies and mistakes in the "settler mortality" data. As a consequence, he claims that Acemoglu *et al.*'s instrumental variable approach is insignificant, non-robust and suffers from weak instrument pathologies. See Acemoglu, Johnson and Robinson (2005) for a response.

*2.2.2. Types of institutions and causal paths*

When talking about institutions and their effects one needs to be careful in distinguishing the types of institutions and the relations between them in order to avoid circular or partial arguments. In other words, one needs to delineate the concrete causal path linking institution types and economic performance. The first question to be answered before attempting to analyze possible causal effects of institutions is, then, as Rodrik puts it: "Which institutions matter and how does one acquire them?" (2000: 4).

The most basic and useful classification distinguishes between economic and political institutions.[4] The former are those that set the rules of the game of economic relations. These include formal and informal laws that regulate markets, exchange, innovation, and so on, determining, thus, the set of opportunities and constraints to economic agents like, for example, the regulations created to counter market failures. Among all these, the neoinstitutionalist literature generally appeals to the degree of property rights protection and contract enforceability in order to link institutions and economic development (North and Thomas, 1973). A good definition of these rights is provided by Barzel: "I define economic rights over an asset as individual's net valuation, in expected terms, of the ability to directly consume the services of the asset, or to consume it indirectly through exchange" (1994: 394). The argument behind the relation between development and property rights enforcement is that entrepreneurs, investors and innovators will not have any incentive to accumulate or innovate if they anticipate that they will not enjoy the full return to the assets they are producing or improving. Hence, this literature relates insecure property rights (equivalent to bad institutions) with

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[4] An alternative and also common nomenclature consists of distinguishing between market and non-market institutions. The underlying idea is strictly the same.

underdevelopment.[5] In fact, as noted in the previous section, most of the empirical papers on this field use as the main independent variable the "risk of expropriation" or "repudiation of contracts", as coded in the International Country Risk Guide,[6] as overall measures of the quality of institutions. As a result this literature does little more than confirming a link between economic environment and development while the common pool of, social and political, factors determining them are often left aside.

Other scholars argue that the economic institutions that matter for development are those that coordinate investment across sectors (Rosenstein-Rodan, 1943; Murphy, Shleifer and Vishny, 1989). The idea is that simultaneous industrialization of many sectors of the economy may spawn benefits for them all generating a "big push". So, for instance, industrialization in one sector may make investment more attractive in other sector complementary to the former. Alternatively, recent studies stress the role of the improvement of financial markets for development and coordination of investments (Levine and Zervos, 1998; Beck, Levine and Loyaza, 2000). Finally, a new wave of research highlights the importance of institutions that stabilize fiscal and monetary policies such as independent central banks.[7]

Political institutions are, in broad terms, those that formally or informally regulate the limits of political power, how this power is transferred and the access of different groups and citizens to it. Some practical examples are electoral systems, judicial independency, presidentialism vs. parliamentarism, political regimes, etc. I mean 'practical' because this list includes concrete arrangements that are interrelated and combined in order to produce different consequences on broader institutional frameworks we shall call "supra-institutions", which actually define in general terms the mechanism of impact of institutional

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[5] See, for instance, Acemoglu and Johnson (2004).

[6] It is elaborated by the Political Risk Services Group.

[7] A good example of this branch of research is offered by Fischer (1993) who argues that growth is negatively associated with large budget deficits, inflation, and distorted foreign exchange markets.

arrangements on economic performance. For instance, Rodrik (1999) emphasizes the crucial role of the institutions of conflict-management for economic performance. According to him, these institutions "adjudicate distributional contests within a framework of rules and accepted procedures --that is, without open conflict and hostilities" (1999: 386), thereby coordination failures can be avoided. The institutions of conflict-management would constitute in this case the "supra-institutions", whereas the rule-of-law, a high quality judiciary, free elections, and so on, would be the practical institutional arrangements that allow for effective conflict-management. Similarly, Ritzen, Easterly and Woolcock (2000) analyze the sources of "social cohesion", which is defined as "a state of affairs in which a group of people (delineated by a geographical region, like a country) demonstrate an aptitude for collaboration that produces a climate for change" (2000: 6). Hall and Jones (1999) refer to these general dimensions of institutions as "social infrastructure" defining it as "the institutions and government policies that determine the economic environment within which individuals accumulate skills, and firms accumulate capital and produce output" (1999: 84). In a good environment, hence, individuals are able to capture the social returns of their actions as private returns.

A different type of "supra-institution" receiving an increasing amount of attention, which I will put my focus on, is accountability, whose effect takes place through the control of governments and politicians. In broad terms, accountability allows for the punishment of politicians in case they implement bad policies on behalf of their own interest or of the interest of some other concrete group. It actually acts as an "anticipation" constraint, that is, rulers anticipate that certain bad 'actions' or policies will harm their reelection or permanence in power odds (Stimson, Mackuen and Erikson, 1995; Manin, Przeworski and Stokes, 1999). The conditions and the obstacles for accountability will be discussed in the next section.

Once these distinctions have been made, the next step is to establish the complete causal path linking institutions to economic

performance that will be followed in this dissertation. The full set of links can be specified as in Figure 2.1.

Note that there are five arrows in this scheme. The first and the last ones, that is, those linking both "geography and underlying conditions" and "economic performance" to "institutional arrangements" stress the premise that institutions are endogenous and will be discussed later on in more detail. Let us focus now in the other three proceeding backwards.

The last link establishes a relationship between "economic institutions" and "economic performance." As Acemoglu, Johnson and Robinson put it, "economic institutions matter for economic growth because they shape the incentives of key economic actors in society, in particular, they influence investments in physical and human capital and technology, and the organization of production" (2004: 2). Taxes, for instance, are distortionary since they affect the decisions between investment and consumption. Taxes, thus, affect property rights and tend to become confiscatory when they are overwhelmingly high. As a result, they may be harmful for economic growth, above all, if used for predatory purposes. It is worth noting that economic institutions not only determine the level of growth but also a wide range of other economic outcomes. For example, progressive taxes and redistribution affect the distribution of income leading to lower inequality. This link, the one establishing a causal relationship between "economic institutions" and development or performance, is the one on which most of North's contributions were focused,[8] neglecting what may be behind in the full causal path depicted above.

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[8] See, especially, North (1981).

*Figure 2.1. Causal path from initial conditions to economic performance*

Geography,
Underlying ⎫→ Institutional ⟶ "Suprainstitutions" ⟶ Economic ⟶ Economic
conditions ⎭    arrangements                                institutions    performance
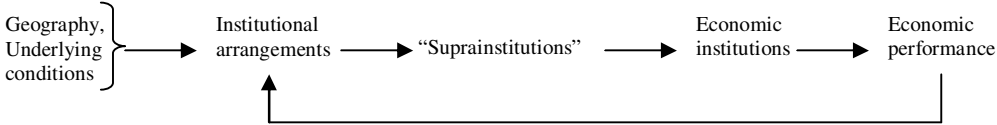
The second link, from "suprainstitutions" to "economic institutions", states that economic institutions are endogenous and, concretely, partly determined by political institutions. Hence, they are chosen according to their expected results. Remember, we argued that confiscatory taxes may harm growth, but these taxes are chosen by a ruler or some kind of government. Recall as well, that we defined "suprainstitutions" as a broad mechanism by which particular institutional arrangements affect economic institutions. As Acemoglu puts it:

> "what we want to know in practice is not only that "institutions" (defined as a broad cluster, and therefore almost necessarily as a black box) matter, but which specific dimensions of institutions matter for which outcomes. It is only the latter type of knowledge that will enable better theories of institutions to be developed and practical policy recommendations to emerge from this new area. Consequently, the issue of "unbundling institutions", that is, understanding the role of specific components of the broad bundle, is of first order importance" (2005a: 24).

As said, a predatory state is expected to make output and economic growth shrink, but the question is then, what allows for the emergence of a predatory state? I will defend that it is because of the lack of political accountability that some dictators enjoy. Accountability permits to punish rulers or governments for their bad outcomes. As a result, those rulers whose probability to stay in power is highly dependent on their economic performance will choose good policies and economic institutions in order to retain power.

Finally, the third arrow links "institutional arrangements" and "suprainstitutions", emphasizing that accountability or conflict-management are second-order features (Przeworski, 2004a) or broad institutional consequences of practical institutional frameworks. Therefore, this mechanism remarks the role that different institutional designs and combinations have on more general institutional terms such as political accountability or, as in Rodrik (1999, 2000), conflict-management. This connection

remained largely overlooked by the first contributions which highlighted harmful effects of instability on economic performance as no link was claimed to exist between formal existing institutional configurations and their associated levels of stability. We are thus proposing some sort of "hierarchy" of political institutions. So the question is: what institutional arrangements promote political accountability? It is commonly argued that under democracy, checks-and-balances, contested and free elections may provide such a second-order result (next section reviews these mechanisms and their shortcomings). Both "institutional arrangements" as well as "suprainstitutions" constitute the core of political institutions.

### 2.2.3. The endogeneity of institutions

Almost nobody discusses today in the neoinstitutionalist school that institutions are endogenous (Aghion, Alesina and Trebbi, 2004). But what are its causes? And what are the consequences? Note that in the causal path diagram above, all institutions have an arrow pointing to them. This indicates that institutions, either instability, accountability or cohesion, are determined by some other factors, either observed or unobserved. The arrows linking "geography and underlying conditions" and "economic performance" to "institutional arrangements" capture this last point by showing the two basic sources of institutional endogeneity (Przeworski, 2004b).

On the one hand, institutions are determined by some sort of underlying conditions and, maybe unique, features of societies. In other words, institutions are not randomly assigned or selected; as a result, some kinds of institutions are more likely to be observed under some specific conditions than others. History generates them by some concrete process. A nice example of this argument is provided by Engerman and Sokoloff's work (1994, 2005). They defend that inequality and institutions in the American colonies were shaped by their initial factor endowments: The suitability for

the cultivation of sugar and other similar types of crops and the presence of large concentrations of native population promoted the evolution of institutions where small elites of European descents hold enormous shares of both wealth and political power. Political regimes (democracy-dictatorship) are an even clearer example. As Przeworski (2004d) argues, for democracy to survive it has to be self-enforcing, so it has to be an equilibrium. Concretely, Benhabib and Przeworski (2003) develop a model in which they show that, conditional on the initial income distribution and the capacity of the poor and the rich to seize power, each country has a threshold of capital stock above which democracy survives. Alternatively, Boix (2003) states that both economic equality and capital mobility promote democracy since the redistributive consequences of it become, then, less severe for the rich.[9]

The second source of endogeneity is founded in the "feed-back" effects of their own consequences or outcomes as historical institutionalists already emphasized. This reversed causality can take place both directly and indirectly. According to the former, the outcome variable, say, development, directly determines the causal variable, i.e., institutions. In the indirect possibility, the outcome variable has an effect on institutions through its error term.

What are the consequences of the endogeneity of institutions? The most direct consequence is that identifying causal effects becomes a difficult methodological problem. Although alternative kinds of estimators are now available, none of them can give us full solution to all the potential biases stemming from the use of non-experimental data[10] (Przeworski, 2004a). Furthermore, all

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[9] However, Boix, after providing a theory of the emergence of democratic regimes, does not take full advantage of it in the empirical part of his book, in which regime becomes an independent variable. Consequently, his results are, at best, doubtful.

[10] The potential biases are four: i) Baseline difference, which emerges when there are differences in the control state between the units that were treated and those that were not. This bias is due to omitted control variables; ii) self-selection bias, which occurs when the choice of

estimators rely on assumptions which are usually untestable. For instance, while the instrumental variables method is based on the assumption of conditional mean independence, Heckman's two-step method relies on a concrete distribution for the error structure.

The second consequence of endogeneity is that institutions may not have any causal effect on economic performance (or other outcomes) if it happens to be very strong (Przeworski, 2004a, 2004b). With all these caveats, then, I am not assuring that institutions do not matter; I am only pointing at the possibility that it could be so and the reasons for that. Actually, there are reasons to be both optimistic and pessimistic at this respect. In the pessimistic side we have the seminal work by Przeworski *et al.* (2000), *Democracy & Development*. They show that, once controlling for selection, political regimes (democracy vs. dictatorship) have no effect on the rate of economic growth,[11] so the observed differences between regimes are due to the underlying conditions under which they exist. Similarly, Cheibub (1998) found that regime type does not affect the overall level of taxation once controlling for the conditions that make us observe countries as being dictatorships or democracies.[12] Yet, relative optimism comes from the recent work by Persson (2003), Persson and Tabellini (2004), and, specially, Persson and Tabellini (2003). Employing similar and some other techniques, they get as main results that: 1) Presidential and majoritarian systems have smaller

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treatment is related to its expected consequences; iii) post-treatment bias, when some of the control covariates may be correlated with the treatment; so changing the former brings about changes in other variables too; and iv) violation of the stable unit treatment value assumption, which means that observations are not independent, so the realizations of the counterfactuals would affect the value actually observed. See King and Zeng (2004) and Przeworski (2004a).

[11] Actually, they show that the only effect of political regimes is on the rate of population growth, dictatorships having higher rates.

[12] Concretely, the dependent variable he uses in his analysis is the central government total tax revenue as a percentage of the GDP at factor cost.

government spending than parliamentary and proportional systems respectively; 2) large districts and personal ballots reduce the level of rent-extraction by politicians; 3) parliamentary systems have more constant fiscal effects.[13]

## 2.3. The logic of accountability

### 2.3.1. Democracy vs. dictatorship

Let us start with a general standard definition of accountability. As Manin, Przeworski and Stokes 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" (1999: 10).[14] The underlying argument is that accountability allows for the punishment of politicians in case they adopt bad policies on behalf of their own interest or of the interest of some other group. This is the reason why I focus on this particular set of political institutions. When analyzing dictatorships and their effect on economic growth, we know that the main obstacle for the latter is that unconstrained rulers can self-enrich and promote special interests that may harm economic performance. Accountability, in determining the probability of surviving in power, may be the basic instrument to constrain rulers' decisions regarding taxation and graft or, in general terms, the type of economic institutions they promote. When modeling political-economic decisions, accountability usually translates into a probability, $p(\bullet)$, which

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[13] See Acemoglu (2005b) for a critical review of their work which focuses on the empirical validity and the theoretical foundations of the instruments used for specific institutions, concretely, those taken from the previous work by Hall and Jones (1999).

[14] 'Representitative' means, in this context, that the government acts in the best interest of the public (Pitkin, 1967).

indicates the likelihood that the ruler or government at time *t* will retain power at time *t+1*.[15] As Przeworski puts it, "this function maps the outcomes generated by rulers on the sanctions inflicted on rulers by the society" (2003: 93). So if, for instance, *p* is a function of general output *Y*, $p(Y)$, and *Y* turns out to be low, then the society is very likely to throw the ruler out using the mechanisms at its disposal.

Political systems, that is, concrete institutional frameworks, differ in the degree of political accountability they offer. According to Lederman, Loayza and Soares (2005) it depends on three main features: The degree of competition, the existence of checks and balances and the overall transparency of the system. This leads Przeworski's argument to make full sense when arguing that "securing property rights, coordinating investment, and rendering the rulers accountable are second-order features of complex institutional frameworks. As such they constitute consequences of specific institutions (…)" (2004a: 8).

The presence of checks and balances, provided mainly by the separation of powers, increase the level of accountability of a political system through the creation of mechanisms to monitor and even punish the misbehavior of other branches of power. Persson, Roland and Tabellini (1997) argue that checks and balances work by creating a conflict of interests between the executive and the legislature, requiring both bodies to agree on public policy and disciplining each other.

Transparency provides citizens or organizations with the necessary information to control the government. Consequently, transparency is basically dependent on the level of freedom of press and expression, the degree of decentralization of the system, and the information mechanisms within state institutions. Indeed, Adserà *et al.* (2003) argue that accountability depends on the degree of citizen information, which prevents politicians' opportunistic behavior. Taking the "free circulation of newspapers

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[15] *t* does not necessarily imply years, it could be a legislative term, a presidency, or any other period with some political meaning.

per person" as a proxy for voters' information they show that a well-informed public (under democracy) explains between one-half and two-thirds of the variance in the levels of governmental performance and corruption. Alternatively, Bordignon and Minelli (1998) argue that simpler rules are more transparent because they allow citizens to gain more information on politicians.

Finally, competition makes basically reference to the existence of free elections that allow citizens to get rid of their undesired rulers and choose new ones. Elections would serve as a punishment mechanism in the hands of voters and, thus, act as a solution to the agency problem in which there is asymmetric information between the principal -the public- and the agent -the government- (see, for example, Ferejohn, 1986). The characteristics of the electoral system can also play a role in here. Some argue that accountability to performance increases the larger the districts are, since entry -of non-corrupt candidates- is easier and there is a bigger number of candidates. On the other hand, personal ballots, contrary to party-lists, allow voters to judge candidates at an individual basis and exercise, consequently, a higher level of accountability (Myerson, 1993; Persson, 2003).

Elections are perhaps the main instrument for accountability in democratic systems, but they can only be used every four or five years. During that period, stable democratic governments do not have to much fear that any group or sector may challenge their tenure.[16] There is the possibility of an impeachment or a motion of confidence, but if the government is supported by a sufficient majority its probability to stay in power in the next period is just one.[17] Nonetheless, elections present some serious difficulties concerning their effectiveness as a control mechanism. First, elections may serve as a prospective instrument and thereby used

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[16] See Benhabib and Przeworski (2003) for a study of the conditions that make this stability possible.

[17] See Maravall (2005) for a study of the survival conditions of democratic governments that takes into account not only the replacement of leaders through elections but also through "conspiracies" of other party or coalition members.

to choose good politicians not just to punish bad ones. Secondly, voters may use elections to retrospectively punish but not actually to reward and reelect those governments that perform well. Third, voters have only one instrument and one day to decide about a big number of dimensions and policy issues, so it might well be that voters keep officials accountable for other issues rather than material well-being. This issue goes back to Riker (1986) who stressed the potential use of heresthetical strategies, which consist of the manipulation of dimensions, what essentially means that politicians structure the choices available to suit their desires and preferred outcomes. According to Ferejohn, "electoral heterogeneity makes possible for officials to play off some voters against others to undermine their accountability to anyone" (1999: 132). Fourth, voters may have difficulties in attributing responsibilities. Due to the separation of powers, the possible existence of coalition governments and an increasing number of international organizations (European Union, IMF, etc.), voters can not exactly discern who is responsible for the potential bad outcomes of some policies. "If citizens are unable to assign responsibility for changes in their welfare, elections can hardly serve to control incumbents" (Maravall, 2005: 4). Information asymmetry reinforces this effect. Finally, according to Sánchez-Cuenca (2003), there are two types of voting, the ideological voting and the performance one. If the vote is ideological, the decision rule is just based on ideological closeness (between the voter's own position and that of the party) so no effective accountability takes place.

Indeed, Cheibub and Przeworski (1999) found empirical evidence that the survival of heads of democratic governments is actually independent of economic conditions.[18] What are the implications of this at the formal level? Following the logic

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[18] They use different variables to capture the economic performance such as the rate of change of inflation, the growth rate of the labor force, the growth of per capita consumption, government consumption and the rate of growth of per capita income.

depicted above, it may seem that in general the dependence of $p$ on $Y$ turns out to be weak under democracy, but more interestingly, it is hinted that this dependence may vary as a consequence of some social and institutional features and be subject to manipulation and noise.

We claim that the accountability function can be defined in the very same terms when analyzing authoritarian governments. One could argue though, that if accountability is difficult to take place under democratic regimes, it will be impossible to occur under dictatorship. Nevertheless, although there are arguments that may lead us to think that this is fairly true, there are also reasons to assert that dictators may be accountable to citizens too. Accordingly, we propose to define a probability function for dictators which considers predation -which is assumed to harm economic performance- as an endogenous variable, so it can be defined as follows, $p = p(\tau)$, where $\tau$ is the rate of ruler's rent extraction.[19]

The systemic features that permit a higher level of accountability in democracies might be greatly undermined under authoritarian regimes. The first and most obvious feature of dictatorships that goes completely against accountability is its lack of transparency. This is embodied by the suppression or severe restrictions on the freedoms of expression and press and, as a result, informational asymmetries between government and citizens become much more acute than they actually are in democratic systems.[20] The second obvious argument against accountability under dictatorship has to do with the separation of powers. As it is generally known, dictatorships are characterized by their concentration of power in the hands of an individual or, at best, a reduced number of them (like military juntas, councils of

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[19] The logic of the argument does not change if we consider either $\tau$, $Y$ or the rate of growth, as $\tau$ is assumed to hamper growth.

[20] See Merat Amini (2002) for a nice exposition of how data were changed and manipulated under the Shah's rule in Iran and how economic policy was managed.

national salvation, politburos, etc.). Finally, periodic elections do not take place under authoritarian regimes. Although there are doubts, as explained above, that elections can really serve to effectively hold governments accountable, this is even more difficult if they are not celebrated or, if so, under a very constrained and corrupt environment and only for plebiscitary reasons.[21]

However, there are reasons to believe that dictators may be accountable to citizens under certain circumstances, especially for economic outcomes. First of all, although the concentration of powers existing in dictatorships certainly prevents the effective presence of checks and balances, it makes also impossible to blur the attribution of responsibilities. When things go bad and a crisis takes place, everyone knows for sure whose the fault is. All fingers will point to the dictator and his closest collaborators.

This last effect may be reinforced by the lack of information and transparency of the regime. When information is deliberately scarce, it is easier for people to blame the government when economic performance worsens than thinking of more elaborated arguments about the functioning of the domestic and the international economy or the impact of exogenous shocks, above all when power is concentrated and enjoys a great level of autonomy.

A second mechanism strengthening accountability may take place in people's minds. People prefer freedom to oppression. This is to say that dictatorship has a cost in itself on individuals' utility (Sen, 1991; Benhabib and Przeworski, 2003). "No one likes to be oppressed by a dictatorship" (Przeworski, 2004d: 18). So when freedom is severely cut and the possibilities of consumption are restricted, material well-being increases its weight in the utility function of citizens. This relates to legitimacy issues. Since

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[21] See Schedler (2002) for a review of the different tactics authoritarian rulers can use to manipulate the results of elections. Besides, the author asserts that elections are just held to legitimate the regime.

authoritarian rulers use to seize power by irregular and even violent means, they cannot, in general, appeal to popular support as a source of legitimacy so many of them turn to economic performance as the reason that justifies their permanence in power.

Under dictatorship, periodical mechanisms for choosing and replacing leaders, such as elections, do not generally exist. Dictators face 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. Thus, dictators have in each period a probability of being overthrown by different political actors or groups and their policy choices will be constrained by this probability. In addition, in the absence of routine ways to remove leaders, questions about constituency arise, that is, questions about the proper identification of the 'principal' in this context. One needs to investigate who can put pressure on the ruler and what 'satisfies' those who can do effectively so. Under dictatorship such mechanisms of accountability are much more costly for those who may want to put them into practice. We identify three sources of threat to dictator's rule: The elite, the military, and the masses. The first may carry out a *palace putsch* taking advantage of their privileged position and access to the ruler; the second may stage a coup using the weapons they have at their disposal and the skills to use them; and the third may rebel, launch strikes and so on.

Dictatorial institutions merit comment as well. As contended for democracies, formal institutions are associated with different levels of accountability. There are one-party authoritarian regimes, dictatorships with legislatures, dictatorships with multiple parties within a parliament, and regimes without any of these formal institutions. Accountability levels may vary between them as they do for democratic systems with alternative electoral systems, party systems, or dissimilar degrees of power separation and checks and balances. The potential variations in the economic results between such institutional arrangements will be explained by providing their specific causal mechanisms in the next chapters.

*2.3.2. Modeling state capture under accountability. A survey*

The causes and consequences of the predatory activity of the state are a central issue in the field of the political economy of development and growth. It has been assumed that rent-extraction and, more generally, corruption lead growth rates to shrink and, as a consequence, retard development. The question at stake is then, what makes rates of extraction differ across countries and leaders? The literature explaining the differences in the level of state capture is relatively scarce, although there are some significant contributions. We can divide this literature into two main groups of models: Those in which the time-preference of the ruler or the political agent remains totally exogenous and those in which it is endogenously determined, although by different parameters. Generally, in all these models (either formal or not) there is one ruler whose objective is to self-enrich by maximizing the value of present and future rents by means of fixing the tax rate and in some cases the level of public spending.

Any ruler has his own time-discount factor which establishes the value he attaches to prospective future rents. Yet, there is another element determining what the actual present value of rents is, which is the incumbent ruler's probability of survival in power, in other terms, the political accountability function. Thus, the higher this probability is, the higher the weight attached to rents at future time periods will be. In other words, the value at present time of the rents at some future date will be higher, the higher the probability that the ruler will still be in power at that date. As said, then, one can find models in which this time preference is endogenously determined by the rulers' own decisions and others in which it is not or in which this parameter is simply absent.

Models with exogenous time-preferences may make a priori distinctions between different types of dictators with regard to these discount factors or simply include a probability term to the maximization problem that does not depend on any other parameter in the model. Olson's (1993) and McGuire and Olson's (1996) seminal works belong to the former type of models. In

them, they posed the argument about the "encompassing" interest of the revenue-maximizing dictator.[22] Thus, autocrats with long time horizons (called *stationary bandits*) have a more encompassing interest in providing public order and other goods than do more insecure ones, the *roving bandits*.[23] For the *stationary bandit* type of ruler, as they put it, "as the monopoly tax-collector, he bears a substantial part of the social loss that occurs because of the incentive-distorting effects of his taxation (...). This limits the rate of his tax theft" (McGuire and Olson, 1996: 72-73). So, in sum, the dictator is also (self-) constrained by his considerations about future accumulation. This argument has tried to be empirically tested by Clague *et al.* (1996), who confirmed the main hypotheses, although using as a proxy for the discount rate the age of the current regime. Nonetheless, regime and leadership duration are both endogenous what casts doubts on their estimated coefficients.

In his contributions, Wintrobe (1990, 1998, and 2001) does not even take the level of self-enrichment as the unique maximand.[24] He distinguishes between *tinpot* and totalitarian dictators, assigning to the former an interest in maximizing their own-consumption while the latter's first preference would be to increase their power. How these preferences emerge, we just do not know.

Regarding exogenous probabilities, in other words, models that include some sort of political survival parameter but without making it a function of any other parameters determined in the model, the underlying problem is the same than for the former works, namely, one part of the story is missing. In this second case, although potential instability is considered, the ruler does not face any trade-off since his decisions are not affecting the likelihood of remaining in power, so one can not derive

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[22] For a critical review and analysis of Olson's contributions see Rose-Ackerman (2003).

[23] For an application of these concepts to the African countries see Rowley (2000).

[24] See also Mueller (2003).

comparative statics, which would be essential to understand policy variations across units. For instance, Tohmé and Dabús (2001) add a parameter in the ruler's maximization problem that captures the probability of staying in office after some time horizon. However, it is assumed to have an exogenous constant negative variation rate, so instability just increases with time. In Chen and Feng's (1996) and Feng's (2003) pieces, we find a more general analysis of the effect of political regimes on economic results, although politicians/governments are not even considered as maximizing agents in their settings; solely individuals maximize consumption and an exogenous probability of regime breakdown affects their second period discounted utility. As a result, lower probabilities of regime continuity negatively affect the growth rate of the country.

In some other contributions in the field, the probability constraint is just absent, mainly because of the static nature of the models or due to their focus on other types of potential economic constraints. This is the case of Marcouiller and Young's (1995) model (see also Buchanan and Faith, 1987; Shleifer and Vishny, 1998). They study whether the possibility to turn to the informal sector may lead the predatory state to refrain from excessive plunder considering that goods produced by each sector are imperfect substitutes. Their answer is negative: "the formal economy could be squeezed out of existence by continual increases in the tax rate when the elasticity of substitution is low and by continual reductions in public order when the elasticity of substitution is high" (Marcouiller and Young, 1995: 631). Empirical evidence reported by Friedman *et al.* (2000) shows that higher taxes lead actually to less unofficial activity, although corruption increases it.

In a fully dynamic setting, Barro (1990) studies the effect of government spending on economic growth and considers the possibility of a self-interested ruler. He concludes that a self-serving ruler will tax at higher rates than a benevolent one but will provide an efficient level of public expenditures (like the benevolent government). So, as in Olson's article, a ruler whose

tenure is totally secure seems to care about future accumulation and in this case fulfills the productive-efficiency condition.

These insights reviewed so far, although valuable, lack the richness that making time-horizons endogenous involves since they skip one fundamental part of the decision-making process. The most recent contributions on the field have attempted to correct this shortcoming by making politicians' or government's decisions regarding self-extraction and/or public spending to affect their stability/durability in power as well. This dependence of survival in power on the ruler's own decisions compels him to trade off self-enrichment in the short-term with the chances of remaining in power for a longer period. The desire to extend tenure may, then, temper the abuse of power (Klick, 2004), making accountability to come into play. However, there are interesting differences between the alternative models based, principally, on the variable affecting the probability of survival or, in other words, on the possible sources of endogeneity and the type of threat rulers have to face.

In Grossman and Noh's (1990, 1994) models, the rent-maximizing ruler likelihood to be in power in the future depends on his current tax and spending policy since the representative producer's currently expected utility is included in the probability function. As a result, when these variables are important for politicians' survival, the equilibrium tax rate and public investment can be relatively benevolent. As to public investment, Grossman and Noh get the same result as Barro (1990), that is, the self-interested ruler choice of public goods would be the same chosen following a welfare/growth-maximizing criterion. This insight is challenged by Acemoglu (2005a) who states that when the state is weak and lacks the power to tax in an effective way, the ruler will underinvest in order to be able to extract rents. Findlay (1990) also shows that a ruler maximizing surplus will provide less than the optimal level of public services.[25]

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[25] See also Findlay and Wilson (1987) and Przeworski (2003).

Overland, Simons and Spagat (2000) put the endogeneity of survival in a different way. Specifically, they make it a function of domestic capital development. The process is similar though, since capital accumulation is in itself a function of taxes and government spending but, on the other hand, in this case, initial conditions matter too. "The idea underlying this relationship is that domestic capital development increases the number and influence of individuals with an interest in the continuance of the current political status quo" (Overland, Simons and Spagat, 2000: 4). Overland *et al.*'s model yields multiple equilibria: If the initial level of capital stock existing in the economy is high enough (beyond the bifurcation point) the dictator will not plunder but promote steady growth, otherwise, a high extraction low performance equilibrium is reached. There is, nevertheless, something odd in their formulation. In the definition of the dictator's problem, they only allow him to choose the split of output between consumption and investment, but not the fraction of consumption he appropriates (and the authors do not give any reason for that).

Contrarily to Overland *et al.*'s assumption about the source of endogeneity, Robinson (2000) sees the increase of domestic capital (infrastructure) as enhancing the risks for dictators, so, generally, it is in their interest to retard development. He argues that public investment, which promotes development, improves the ability of agents outside the ruling elite to contest political power.[26] There are, nonetheless, two shortcomings in this assumption: First, public investment may make the repressive capacity of state forces more effective too and, arguably, at a higher rate; and second, public goods provided by predatory leaders may have as the only objective to deter banditry so they can extort more since the exit option (in this case, banditry) has higher costs (Moselle and Polak, 2001). Robinson's (2000) conclusions derived from his model are, on the other hand, at odds

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[26] In other versions of the model, he allows agents out of power to allocate part of their capital to subverting power as well.

with Olson's arguments. Robinson claims that those rulers who expect to stay more time in office will be the greater thieves.

In general, in the models reviewed so far, it is considered that those who may oust the government are the producers or households affected by taxes. There are more detailed works focusing on specific actors or specific political settings. For instance, Galetovic and Sanhueza (2000) assume that autocrats can only be ousted by a coup. In their setting, the probability of staying in power in the next period depends on the realization of output in the previous period and the people's willingness to passively follow the commands of a new ruler.[27] Focusing on democratic systems in which citizens are entitled to vote periodically, Ventelou (2002) studies different alternatives by which strategic voters can affect the probability of politicians' re-election in order to avoid a 'take the money and run' equilibrium.[28] A general model of insurrections is developed by Grossman (1991), in which the ruler faces a double trade-off in choosing the tax rate that maximizes income for his clientele since higher taxes have an effect on both the time peasants devote to production and to insurrection activities.

It is worth noting that the underlying intuition behind models with exogenous and endogenous time-preference rates is, in general, the opposite. For the encompassing interest -à la Olson- to emerge, a high security in office is required if the bandit has to become, in his own terms, "stationary." As a result, in this case, higher security should be related to a lower rate of graft and, hence, to higher growth rates. On the other hand, in models with endogenously constrained politicians, commonly, plunder will be curbed as long as the survival constraint is binding. So in these

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[27] See Sutter (2000) for a game-theoretic model of coups.

[28] These mechanisms are: a) To organize a periodicity for elections, so for a length of *t* periods, the politician is totally secure; b) to use clientelism assigning budget misappropriations to a group of voters to assure their support; and c) to introduce uncertainty about the real type of politician.

cases, then, a more insulated (stable) ruler will be able to increase his level of rent extraction, harming growth.

## 2.4. Conclusion. What is left?

New institutionalism has put institutions at the core of the research agenda. Although approaching the issue from different views and strategies, new institutionalisms share a common core: They are all well aware of the gap existing between political demands and preferences and the actual outcomes, so their analyses have turned their attention to the norms and procedures used for aggregating individual choices.

When studying economic development and its causes, new institutionalists have tended to view institutions as the "fundamental cause of long-run growth" (Acemoglu, Johnson and Robinson, 2004). As stressed above, this assertion is not devoid of problems both at the theoretical and methodological levels. The questions that arise are basically two: If institutions are the causes, which are, then, the causes of the causes? And second, which institutions must we pay attention to?

Institutions are endogenous, that is, they are determined by some factors and variables that need to be properly studied. In other words, institutions are not randomly assigned or selected as a treatment in an experiment. In order to identify the potential causal effect of any cause, in this case, institutions, one needs to theorize first about what underlies their existence and their form.

On the other hand, one needs to choose the dimension of institutions that may affect the outcome under study. We must, then, develop arguments justifying which are the institutions that matter for development. We defend in this dissertation that these institutions are the institutions of accountability. The assumption behind this selection is that well-functioning accountability mechanisms can drastically reduce the extraction capability of rulers. This framework is suitable to be applied both to democratic as well as to authoritarian regimes. Indeed, the literature analyzing

predatory rule often depart from this setting as it incorporates uncertainty in governments' decisions based on their likelihood of losing power or not.

The literature on state capture, reviewed in the last section, presents two basic shortcomings. The problem of models with exogenous time preferences is obvious as one crucial part of the story is missing: Dictators' own decisions with respect to policy affect their chances to remain in power in the future and get the benefits derived from it. Furthermore, models with endogenous time-horizons tend to compare the optimal tax rate under the constrained and the unconstrained settings. However, concrete comparative statics exercises are frequently missing. To find empirical implications of political-economic models these exercises are essential though. As a result, these contributions lack a careful analysis of the conditions under which the probabilistic constraint has an actual effect, since its solely existence does not guarantee its efficacy as an anticipation mechanism.

# CHAPTER 3. OPTIMAL PREDATION AND ACCOUNTABILITY UNDER DICTATORSHIP

## 3.1. Introduction. Variability in dictators' behavior

The causes and consequences of the predatory activity of the state are a central issue in the field of the political economy of development and growth. It has been assumed that rent-extraction and, more generally, corruption lead growth rates to shrink and, as a consequence, retard development. The question at stake is then, what makes rates of extraction differ across countries and leaders? In other words, why is that Rafael Leónidas Trujillo, former Dominican Republic dictator (1930-1961), was able to own 80% of industrial production and make 60% of the labor force depend on his firms or the state (Moya Pons, 1995) -but did not care about development as the *olsonian* concept of encompassing interest would suggest-, while Pinochet (who ruled Chile from 1973 to 1990) had "only" about 8 million dollars (or more, as the investigations proceed) at the Riggs Bank in the US?[1] The differences between autocratic rulers are absolutely astonishing. According to some estimates, Mobutu Sese Seko (Zaire's former dictator) had total control over 17-22 percent of annual national budget for his own personal and discretionary use. Other estimates point that the 1981 budget allocation for the Presidency -that is, just Mobutu- was 1.48 billion Belgian francs, to which one must

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[1] As recently made public by a report by the US Senate Subcommittee on Investigations (July, 2004).

add 600 million francs just for personal expenses of the leader (Callaghy, 1984). Jean Bedel Bokassa, Central African Republic's former dictator, spent the whole annual state budget in one day and one thing, his coronation as the new emperor Bokassa I. In Malawi, after being deposed, it was revealed that Kamuzu Banda had direct control over the 35% of his country's GDP (Sánchez Piñol, 2006).

We thus need to model the optimal rent-extraction rate under different conditions for a dictator who maximizes his own consumption. I follow Buchanan and Tullock (1965) in viewing political actors as rational economic agents pursuing their self-interests, and Levi (1988) in assuming that "rulers maximize revenue to the state" (1988: 10), and in this concrete case, in order to turn it into personal rents. In Brennan and Buchanan's words, "revenue maximization remains a suitable simplification of government behavior" (2000: 34). Similarly, Findlay (1990) suggests that assuming that rulers seek to maximize rents applies to the less developed countries but not to advanced industrialized ones. As Brough and Kimenyi put it, "dictators must be viewed as purposive self-interested individuals" (1986: 40). Extreme cases of theft by authoritarian rulers have received much attention in the literature, mostly, however, in relation to transitions from this kind of rule or by in-depth historical accounts. Indeed, they have been called *kleptocracies* (see, for instance, Grossman and Noh, 1990; Grossman, 1999; Acemoglu, Robinson and Verdier, 2004), *sultanistic* regimes (Chehabi and Linz, 1998), *neopatrimonial* regimes (see, for example, Eisenstadt, 1973; Clapham, 1985; Bratton and Van de Walle, 1994; Brownlee, 2002), *tinpots* (Wintrobe, 1990, 1998) or *predatory* dictators (Fatton, 1992; Robinson, 2000; Moselle and Polak, 2001).

Examples of this kind of authoritarian rule have abounded specially in African countries, leading the continent to fall dramatically behind. For this reason, the literature on comparative development has tended to focus on the causes of the so-called African "tragedy" and to treat this type of corrupt regime simply

as a region specific "disease."[2] Certainly, Africa may have been the region where some of the most outrageous examples of rapacious leaders -namely, Mobutu, Moi, Bokassa, Mengistu, Doe and so on- have taken place, but the phenomenon is not African 'exclusive.' Asia, South America, Central America and the Caribbean have also "produced" notorious thieves; names such as the Duvaliers, the Somozas, Batista, Trujilllo, Ferdinand Marcos and Suharto will come rapidly to our minds. Most of dictators have pursued self-enrichment in a more or less evident way. Look at the case of Pinochet; he promoted market-oriented policies following the monetarist principles of the Chicago Boys in order to achieve rapid growth. He, thus, launched a rapid change towards deregulation and privatization, abolishing taxes on wealth and profits and the minimum wage, privatizing the pension system, state industries and banks, but he did not forget to keep a small portion of the benefits for himself as reported above. Even one of the paradigms of the developmental state engaged in rent-extraction. Under Park Chung Hee (South Korea, 1963-1979), political elites took millionaire donations from big business corporations. If these funds were not provided the loans to big firms could have get called by the Bank of Korea, or they could be subject to tax audit (Kang, 2002). Kim Jong-pil, head of the Korean CIA was reported to have accumulated more than $50 million in property and businesses. Actually, some despots appear -or appeared- in the Forbes Magazine ratings of the richest people in the world. You can find there, for instance, Saddam Hussein, Iraq's former dictator, with an estimated fortune of two billion dollars.[3]

In this Chapter we pave the way for the understanding of such variability. Contrarily to the works in which the types of dictator are distinguished *ex ante* by assuming that they have distinct

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[2] See, among many others, Bates (1981), Easterly and Levine (1997), Sachs and Warner (1997), Collier and Cunning (1999), and Sala-i-Martin and Arcadi (2003).

[3] Check the website for more information: http://www.forbes.com/billionaires/

preferences (i.e., different maximands) or different discount rates, we suggest that they all share a generic objective, self-enrichment, so policy differences will be brought about by the variations in the political constraints they have to face and the economies they govern.

In the first section, we present the basics of the models, find the optimal household's saving rate, and study the dictator's choices when no accountability constraint is binding. In the second section, we solve dictator's problem under accountability and we define the parameters -and the concepts behind- of the accountability function and its specific form. Consequently, the dimensions of *security* and *sensitivity* are presented. Later on, the consequences of the first-order condition are fully explored by doing multiple comparative statics exercises. Finally, we explore alternative accountability functions and their consequences in terms of comparative statics with the aim of checking whether the previous results can be generalized. We repeat some of the exercises but taking both concave and convex functions as a potential source of policy variation and alternative hypotheses.

## 3.2. The general model

Both approaches to the political economy of development reviewed in Chapter 2 have one important shortcoming that will be addressed in the model to be presented in this chapter. The problem of models with exogenous time preferences is that one crucial part of the story is missing: Dictators' own decisions with respect to policy affect their chances to remain in power in the future and get the benefits derived from it. So I will develop a simple model related to the second group of works reviewed, i.e., those in which the time-preference is endogenous.

On the other hand, models with endogenous time-preference rates tend to compare the optimal tax rate under the constrained and the unconstrained settings with the aim of comparing behavior under both of them. However, concrete comparative statics

exercises are frequently missing. To find empirical implications of political-economic models these exercises are essential though. As a result, these contributions lack a careful analysis of the conditions under which the probabilistic constraint has an actual effect. On the other hand, the different parameters in the survival probability function may have different effects. Therefore, albeit keeping the setting of the model as simple as possible, I will concentrate in a full development of the relevant possible comparative statics, specially, with regard to the parameters that form the probability function that may constrain self-interested rulers with the aim of getting empirically testable hypotheses.

### 3.2.1. Basics of the model and definitions

The model will consist of two periods and two actors, the dictator and a representative household. Its fundamental elements are the following:

1) The production function: Output $y$ at time $t$ is produced out of one productive factor, capital ($k$). Capital is accumulable. We thus have that

$$y_t = f(k_t) \qquad (3.1)$$

We assume a simple production function in which output $y_t$ at time $t$ is produced with capital $k_t$ and technology is linear

$$y_t = rk_t \qquad (3.2)$$

where $r$ is a constant rate of return, $r > 1$. Consumption is a constant share of output, $(1-s)$, where $s$ is the saving and, hence, the investment rate that will be chosen by the representative household; so consumption at time $t$ is simply

$$c_t = (1-s)\,y_t \tag{3.3}$$

From here we can easily deduce, then, that output at time *t*+1 is going to be

$$y_{t+1} = r(k_t + sy_t) = y_t + rsy_t \tag{3.4}$$

so the growth rate of this economy is

$$\gamma_t = \frac{\Delta y_t}{y_t} = rs \tag{3.5}$$

where *s* will be endogenously determined.

2) The dictator is a purely self-interested agent who exercises sovereign power to maximize rents. Accordingly, he can be compared to any other private enterprise or consumer in microeconomic theory. In contrast, households maximize consumption. So we have that, for the dictator, utility is $U^D(R_t)$, while for the representative household it is $U^H(c_t)$, where $R_t$ stands for rents, which are actually dictator's consumption -to be defined below-, $c_t$ stands for consumption and the subscript *t* for the time period.

We use a particular type of CRRA utility functions in which $\sigma = 1$, so the utility functions are logarithmic

$$U^D(R_t) = \log(R_t)$$
$$U^H(c_t) = \log(c_t) \tag{3.6}$$

The ruler extracts rents by taxing at a non-negative rate $\tau$ household's income in the two periods, consequently, rents at time *t* are

$$R_t = \tau\, y_t \quad \text{where} \quad \tau \in [0,1] \tag{3.7}$$

It is worth noting that $\tau$ is capturing whatever means the dictator may use in order to get a share of households' income. It can be argued, as Acemoglu (2005a) does, that taxation is a much more institutionalized and predictable way to get resources than simple expropriation, which is basically arbitrary and more uncertain. Although the distinction may be relevant in practice, we assume that in the model $\tau$ represents any activity to extract rents that the autocrat may use, so we will think of it, generally, as the rate of rent-extraction. The only condition is that it has to be anticipated by the household and, consequently, that the resulting transfers of resources have a distortionary effect by altering the calculus of those who make the investment decisions.

3) There is an endogenous probability that the dictator stays in power in the second period, which we shall call the *political accountability function*. We call it the accountability function because it relates the rulers' policy choices with their chances of retaining power in the future. In case politicians adopt 'bad policies', sanctions involving the removal from office may be applied. As said, this probability is endogenously determined in the model since it depends on the tax rate chosen by the dictator in order to maximize rents over the two periods. This dependence of survival in power on the ruler's own decisions compels him to trade off enrichment in the short-term with the likelihood of remaining in power for another period. So actually, accountability acts as an "anticipation" mechanism, thereby rulers anticipate that certain bad "actions" or policies will harm their odds of reelection or permanence in power, foreseeing, thus, the consequences of their policy choices.[4] Hence, if he lives for two periods ($t = 0$ and $t = 1$), the probability of remaining in power in $t = 1$ can be generally defined as

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[4] See, for example, Stimson, Mackuen and Erikson (1995) and Manin, Przeworski and Stokes (1999).

$$\Pr(survival) = p(\tau)$$
$$\text{where} \quad 0 \le p(\tau) \le 1$$

(3.8)

where $p_\tau < 0$,[5] that is, higher extraction reduces the likelihood of keeping power.

As a result, the probability of survival is defined as a function of $\tau$, which stands for the tax rate chosen by the dictator to solve his problem.[6] This will allow us to make the time-preference of the ruler endogenous, as defended. The mechanism for this is quite straightforward: The value at present time of the rents at some future date will be higher the higher the probability that the ruler will still be in power at that date is.

4) If the dictator is thrown out of office he gets an exit value, $U^{exit}$. It represents the utility the dictator gets once he is out of power, so the ruler gets $U^{exit}$ in the second period with probability $1 - p(\tau)$. Therefore, we are assuming that the payoffs for different post-office scenarios may vary for different dictators. We shall call this term, *judicial accountability*. Indeed, as commented above, once they are out of power, dictators must face a very uncertain future in which the results might be fatal. Some models simply assume that this utility is zero, so the ruler (dictatorial or not) gets nothing once he is out of office so the second term in the expected utility equation just vanishes. But what if a dictator is very afraid of what may happen to him if he is ousted? Or, what if,

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[5] The subscript indicates the first derivative with respect to that parameter, in this case $\tau$.

[6] The results would not change if we take $p(\gamma_t)$, i.e., if we make the probability of keeping power a function of growth, $\gamma_t$, since, as shown below, the rate of economic growth is a negative function of $\tau$, so the underlying idea is the same. The same happens if we take $p(y_1)$, for identical reasons. We take, then, $p(\tau)$ in order to simplify the notation.

alternatively, one dictator is sure that in case his tenure is jeopardized by whatever actor he will be able to fly out the country and live in exile with the money saved in an account in a Swiss bank? It is clear, then, that post-exit scenarios and how they are valued may make some difference.

We can think of the simplified term $U^{exit}$ as some sort of expected consumption once the dictator is not in power, $U^{exit} = \log(c^0)$, to which the dictator attaches a probability, $q$, that makes that value to be lower. Actually, note that if $U^{exit} = -4$, it means that $c^0 = 0.0183$, which is fairly low. We explore this possibility in Chapter 7, where the term $U^{exit}$ will be substituted by

$$\left[ qU^{low} + (1-q)U^{high} \right]$$

where $q$ denotes the probability of a very low utility post-exit scenario -such as house arrest, jail or execution- taking place, while $U^{high}$ would comprise situations in which the ruler escapes punishment.

5) Putting all these elements together we can now define both the dictator's and household's general problems. For the representative household it is

$$\max_{s} \sum_{t=0}^{t=1} U^H(c_t) = U(c_0) + \delta U(c_1) = \log(c_0) + \delta \log(c_1) \quad (3.9)$$

where $\delta$ is the discount factor of the representative household-producer and s is the saving rate which will be defined and specified below.

On the other hand, the dictator's problem is

$$\max_{\tau} E \sum\nolimits_{t=0}^{t=1} U^{D}(R_{t}) = U(R_{0}) + \beta \left[ p(\tau)U(R_{1}) + (1 - p(\tau))U^{exit} \right]$$

$$\text{s.t. } 0 \leq p(\tau) \leq 1 \tag{3.10}$$

and to the household's problem

where $\beta$ is the dictator's discount factor.

We will proceed in the following way: The first step is to solve the household's problem. As said, the representative household maximizes consumption over the two periods by choosing the saving rate of the economy subject to distortionary taxes. Given that households only live for two periods, there are no savings in the second one. By solving this problem we will get the equilibrium saving rate and we will be able to derive the pattern of accumulation of capital and the growth rate of the economy. Secondly, we will proceed by solving the dictator's problem subject only to one of the two possible constraints according to which the dictator takes the optimal saving rate chosen by the representative household as given so he is constrained by the path of capital accumulation. The second constraint is the accountability function since it makes time horizons endogenous. Thirdly, using a general notation, we will solve the dictator's problem constrained by both the accountability and accumulation path with the aim of analyzing the general solution and the implications of the first-order condition.

By solving the autocrat's problem we will get a tax rate that will be a function of a series of variables from the model. For our interest, the most relevant parameters will be those that define the accountability of dictators; although we will also pay attention to the economic conditions such as the initial income. In sum, in opposition to the works such as Wintrobe's (1990, 1998) or Mueller's (2003) in which dictators are distinguished *ex ante* by assuming that they have different preferences (i.e., different maximands), we suggest that they all share a generic objective, to maximize rents, so policy differences will be brought about by the variations in the constraints they have to face and the economies

they govern. The basic problem in the former type of models (such as Wintrobe's) is, as Przeworski puts it, that "we can always invent some objective that would lead the actor to behave in the way that was observed" (2003: 86). Comparative statics constitute the key instrument through which such variations can be truly investigated and, as a result, hypotheses derived.

### 3.2.2. Household's behavior: The saving rate

In this subsection we will develop the model by following the three steps just described above and by specializing the functional forms of the elements defined in the previous section (namely, the production and the accountability functions).

As said, the representative household chooses $s$ (the saving rate) in order to maximize the utility of consumption in the two periods. Therefore, substituting (3.3) and (3.5) into (3.9), we get the specific household's problem

$$\max_{s} \sum_{t=0}^{t=1} U^H(c_t) = \log\left[(1-\tau-s)y_0\right] + \delta\left(\log\left[(1-\tau)(1+rs)y_0\right]\right)$$

$$(3.11)$$

Where, again, $\delta$ is the household's discount factor. Note that in the second period, though, households do not invest, they simply consume all non-taxed income at their disposal since, by assumption, they only live for two periods. Household's utility is negatively related to taxes but positively to income. The problem above yields the following first-order condition

$$\frac{\partial \sum_{t=0}^{t=1} U^H(c_t)}{\partial s} = \frac{1}{s+\tau-1} + \frac{r\delta}{rs+1} = 0 \qquad (3.12)$$

which equals the marginal benefit of consuming at present to the marginal cost of reduced investment on output in the future.

Solving for *s* we get, then, the household's optimal saving rate under equilibrium, which is

$$s^* = \frac{r\delta(1-\tau)-1}{r(1+\delta)} \qquad (3.13)$$

Note that $s^*$ is negatively related to $\tau$, that is, to rent-extraction, so, in fact, we actually have that $s^* = s^*(\tau)$ where $s^*_\tau < 0,$[7] given that the representative household anticipates that a share of its income will be taxed at rate $\tau$. If taxes are anticipated to be high, the overall level of investment is going to be low in response. Substituting $s^*$ in (3.13) into (3.5) we have that the growth rate of the economy is

$$\gamma = rs^* = \frac{r\delta(1-\tau)-1}{(1+\delta)} \qquad (3.14)$$

From here, and given the only extractive nature of the government (dictator), that is, given that he does not spend any of the revenue to provide public goods or productive investment to the economy, we see that the growth maximizing tax rate -which would be chosen by a benevolent social planner- is simply equal to zero since the derivative of $\gamma$ with respect to $\tau$ is negative, yielding, therefore, a corner solution

$$\frac{\partial\gamma}{\partial\tau} = \frac{-r\delta}{1+\delta} < 0$$

---

[7] The actual derivative is $s^*_\tau = \dfrac{-\delta}{1+\delta}$ , which is undoubtedly negative.

Thus, taxes are distortionary because they affect the calculus of household's via the rate of return of its investment. As a result, the effect on the growth rate is negative as well. In fact, the growth rate of consumption in a simple *AK* production function model with constant relative risk aversion utility function in which there are flat-rate taxes would be $\gamma_C = \left[\delta\, r(1-\tau)\right]^{\frac{1}{\sigma}} - 1$ from which we know that $\dfrac{\partial \gamma_C}{\partial \tau} < 0$, so growth decreases with taxes in this alternative context as well.[8]

### 3.2.3. Total security and long-term considerations

Before proceeding to solve the dictator's problem under accountability and to study the comparative statics, let us analyze with greater detail one specific case that underlies the general model. This case refers to the completely secure dictators, that is, those for whom the accountability function equals 1. Therefore, this ruler knows in advance he is going to remain in power in the second period with probability $p(\tau) = 1$. As a result the exit value and the accountability function disappear from the problem and will not represent a constraint to be considered when deciding the rate of extraction. The only constraint still present is the one posed by the household's choice of its optimal saving rate ($s^*$). The question that arises is whether this latter constraint is going to be effective or not in restraining the voracity of a selfish and fully insulated -non accountable- ruler.

The autocrat's problem can be thus rewritten as follows

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[8] The parameters are the usual ones: $\delta$ is the rate of time preference, $\tau$ is the tax rate, $r$ is the rate of return, and $\sigma$ is the magnitude of the elasticity of the marginal utility of consumption.

$$\max_{\tau} \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau \, y_0) + \beta \left[ \log\left( \tau \left( 1 + \frac{r\delta(1-\tau)-1}{1+\delta} \right) y_0 \right) \right]$$

$$(3.15)$$

This expression, differentiating with respect to $\tau$, yields the following first order condition

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} + \beta \frac{(1+r(1-2\tau))}{(1+r(1-\tau))\tau} = 0 \qquad (3.16)$$

Solving for $\tau$ we get the equilibrium rent-extraction rate chosen under total security in a two period framework, which is

$$\tau^{p=1} = \frac{(1+r)(1+\beta)}{r(2\beta+1)} \qquad (3.17)$$

The equilibrium tax rate is a function of $\beta$ and $r$; $\tau^{p=1} = \tau^{p=1}(\beta, r)$, where $\tau_\beta^{p=1} < 0$ and $\tau_r^{p=1} < 0$.[9]

Note that the resulting tax rate is very high. Actually, it could only be less than 1 as long as $r > \frac{1+\beta}{\beta}$ which implies a rate of return of more than 100% if $\beta < 1$. This is definitively not feasible. Thus, the resulting equilibrium tax rate in a two period framework and with a totally secure dictator is 1, that is, total confiscation when no accountability mechanism is present. In fact, if we assign the following values to the parameters, $\beta$=0.95 and $r$=1.2,[10] we get

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[9] Again, the subscript indicates first derivative with respect to that parameter.

[10] These values are not random, they are usually employed in other economic models.

that $\tau = 1$. What does it imply? The result shows that household's accumulation path does not represent an effective constraint for the dictator in a two-period framework. Therefore, a ruler only constrained by the disincentive effects of households expecting high taxes does not even choose a tax rate at the peak of the Laffer curve in order to maximize revenue but the expropriatory corner solution. As Engineer correctly puts it, "[t]he Laffer curve may be no defence against an unconstrained Leviathan" (1997: 4). This result reveals an interesting insight consisting in that, in a two period framework, a dictator does not care about the accumulation of capital so the households' decisions with respect to investment do not represent an effective constraint in the dictator's decisions with regard to rent-extraction. No "encompassing" interest seems to intervene. The insulated ruler is aware that a lower tax rate allows for a higher saving rate and, subsequently, a higher output in the second period on which to impose taxes, but he just does not care when he is expected to live only two periods.

When thinking about two periods, one tends automatically to think of years, nevertheless, we could think of other and longer time frameworks in a more general or abstract way, not necessarily involving just years. One way to introduce a long-term perspective in the model would be to consider that each period in it lasts actually *n* time units. In this case *n* would represent the time that takes for the accountability function to be effective. Using this mechanism we can extend the duration of the periods and explore its consequences for the equilibrium tax rate.

The new problem, assuming again that Pr(survival)=1, can be rewritten as follows

$$\max_{\tau} \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) + \beta^n \left[ \log\left(\tau\left(1+rs^*\right)^n y_0\right)\right] \quad (3.18)$$

Note that *n* becomes the exponent for both the discount factor and the rate of growth, indicating the times (periods) that they have to

be multiplied as time units become longer. The first-order condition for this problem is now

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} + \beta^n \left( \frac{1 + r[(1-\tau) - \tau n]}{(1 + r(1-\tau))\tau} \right) = 0 \quad (3.19)$$

Equating it to zero and solving for $\tau$ we get the equilibrium tax rate when the dictator is totally secure in office and time periods last $n$ time units

$$\tau^l = \frac{(1+r)(1+\beta^n)}{r(1+\beta^n(1+n))} \quad (3.20)$$

The resulting optimal tax rate, $\tau^l$ (where superscript $l$ stands for long-term), is now a function not only of $r$ and $\beta$ as in (3.17) but also now of $n$: $\tau^l = \tau^l(\beta, r, n)$. Remember that the role of $n$ is to introduce a way to extend the time periods so that we can check whether, at certain time, long-term considerations lead the dictator to set a lower tax rate in order to allow the capital to accumulate and the taxable output to grow faster in the future. Comparative statics with regard to $n$ yield the following result

$$\frac{\partial \tau^l}{\partial n} = -\frac{\beta^n[1 + (\ln \beta)n(1+r) + r] + \beta^{2n}(1+r)}{r(1+\beta^n(1+n))^2} < 0 \quad (3.21)$$

Therefore, the longer the time period, the lower the rent-extraction fixed by the self-interested ruler, allowing for capital accumulation so he can tax a bigger output in the future. In Figure 3.1 we can see this pattern in a clearer way. In the y-axis we have the optimal tax rate, whereas the length of the periods is in the x-axis. The

horizontal thicker line shows the maximum level of taxes possible, that is, 1.

*Figure 3.1. The effect of period length (n) on the rate of rent-extraction*
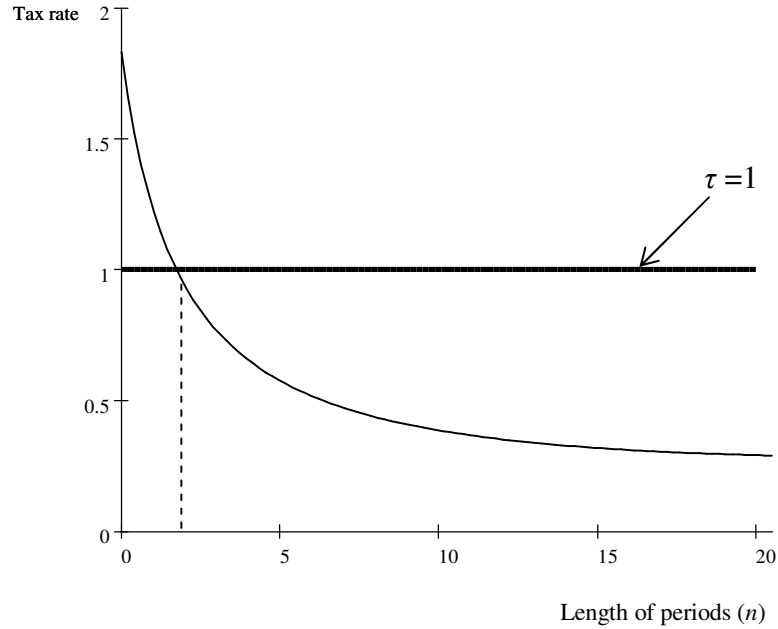


Note, then, that under a certain value of $n$ the equilibrium tax rate is always 1, but it decreases as $n$ increases. If we assume again that the discount rate is 0.95 ($\beta$), and that the rate of return to capital is 1.20 ($r$), we get that the values of $\tau$ as a function of the length of the periods ($n$) are the following

$$\tau^{I} \begin{cases} =1 & \text{if } n \leq 1.74 \\ <1 & \text{if } n > 1.74 \end{cases} \tag{3.22}$$

We can observe that the value from which $\tau$ is less than 1 is not really high, just almost 2; note, besides, that $\tau^{I} \rightarrow 0$ as $n \rightarrow \infty$. In sum, a long term perspective in the dictator's decisions does not take too long to appear, he just needs about two $n$ periods to start worrying about capital accumulation and reduce taxation to foster investment and output in the long-run. Moreover, this critical value of $n$ decreases as $r$ increases.[11]

## 3.3. Predation under accountability

### 3.3.1. General solution

Let us now introduce accountability, in its various forms, into the general problem. In general terms, that is, without specializing the accountability and utility functions, the dictator's problem can be defined as follows (as we did in subsection 3.2.1)

$$\max_{\tau} E \sum_{t=0}^{t=1} U^{D}(R_{t}) = U(R_{0}) + \beta \left[ p(\tau)U(\tau y_{1}) + (1 - p(\tau))U^{exit} \right]$$

$$\text{s.t. } 0 \leq p(\tau) \leq 1 \qquad (3.23)$$

$$\text{and s.t. to the household's problem}$$

The rate of rent-extraction that will be chosen to maximize rents in the two periods is, thus, affecting the probability of retaining power $p(\tau)$, on the one hand, and $y_{1}$ through its negative effect on the household's saving rate. Differentiating (3.23) with regard to $\tau$ yields the following first order condition

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[11] The mechanism is simple since a bigger $r$ means that the marginal benefits of capital accumulation increase.

$$U_{R_0} \frac{\partial R_0}{\partial \tau} + \beta \left[ \frac{\partial p(\tau)}{\partial \tau} U(R_1) + p(\tau) U_{R_1} \frac{\partial R_1}{\partial \tau} - \frac{\partial p(\tau)}{\partial \tau} U^{exit} \right] = 0$$

(3.24)

where, in fact, $\frac{\partial p(\tau)}{\partial \tau} < 0$, $\frac{\partial R_0}{\partial \tau} > 0$, and $\frac{\partial y_1}{\partial \tau} < 0$ given that the

marginal utility of taxes in $t{=}1$ is $\frac{\partial U(R_1)}{\partial \tau} = U' \left( y_1 + \tau \frac{\partial y_1}{\partial \tau} \right)$,

since $R_t = \tau y_t$.[12] The structure of condition (3.24) states that the ruler will increase the rate of extraction up to the point where his marginal utility of rents equals the his loss in terms of lower expected probability of getting rents in $t{+}1$ instead of the exit value $U^{exit}$ and the cost of reduced investment in future income. Specifically, the condition above can be rearranged as follows

$$U_{R_0} \frac{\partial R_0}{\partial \tau} + \beta \left[ p(\tau) U_{R_1} y_1 + \frac{\partial p(\tau)}{\partial \tau} U^{exit} \right] =$$

$$= \beta \left[ \frac{\partial p(\tau)}{\partial \tau} U(R_1) + p(\tau) U_{R_1} \left( \tau \frac{\partial y_1}{\partial \tau} \right) \right]$$

(3.25)

Therefore extraction negatively affects both the likelihood of staying in power as well as output in $t{=}1$ through its negative effect on the household's optimal saving rate, as shown in subsection 3.2.2. Also recall that in subsection 3.2.3 we studied the conditions under which capital accumulation may represent an effective constraint to the autocrat. The results showed that only accountability may dodge the "grabbing hand" in this two-period framework, that is, the fact that on the right-hand side we have

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[12] Subscripts indicate first derivative with respect to that parameter.

$\partial y_1 / \partial \tau < 0$ will not be acting as a restraining mechanism for the self-interested ruler (since when $p(\tau)$=1 he captures all income available).

The equations just presented define the general structure of the solution of the problem that the dictator solves and helps us to understand what elements may lead to a lower or a higher level of extraction. Next sections will be devoted to make full sense of this first order condition, especially, by specifying concrete alternative forms for the accountability function $p(\tau)$.

### 3.3.2. Specialized solution

In order to fully develop the model depicted in the previous subsection and to comprehend the effects of the parameters, we need to specialize the accountability function, that is, define a concrete form and explore the meaning and effect of each of its components.

Let us begin by assuming a simple functional form, so we can concentrate on the definitions and the comparative statics. We define as a first step, a linear probability function of the following form

$$0 \leq (A - B\tau) \leq 0 \tag{3.26}$$

The function consists, therefore, of two parameters (*A* and *B*) and one variable, the tax rate ($\tau$), which makes it endogenous. We shall call *A* the security parameter, while *B* is called the sensitivity parameter. Hence, the extent to what the tax rate, $\tau$, affects the dictator's survival probability is determined by his level of sensitivity (*B*), which acts as the coefficient for the variable $\tau$. A high *B* coefficient implies a high decrease in the probability of staying in power given a unitary increase in the tax rate and, hence, a higher level of political accountability based on the economic results of the ruler's policies. On the other hand, the parameter *A* captures the dictator's structural security. Security

refers to the overall probability of being overthrown independently of the economic growth or the rate of extraction fixed. Assume, then, that $\tau$ is zero, hence, the probability of survival would be just *A*, the intercept in a linear specification. This is only a simplification since dictators' survival in power depends on many variables, so security is related to all of those with the exception of economic performance (directly related to the predatory activity of the regime), and measured by the sensitivity coefficient.

Once the accountability function is defined, we can now describe the effective constraint it poses on the tax rate the autocrat will choose. This constraint is the following and describes the whole range of values that $\tau$ might take

$$0 \leq \tau^{\min} \leq \tau^{*} \leq \tau^{\max} = \frac{A}{B} \leq 1 \qquad (3.27)$$

It is telling us that the maximum tax rate allowed by the probability constraint is $A/B$, which can be equal or less than 1, while the minimum might be zero.

Once solved the first stage of the model (see section 3.2.2) and specified the concrete functional form of the accountability function we can now turn to the dictator's problem. The dictator acts as a Stackelberg leader, as in Barro (1990), therefore, he just chooses the rate of graft that maximizes his own rents knowing the household's optimal accumulation path in advance, that is, knowing (3.13).[13] Recall that the autocrat's utility is $U^D(R_t) = \log(R_t)$, where $R_t = \tau y_t$ are the rents the dictator extracts by applying a non-negative tax rate. So rewriting and specifying the dictator's problem we get

----

[13] The path of capital accumulation.

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) +$$

$$\beta\left[ (A - B\tau)\log(\tau\,(1 + rs^*)\,y_0) + (1 - (A - B\tau))U^{exit} \right]$$

$$\text{s.t.} \quad s^* = \frac{r\delta(1-\tau)-1}{r(1+\delta)} \tag{3.28}$$

$$\text{and} \quad 0 \le \Pr(survival) = (A - B\tau) \le 1$$

Since we already know that $s$ is determined by the representative household, which actually chose $s^*$ in order to maximize its utility of consumption in the two periods, we can substitute it into the problem above to get the complete dictator's problem

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) + \tag{3.29}$$

$$\beta\left[ (A - B\tau)\log(\tau\,(1 + \frac{r\delta(1-\tau)-1}{(1+\delta)})\,y_0) + (1 - (A - B\tau))U^{exit} \right]$$

Differentiating with respect to $\tau$ we get the first-order condition for the above problem. We allow for the possibility that this condition is either constantly positive or negative, so corner solutions may be found. First-order condition is then

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} + \beta\left[ -B\left( \log\left( \tau\left( 1 + \frac{r\delta(1-\tau)-1}{1+\delta} \right)y_0 \right) \right) + \right.$$

$$\left. + (A - B\tau)\left( \frac{1 + r(1-2\tau)}{\tau(1 + r(1-\tau))} \right) + BU^{exit} \right] = 0$$

$$\tag{3.30}$$

and rearranging terms we get

$$\tau^{-1} + \beta\left[ A\left( \frac{1 + r(1 - 2\tau)}{\tau(1 + r(1 - \tau))} \right) + BU^{exit} \right] = \tag{3.31}$$

$$\beta\left[ B\left( \log\left( \tau\left( 1 + \frac{r\delta(1 - \tau) - 1}{1 + \delta} \right)y_0 \right) \right) + B\tau\left( \frac{1 + r(1 - 2\tau)}{\tau(1 + r(1 - \tau))} \right) \right]$$

This last equation, to repeat, illustrates that the self-interested dictator chooses the policy that equates the expected marginal benefits from taxation to the marginal cost that this rate of extraction has in reducing the probability of being able to enjoy future rents from power, but increasing those of getting the post-exit value, $U^{exit}$, instead.

Following the structure of the first-order condition detailed in the expressions (3.24) and (3.25) detailed in the previous subsection, we have that

$$U_{R_0}\frac{\partial R_0}{\partial \tau} = \tau^{-1}$$

$$\frac{\partial p(\tau)}{\partial \tau} = -B$$

$$U_{R_1}\frac{\partial R_1}{\partial \tau} = \left( \frac{1 + r(1 - 2\tau)}{\tau(1 + r(1 - \tau))} \right)$$

where $\frac{\partial y_1}{\partial \tau} = -r\delta\left( \frac{y_0}{\delta + 1} \right)$

where the first and third expressions are the marginal utilities of extraction in periods 0 and 1 respectively. The second defines the marginal cost of taxes in terms of likelihood of retaining power; and the fourth the marginal cost of taxation in terms of output for period $t=1$.

To get the equilibrium rate of rent-extraction we would have to solve for $\tau$ the expression (3.30) above, nonetheless, as it can not be analytically done, we will proceed by solving it with the help of some tables and figures based on numerical simulations. In doing so, the comparative statics will be developed with respect to the terms of interest, that is, the effects on $\tau^*$ -the equilibrium tax rate- of a marginal change in the variables below. From first-order condition (3.30) one can easily deduce that the optimal tax rate, $\tau^*$, is going to be a function of the following parameters: The rate of return ($r$), the discount factors ($\delta$ and $\beta$), the initial income ($y_0$), the security term ($A$), the sensitivity term ($B$) and the post-exit pay-off ($U^{exit}$), so we get that

$$\tau^* = \tau^*(\underbrace{r, y_0, \delta, \beta}_{\substack{\text{Economic} \\ \text{conditions}}} ; \underbrace{A, B, U^{exit}}_{\substack{\text{Accountability} \\ \text{function}}})$$

Thus, we can distinguish two sorts of variables that determine both the optimal rate of rent-extraction chosen by the dictator and the probability of staying in power. On the one hand, the underlying economic conditions under which the dictator seeks to maximize his own consumption consist of three elements: The initial income, the rate of return and the discount factors. On the other hand, the equilibrium is determined by the accountability function, which has the three elements mentioned above: $A$, $B$ and $U^{exit}$. The following sections are devoted to carefully develop comparative statics exercises combining the effects of several of the aforementioned parameters.

### 3.4. Comparative statics

*3.4.1. Comparative statics with regard to A (security)*

As explained before, the parameter *A* captures the structural security a dictator has once in power. It is the intercept of the linear probability function used so far: $(A - B\tau)$. As *A* increases, so does the overall level of dictator's security, that is, he faces lower probabilities of being toppled by whatever actor.

Comparative statics with regard to *A* are, then, based on $\dfrac{\partial \tau^*}{\partial A}$,

i.e., the partial derivative of $\tau^*$ with respect to *A*, which using general notation and the implicit function theorem is

$$\frac{\partial \tau^*}{\partial A} = -\frac{F_A}{F_\tau} = -\beta \frac{U_{R_1} \dfrac{\partial R_1}{\partial \tau}}{SOC} \qquad (3.32)$$

which is positive due to the fact that the second-order condition (*SOC*) is negative, and dictator's marginal utility of rents is increasing in $\tau$, so $U_{R_1}$, $\dfrac{\partial R_1}{\partial \tau} > 0$.

Since there are other parameters implied in the determination of the optimal rate of extraction, the effect of changes in *A* values will be analyzed in relation to different values of other parameters ($B$, $U^{exit}$ and $y_0$) to check whether its effect changes under different underlying conditions. So we will be performing mainly the mixed partial derivatives of $\tau^*$ with respect to *A* and *B*; formally, $\partial^2 \tau^* \big/ \partial A \partial B$.[14]

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[14] It should be equal to $\partial^2 \tau^* \big/ \partial B \partial A$ by Schwarz Theorem.

The simulations assume specific values for the parameters that describe the economy listed in the previous section just for illustrative purposes. They are: $\delta$, $\beta=0.95$, $r=1.2$ and, for the moment $y_0 = 2$ -so initial income is low- and $U^{exit} = -4$ and -20 (two dissimilar post-exit accountability values). Table 3.1 shows the optimal values of $\tau^*$, obtained solving the first-order condition numerically for $\tau$ (recall that $\tau=1$ implies total confiscation).

Numbers in bold represent the maximum tax rate allowed by the probability constraint ($0 \le (A-B\tau) \le 1$) when a corner solution exists and it would actually correspond to $\tau^*=1$, that is, when the first-order condition is positive.[15] Note that in the table there are some numbers in parentheses for the high values of sensitivity ($B$) and low $A$'s as well. The reason is that they do not correspond to the actual optimal point resulting from solving the first-order condition for $\tau^*$ numerically since the results one gets from doing so yield negative survival probabilities. Therefore, they are corner solutions too. For example, when $A=0.1$ and $B=0.7$, the result of the first-order condition equation is $\tau^* = 0.438$, which would be the optimal tax rate to be chosen by the ruler. Nonetheless, substituting these values in the probability function $(A - B\tau^*)$ one gets (0.1- 0.7*0.438) = -0.206, which is not possible since, by probability theorems, $0 \le \Pr(survival) = (A - B\tau) \le 1$. The maximum $\tau^*$, therefore, is $A/B \le 1$. Note, as well, that when $A=0.1$ and $B=0.3$, even though the optimal solution would be 1 (corner solution), the dictator can only set $\tau^*=0.333$ because of the restriction posed by the probability function. So numbers in bold and in parentheses are these maximum tax rates admitted by the constraints on the probability numbers, namely, $A/B$.

---

[15] See condition (3.27) for the effective constraint on $\tau^*$.

*Table 3.1. Optimal predicted tax rates for different values of A and B*

| | | | | | **B** | | | |
|---|---|---|---|---|---|---|---|---|
| | $U^{exit}$ | 0.1 | 0.3 | 0.5 | 0.7 | 0.9 | 1.2 | 2 |
| 0.1 | -4 | **1** | **0.333** | (0.2) | (0.142) | (0.111) | (0.083) | (0.05) |
| | -20 | 0.544 | 0.191 | 0.117 | 0.085 | 0.067 | 0.051 | 0.031 |
| 0.3 | -4 | **1** | 0.883 | 0.557 | 0.416 | (0.333) | (0.25) | (0.15) |
| | -20 | 0.593 | 0.218 | 0.135 | 0.098 | 0.077 | 0.059 | 0.036 |
| 0.5 | -4 | **1** | 0.891 | 0.599 | 0.454 | 0.369 | 0.291 | 0.192 |
| | -20 | 0.633 | 0.245 | 0.152 | 0.111 | 0.088 | 0.067 | 0.041 |
| 0.7 | -4 | **1** | 0.896 | 0.634 | 0.489 | 0.400 | 0.317 | 0.210 |
| | -20 | 0.665 | 0.270 | 0.169 | 0.124 | 0.098 | 0.075 | 0.046 |
| 0.9 | -4 | **1** | 0.9 | 0.664 | 0.520 | 0.429 | 0.342 | 0.227 |
| | -20 | 0.692 | 0.294 | 0.186 | 0.136 | 0.108 | 0.082 | 0.051 |
| 1 | -4 | **1** | 0.901 | 0.677 | 0.535 | 0.442 | 0.353 | 0.236 |
| | -20 | 0.703 | 0.305 | 0.194 | 0.143 | 0.113 | 0.086 | 0.053 |

*A* (row group label at left)

Note: Numbers in bold and in parentheses represent the maximum tax rate allowed by the probability constraint.

Let us now examine the effect of $A$ on $\tau^*$. When sensitivity is very low (in this case, when $B = 0.1$) and the exit value is -4, the security dimension has no effect on the optimal rate of extraction since the dictator always chooses the take everything setting $\tau^* = 1$ given that it barely affects his probability of keeping power. Apart from this case, we can easily demonstrate that the effect of security on the rate of extraction is positive for the rest of values of $B$. Formally we get then that under this very particular setting

$$\left. \frac{\partial \tau^*}{\partial A} \right|_{B>0.1} > 0 \, .$$

When we increase the exit value to -20, the positive effect of security on graft takes place at all levels of sensitivity. So we can

state that in general $\frac{\partial \tau^*}{\partial A} > 0$. Different security conditions can make an important difference in the economic results of a country under authoritarian rule. A very secure dictator with $A=1$ and quite insensitive (for instance $B=0.3$) expecting a relatively bad exit value (-4) will choose a tax rate of 0.901, expropriating almost all the income produced in his country, while a much insecure one, with $A=0.1$, will just tax at a rate of 0.333.

Why is the effect of $A$ on $\tau^*$ positive? Recall equation (3.25): Since under this functional form, security does not affect the slope ($\partial p(\tau)/\partial \tau$) (which is negative), and given that -as shown in subsection 3.2.3- the possible restraining effect of ($\partial y_1/\partial \tau$)< 0 is ineffective in this framework, $A$ only affects the right-hand side of (3.25), i.e., the weight of future benefits of extraction. This means that, in the first-order condition, the marginal cost in terms of decreased survival probability is not affected by the size of the security parameter. On the contrary, it only influences positively the likelihood of staying in power in $t =1$ and getting rents then.

### 3.4.2. Comparative statics with regard to B (sensitivity)

Returning to Table 3.1, we can observe that the effect of the sensitivity parameter on the optimal rate of extraction is negative for all values of A. Formally, then, $\partial \tau^*/\partial B < 0$. The reason is that a higher slope of the accountability function increases the marginal cost of rising taxes in terms of the probability of retaining power in the next period and getting $U^{exit}$ instead. This is due to the fact that $\partial p(\tau)/\partial \tau = -B < 0$, so using the implicit function theorem we obtain

$$\frac{\partial \tau^*}{\partial B} = -\frac{F_B}{F_\tau} = -\beta \frac{U^{exit} - U(R_1) - \tau U_{R_1} \dfrac{\partial R_1}{\partial \tau}}{SOC} \qquad (3.33)$$

where the denominator is negative -from the second-order condition (*SOC*)- and the numerator is negative as well as long as the utility of staying in power is higher than that of losing it ($U^{exit}$).

The effect of this parameter remains quite homogeneous for all values of *A*. This effect is, at the same time, stronger when changes occur in the small values of B. For instance, when A=0.5 (and $U^{exit}$ = -20), a two point increase in *B*, from 0.1 to 0.3, reduces the optimal tax rate from 0.633 to 0.245, whereas when *B* is already high, like an increase from 1.2 to 2, has more or less the same marginal effect reducing $\tau^*$ from only 0.067 to 0.041.

This dimension of the ruler's accountability reveals to be fundamental to understand economic results under dictatorship (and, presumably, under any other regime). Its effect on the tax rate is much bigger than the effect of the security parameter. The reason is simple. Through the sensitivity parameter the extraction rate affects the probability of staying in office and, as a result, the time preference of the autocrat. This forces him to trade off self-enrichment at present time with survival and more rents in the future. The lower the sensitivity level is, the weaker the trade-off that the dictator has to face.

### 3.4.3. Comparative statics with regard to $U^{exit}$ (pot-exit utility)

Remember that $U^{exit}$ stands for the utility the dictator may get once he has been deposed entailing, therefore, some very different scenarios (as will be shown in Chapter 7). The effect of the exit utility values is as follows: As dictators perceive and foresee a more negative utility for them after losing power, they will tend to

restrain their own actions with regard to graft while staying in power. Formally, thus, we have that $\partial\tau^*/\partial U^{exit} > 0$. The logic is straightforward: The lower the exit value, the higher the relative utility of remaining in power is relative to that of losing it, and to assure this, lower taxes must be fixed.

*Table 3.2. The effects of $U^{exit}$ on the predicted tax rate for different values of A and B*

| | | $U^{exit}$ | | | | |
|---|---|---|---|---|---|---|
| *A* | *B* | -2 | -4 | -7 | -10 | -14 |
| 0.3 | 0.2 | **1** | **1** | 0.782 | 0.584 | 0.438 |
| 0.3 | 0.7 | **0.428** | 0.416 | 0.262 | 0.190 | 0.139 |
| 0.3 | 2 | (0.15) | (0.15) | 0.104 | 0.073 | 0.052 |
| 0.8 | 0.2 | **1** | **1** | 0.831 | 0.672 | 0.530 |
| 0.8 | 0.7 | 0.802 | 0.505 | 0.330 | 0.245 | 0.182 |
| 0.8 | 2 | 0.362 | 0.219 | 0.135 | 0.097 | 0.069 |

Besides, as can be easily checked in Table 3.2, the effect of this post-exit value turns out to be very important in determining the effective level of rent-extraction. The differences this parameter can generate without changing the values of *A* and *B* are enormous. For instance, when security is relatively high (*A* = 0.8) and sensitivity has an intermediate level (say, 0.7), we see that for a $U^{exit}$ = -2 the optimal tax rate is 0.802, which implies almost total confiscation, whereas if the exit utility is very high, -14 (e.g., being imprisoned), the optimal rate of extraction is only 0.182, which is much more benevolent.

There is another interesting effect of the exit utility which takes place mainly through the effect of the security parameter (*A*). We have already seen that, in general, the higher exit negative value is, the lower the tax rate set by the dictator will be. When

this post-exit utility is very low the leader taxes with the aim of getting rents but also seeking not to lose power, so the effect of the probability constraint becomes less important. The lower the $U^{exit}$, the higher the rulers' temptations to grab a higher portion of the cake for themselves are. It is in these cases when the probability constraint may become really binding, above all with respect to the security parameter ($A$). The pattern can be easily observed in Figure 3.2. When $U^{exit}$ is very low (-20) the average effect of the security parameter on the tax rate is constant and positive. Nonetheless, when $U^{exit}$ is only relatively low (-4) the effect of $A$ is no longer constant, it turns out to be very strong and positive for its low values. The weight of the security parameter is higher when the exit utility is low, so as the dictator is more secure he prefers to risk a little bit more and extract more rents, since he does not fear that much the consequences of being overthrown. Actually, the associated survival probabilities for these low values of $A$ are zero. They are so insecure that extract as much as they can and run.

The effect on the sensitivity parameter is negligible instead as Figure 3.2 shows (right-hand side) as well. A higher $U^{exit}$ only makes the slope somewhat increase, so the strong negative effect of $B$ is mainly found in its low values (see dashed line).


### 3.4.4. Poor and rich dictatorships (the effect of income)

Initial conditions play a fundamental role in many models of economic growth and development. Concretely, following Ray (2000), in models with multiple equilibria, persistent disparities on long-run cross-country growth patterns have two main reasons. Firstly, underdevelopment emerges as a consequence of a self-fulfilling failure of expectations. The key mechanism here is that of complementarity. Thus, two opposite outcomes may be

*Figure 3.2. The effect of security and sensitivity on the equilibrium tax rate for two values of the exit utility*
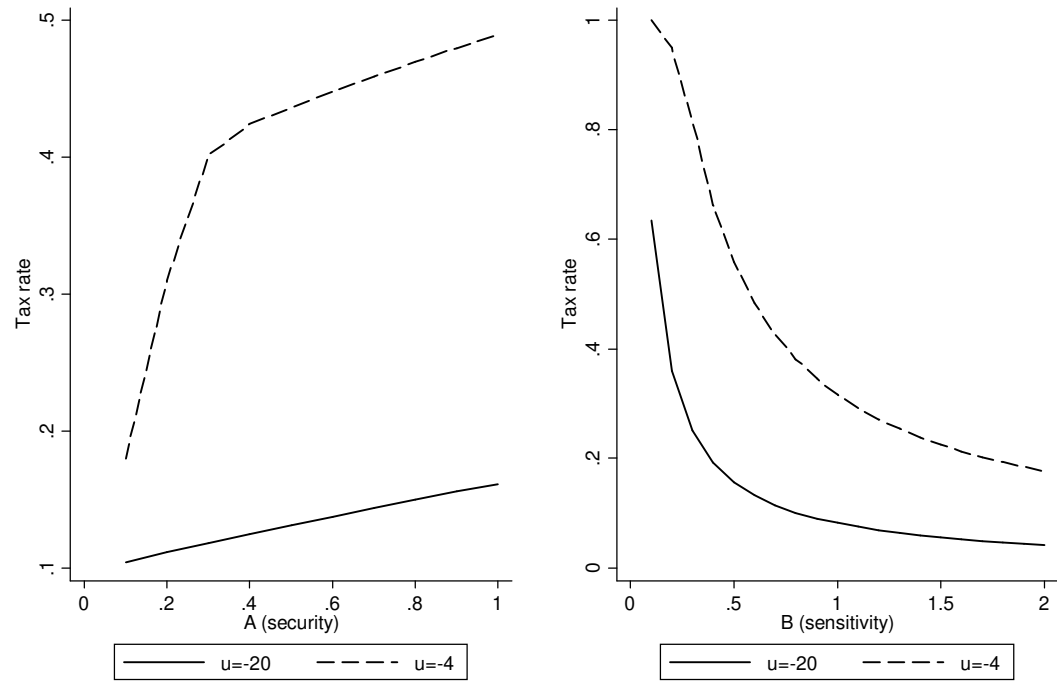
observed. One in which everybody invests since they expect that others will do so; and the other, where a coordination failure occurs and no investment takes place. This may happen either through inter-industry links or demand complementarities (Murphy, Shleifer and Vishny, 1989).

The second group of models stresses the role of certain historical configuration in the selection among various equilibria. These legacies do not have to be necessarily linked to the initial levels of capital stock or income. Different sets of factors may determine the path towards one equilibrium or another, for instance, inequality, traditions, institutional structures, etc. (Ray, 2000).

Following the setting of the model developed in the second section, "better" initial conditions, namely, higher $y_0$, augment the value of staying in power since there is more output from which taxes can be collected. Therefore, if one holds taxes constant, an increase in $y_0$ involves directly more rents that go to the hands of the ruler. Thus, if the dictator can get the same amount of rents but taxing less, and, consequently, facing a lower risk of being thrown out, it can be hypothesized that the higher the level of initial income, the lower the optimal tax rate chosen by the self-interested dictator. Table 3.3 proves it by taking different values for *A*, *B* and $y_0$.[16]

Whatever the chosen values for *A* and *B* are, a higher initial income always leads to a lower level of rent-extraction, so we have that $\partial \tau^* / \partial y_0 < 0$ for all possible specifications. The strongest effect of initial income are found in the case of a secure and somewhat sensitive ruler ($A = 0.8$, $B = 0.7$); while when the dictator is secure and quite insensitive (0.2), the negative effect of income is not so important. In the first case, taxes go from a maximum of 0.576 to a minimum of 0.373 -when initial income is 15-. On the other hand, for the secure/insensitive ruler, going from

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[16] We assume $U^{exit}$ = -4 and $r$ =1.2 for illustrative purposes.

an income of 1 to an income of 15 only leads to decrease the tax rate in 0.102 points.

*Table 3.3. The effect of initial income on the optimal predicted rate of extraction*

|   |   | $y_0$ | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| *A* | *B* | 1 | 2 | 4 | 10 | 15 |
| 0.3 | 0.2 | **1** | **1** | **1** | 0.936 | 0.884 |
| 0.3 | 0.7 | (0.428) | 0.416 | 0.366 | 0.316 | 0.298 |
| 0.3 | 2 | (0.15) | (0.15) | (0.15) | 0.128 | 0.120 |
| 0.8 | 0.2 | **1** | **1** | 0.999 | 0.927 | 0.898 |
| 0.8 | 0.7 | 0.576 | 0.505 | 0.450 | 0.393 | 0.373 |
| 0.8 | 2 | 0.254 | 0.219 | 0.192 | 0.164 | 0.155 |

In addition, for equal levels of initial income equilibria can differ a lot. Take, for example, the case when $y_0 = 1$, that is, a backward economy. In this case, we find two extreme values for the rate of extraction; the highest one is 1, which means total expropriation. However, the minimum we find for the assumed values is 0.15, which is a relatively benevolent tax rate. When $y_0 = 15$, enormous differences are found despite the country is richer. The maximum tax rate under this conditions is as high as 0.898 (for the secure/insensitive ruler), while the minimum is just 0.155 (when the leader is very sensitive).

Similarly, although the figures are not reported, we have that $\partial \tau^* / \partial r < 0$, so the rate of return of capital has a negative effect on rent extraction as it increases. A higher rate of return implies a higher output and it is exogenous, so it allows the dictator to put more money into his pockets without necessarily increasing the risks of being unseated.

### 3.4.5. Growth rates and survival probability

Once analyzed the effect of the main parameters in the model on the optimal rate of extraction chosen by the dictator, we proceed now to see how it reflects on the growth rates, $\gamma^*$, and the autocrats' survival probability.

Regarding the two main parameters of the accountability function (*A* and *B*), Figures 3.3 and 3.4 show their effect on both the growth rate as well as the probability of survival based on the simulations carried out for different values of the other parameter. The values for the simulations are as follows: *A* goes from 0.1 to 1 with increments of 0.1, while *B* goes from 0.1 to 3 with increments of 0.1 as well. The exit value, $U^{exit}$, has been set to -20.

In Figure 3.3 we observe the effect of the security parameter for three values of *B*. As *A* (security) increases, so does the average autocrats' probability of survival; note that the slope of the line is pretty high in all cases. On the contrary, growth rates are decreasing with *A* (security). Note that this effect is stronger when sensitivity is low. Hence, more secure leaders are able to predate at higher rates. As they feel more secure in power, dictators decide to extract a higher portion of rents; if, besides, sensitivity is low, the economic tragedy is unavoidable. Remember that this is so because the security parameter is independent of *τ* (tax rate), therefore, it is not part of the slope. As a result, if it is higher, it increases the probability of staying in power regardless of the rate of extraction.

For *B*, the trends are the opposite with respect to those found for A, that is, there is a positive and strong relationship between growth and the sensitivity parameter, although the slope is decreasing; whereas the relationship between the dictators' probability of survival and this parameter is negative and very tenuous (see Figure 3.4). As it can be seen, for low security values, the lines are almost flat. This has to do with the fact that dictators do not let their odds of being deposed to decrease that much; so when A is already low, no extra risk is taken.

Figure 3.3. The effect of A on the growth rate and survival probability for three values of B ($U^{exit}$=-20)

Note: u=-20
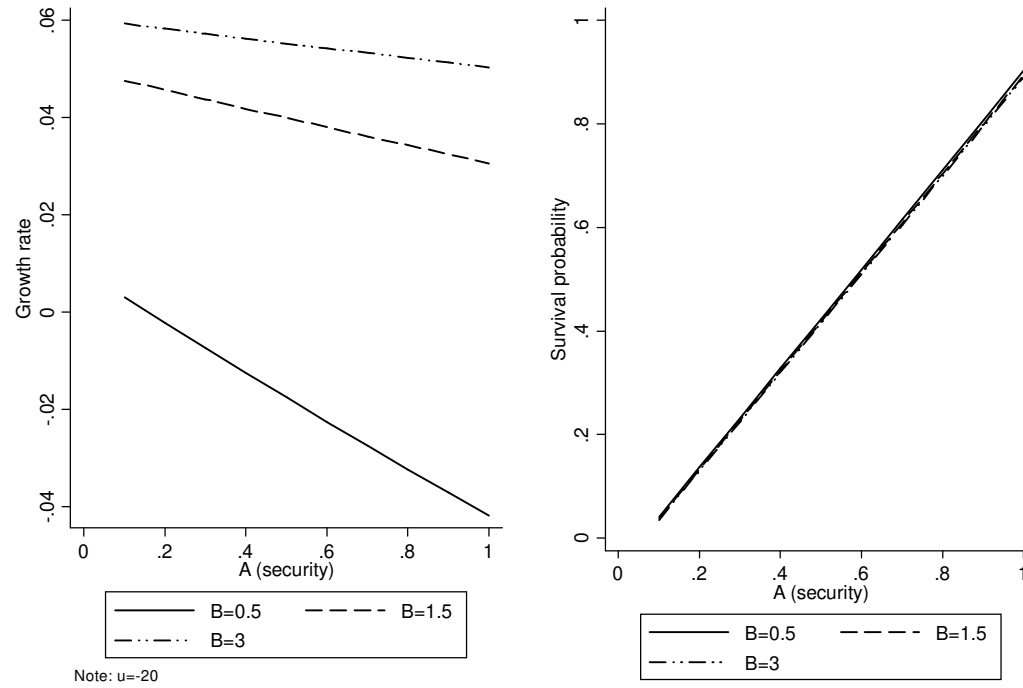
*Figure 3.4. The effect of B on growth and survival probability for three values of A ($U^{exit}$=-20)*

Note: u=-20
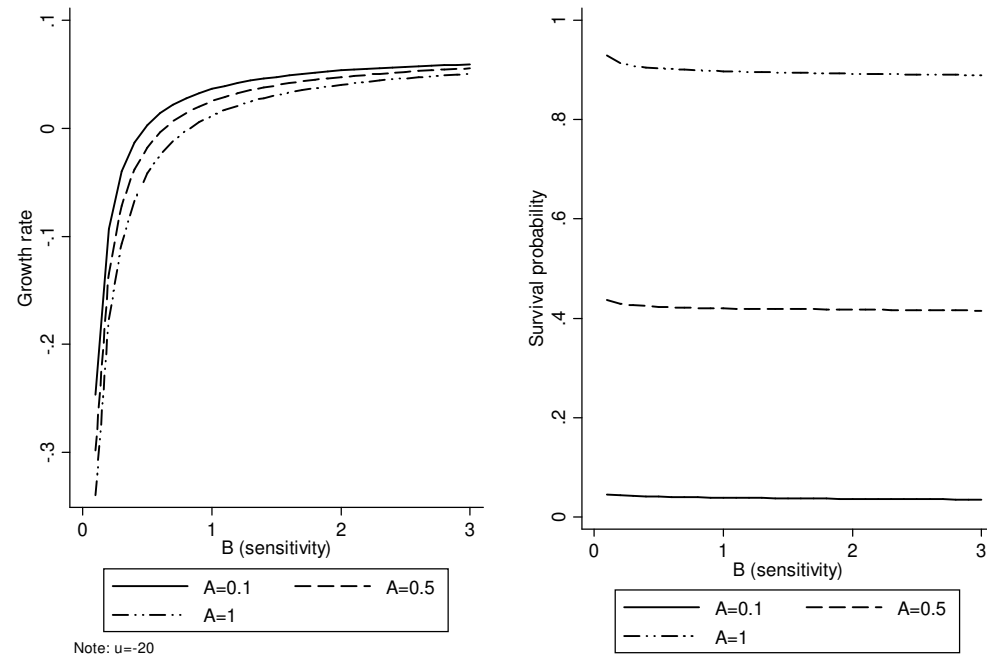
### 3.5. Economic results under linear accountability function

At this point we can draw a first map of the expected growth rates for different types of dictators according to the two main dimensions of the accountability function: Security and sensitivity (and controlling for the exit value). Combining both dimensions we will make a general prediction about the expected growth rates that each type of ruler will attain.

The following Table (3.4) shows the predicted growth rates for different combinations of the security and sensitivity values according to the values assumed so far. This table groups the range of values for the security and sensitivity parameters in three intervals and shows the predicted growth rates for two different values of the exit utility.

*Table 3.4. Combining the three accountability dimensions: Predicted growth rates*

| | | Sensitivity | | |
| --- | --- | --- | --- | --- |
| *Security* | $U^{exit}$ | (0.1-0.9) | (1-1.9) | (2-3) |
| (0.1-0.3) | -4 | -.214 | -.012 | .024 |
| | -20 | -.039 | .043 | .055 |
| (0.4-0.6) | -4 | -.318 | -.082 | -.022 |
| | -20 | -.060 | .036 | .051 |
| (0.7-1) | -4 | -.339 | -.105 | -.037 |
| | -20 | -.080 | .029 | .047 |

The resulting portrait is clear. Those rulers who are expected to be the most predatory ones (highest graft and lowest growth rates) are those who enjoy the lowest levels of sensitivity and the

highest levels of security and that, besides, would not face an uncertain or negative post-exit scenario.[17] A higher level of security broadens the range of possible tax rates the dictator can apply, while the low sensitivity implies that the probability of being thrown out will not be much affected by that tax rate. The result is obvious, a high level of rent extraction. The trade-off between more rents today and lower probability of staying in power in the next period is very much attenuated in this case.

On the contrary, the rulers who are expected to improve economic performance are those very sensitive and not much secure. As political survival is fragile and very dependent on the tax rate chosen, the options for the rent-maximizing dictator facing a strong and effective trade-off between "stealing" more and remaining in power are reduced.

Between these two extremes there is a wide range of possibilities; these, however, seem to be mainly driven by the importance of the sensitivity parameter. When $U^{exit} = -20$, note that the first three best performing cells are those with the highest level of sensitivity and, then, ordered according to their level of security. The same happens with the other two levels of sensitivity. When $U^{exit} = -4$, the figures change slightly since the second best performing ruler is that with a moderate level of sensitivity (1-1.9) but the lowest level of security. This can also be observed if we group the values of the sensitivity parameter into six categories (not reported).

## 3.6. Alternative accountability functions

So far we have assumed the simplest possible form for the accountability function (linear), so we have been able to concentrate on the comparative statics resulting from the solution of the model. Nonetheless, one question automatically emerges:

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[17] We know as well that richer dictatorships will impose lower taxes so they will grow at higher rates.

Are the results affected by the form of the accountability function? In other words, we have to check if the patterns so far identified hold under different specifications, that is, after changing the underlying assumptions. Thus we will be able to test whether the previous results can be generalized or not. If results actually change, alternative hypotheses can be derived.

The linear probability function has nice properties that simplify the notation and help to understand the theoretical concepts behind the model, such as 'security' and 'sensitivity'. However, under this concrete specification and due to linearity, the effect of the tax rate on the survival probability is constant for the whole range of values of $\tau$, i.e., the slope $B$ is constant. This is no longer true when the shape of the probability function is either concave or convex. In the first case, the slope is decreasing, while in the second it is increasing. Figure 3.5 portrays the alternative functions for the very same values of $A$ and $B$.[18]

The next subsections explore different variations in the form of the accountability function. The first part of the model in which households choose their optimal saving rate does not change.

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[18] The probability of survival is represented in the *y*-axis, while the rate of extraction is represented in the *x*-axis.

*Figure 3.5. Alternative forms of the political accountability function for the same values of security and sensitivity*
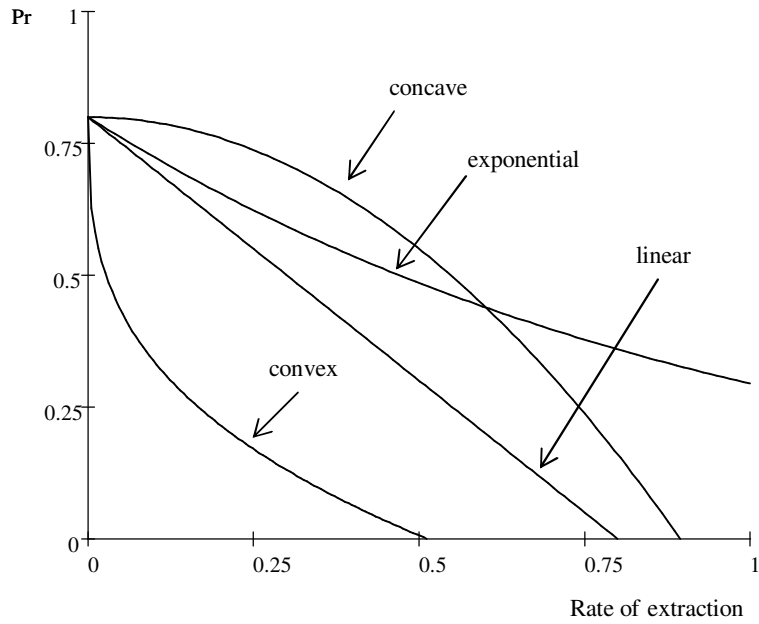


Note: *A*=0.8 and *B*=1. For the convex function *b=3*.

### 3.6.1. Concave accountability function

To keep things simple, let us assume a quadratic probability function of the following form

$$0 \leq \Pr(survival) = (A - B\tau^2) \leq 0 \qquad (3.34)$$

A is still the security parameter -the intercept- and B the sensitivity one. Note that since $f''(\tau) < 0$, the slope of the function is decreasing. This implies that marginal increases in the extraction rate have small effects on the probability of staying in power at low levels of $\tau$, but this effect becomes bigger as $\tau$

increases. Put it in a different way, if taxes are low and the dictator wants to increase self-enrichment, he can do so without affecting much his chances to retain power in the next period.

As a result of this function, the effective constraint for the dictator with regard to rate of extraction is now

$$0 \leq \tau^{\min} \leq \tau^* \leq \tau^{\max} = \frac{\sqrt{AB}}{B} \leq 1 \qquad (3.35)$$

So the dictator's problem is now

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) +$$

$$\beta \left[ (A - B\tau^2) \log(\tau\,(1 + rs^*)y_0) + (1 - (A - B\tau^2))U^{exit} \right]$$

$$\text{s.t. } s^* = \frac{r\delta(1-\tau)-1}{r(1+\delta)} \qquad (3.36)$$

$$\text{and } 0 \leq \Pr(survival) = (A - B\tau^2) \leq 1$$

Under this new setting, first-order condition is

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} + \beta \left[ -2B\tau \left( \log\left( \tau \left( 1 + \frac{r\delta(1-\tau)-1}{1+\delta} \right) y_0 \right) \right) + \right.$$

$$(3.37)$$

$$\left. + (A - B\tau^2)\left( \frac{1 + r(1-2\tau)}{\tau(1 + r(1-\tau))} \right) + 2B\tau U^{exit} \right] = 0$$

Note that the structure of the equation is very similar to that of (3.30). Then, the question is, does concavity make any difference? Table 3.5 reports the equilibrium tax rates for both types of accountability functions and for common values of the security and sensitivity parameters.[19]

*Table 3.5. Comparing linear and concave accountability functions:*
*Predicted tax rates*

| Security | | Function | B (sensitivity) | | |
|---|---|---|---|---|---|
| | | | 0.5 | 1.5 | 3 |
| | 0.2 | Linear | 0.126 | 0.044 | 0.023 |
| | | Concave | 0.249 | 0.146 | 0.104 |
| A | 0.7 | Linear | 0.169 | 0.06 | 0.031 |
| | | Concave | 0.287 | 0.17 | 0.122 |
| | 1 | Linear | 0.194 | 0.07 | 0.036 |
| | | Concave | 0.306 | 0.183 | 0.132 |

The results are the same than in the linear specification with regard to the general signs of the comparative statics. Thus, as above, the effect of security on the rate of rent-extraction is positive, while the effect of sensitivity is negative; so again: $\partial\tau^*/\partial A > 0$ and $\partial\tau^*/\partial B < 0$. The differences are found in the size not in the directions of the effects. On average, under a concave accountability function, the level of graft is higher for all values of *A* and *B* considered to illustrate these patterns. Why is that so? Under this setting, all rates of extraction are relatively low (mainly due to the fact that $U^{exit}$ = -20, and could also be because of $y_0$ ); for the concave case, this implies that the dictator is in the "low

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[19] The rest of the parameters in the equation are held constant at the following values: $y_0$ =2, $r$ =1.2, $\delta$, $\beta$= 0.95, and $U^{exit}$ = -20.

risk section" of the curve, given that the slope is also a function of $\tau$, that is, that part in which increases in taxes lead only to small increases in the risk of losing power.

In general, the differences in the size of the effect of *A* for both types of function are small, only somewhat higher for the linear function when sensitivity is low, and just the opposite when sensitivity is high (1.5 and 3). What is always higher under the concave specification is the effect of *B*. Note that in the first order condition, the marginal costs in terms of survival probability are for the concave case multiplied by $2B\tau$, whereas only by *B* in the linear case, so now the slope is also a function of the rate of rent-extraction.

### 3.6.2. Convex functions

Convex probability functions can be of two types, which differ in the effective constraint that they may impose on the dictator's options based on their properties and on whether *A* (security) affects the slope of the function. In spite of these differences to be explored below, in both functions the slope is increasing.

The first type we are going to discuss can be written, in general terms, as follows

$$0 \leq \Pr(survival) = (A - B\tau^{\frac{1}{b}}) \leq 0 \qquad (3.38)$$
$$\text{where} \quad b \geq 2$$

Given the function assumed above now, the range of possible values that $\tau$ may take is

$$0 \leq \tau^{\min} \leq \tau^* \leq \tau^{\max} = \left(\frac{A}{B}\right)^b \leq 1 \qquad (3.39)$$

Thus dictator now maximizes

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) + \tag{3.40}$$

$$\beta \left[ (A - B\tau^{\frac{1}{b}}) \log(\tau\,(1 + rs^*)\,y_0) + (1 - (A - B\tau^{\frac{1}{b}}))U^{exit} \right]$$

so first-order condition yields the following result

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} +$$

$$+ \beta \left[ -B\frac{\tau^{\frac{1-b}{b}}}{b} \left( \log\left( \tau\left( 1 + \frac{r\delta(1-\tau)-1}{1+\delta} \right)y_0 \right) \right) + \right.$$

$$\tag{3.41}$$

$$\left. + (A - B\tau^{\frac{1}{b}})\left( \frac{1 + r(1 - 2\tau)}{\tau(1 + r(1-\tau))} \right) + B\frac{\tau^{\frac{1-b}{b}}}{b}U^{exit} \right] = 0$$

where now $\dfrac{\partial p(\tau)}{\partial \tau} = -B\dfrac{\tau^{\frac{1-b}{b}}}{b}$ .

As in the concave function, the slope of the accountability function that determines the marginal cost of increasing taxes is a function of $\tau$, and now also of $b$. Besides, as in the concave and linear cases, this marginal cost in terms of survival chances is again independent of the security parameter $A$. Therefore, as in the previous cases, we get that $\partial\tau^*/\partial A > 0$. Besides, we can also affirm that, as usual, the effect of $B$, for the reasons detailed, is negative: $\partial\tau^*/\partial B < 0$. No direct comparisons can be made with the rates of extraction in Table 3.5 since it would imply choosing a value for $b$. However, following the previous argumentations we

can affirm that they are going to be lower than those got under the linear specification. Given the convexity of the function, at low values of $\tau$, a small increase in the rate of extraction translates into a high decrease in the probability of survival. Therefore, the effect of $B$ is also expected to be higher.

What about the role of $b$? Simple manipulation shows that the slope of the accountability function is positive in $b$

$$\partial\left(-B\frac{\tau^{\frac{1-b}{b}}}{b}\right)\Bigg/\partial b = B\tau^{\frac{1-b}{b}}\left(\frac{\ln\tau+b}{b^3}\right)>0$$

as a result, at lower values of $\tau$ and high $b$, the slope of the accountability function becomes rapidly flat, therefore, taxes can be increased taking only low risks. Therefore, we can state that $\partial\tau^*/\partial b > 0$.

### 3.6.3. The exponential accountability function

The exponential probability function -a subset of the convex ones- has interesting properties that may add interesting insights to our analysis. The function can be specified as follows

$$0 \le \Pr(survival) = Ae^{-B\tau} \le 0 \tag{3.42}$$

The parameters have the usual meaning and general properties. Yet the effective constraint is totally altered in this case. Now it is simply

$$0 \le \tau^* \le 1$$

This is due to the fact that there exists no value of $\tau^*$ for which the probability of survival is absolutely 0; actually, we have that $\Pr(\text{survival}) \to 0$ as $\tau^* \to \infty$.

The dictator's problem, thus, can be simply defined as follows

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = \log(\tau\, y_0) +$$

$$\beta \left[ (Ae^{-B\tau}) \log(\tau\,(1 + \frac{r\delta\,(1-\tau)-1}{(1+\delta)})\,y_0) + (1 - (Ae^{-B\tau}))U^{exit} \right]$$

(3.43)

and first-order condition is just

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} +$$

$$+\beta \left[ -ABe^{-B\tau} \left( \log\left( \tau\left(1 + \frac{r\delta\,(1-\tau)-1}{1+\delta}\right)y_0 \right)\right) + \right.$$

(3.44)

$$\left. + (Ae^{-B\tau}) \left( \frac{1+r(1-2\tau)}{\tau\,(1+r(1-\tau))}\right) + ABe^{-B\tau}U^{exit} \right] = 0$$

An interesting new fact merits now comment. In opposition to all other accountability function specifications, in the exponential case the slope of the probability of retaining power is $\partial p(\tau)/\partial \tau = -ABe^{-B\tau}$, so it is also a function of $A$ (security), besides $B$ and $\tau$. Consequently, the security parameter is now affecting not only the marginal benefit of taxation -as before-, but also its marginal cost in terms of survival likelihood. The consequences of this must be carefully explored since the results

are going to depend thus on which of the effects prevails and under what conditions.

So far we have checked that the general patterns of the relationships between the parameters of the accountability function and the optimal rate of extraction do not vary with the form of the probability function. The exponential form is the exception. Multiple equilibria with different effects emerge. We will refer to them as the low-extraction and the high-extraction equilibrium and denote them by $\tau^{low}$ and $\tau^{high}$ respectively. Figure 3.6 shows the equilibrium values of $\tau^*$ resulting from the simulations for various values of *A*. There are two clear trends for each of the types of equilibria -low and high rent-extraction-. The effect of *B* remains unchanged, being negative for both kinds of equilibria.

Note, first, that for *A* = 0.1 there is only one equilibrium, which is corner solution entailing complete confiscation, probably as a result of setting a too low level of income ( $y_0$ ). But from there two opposite trajectories with respect to the security parameter arise: For the high-extraction set of equilibria, more security leads to higher tax rates, while for the low-extraction set, more security makes the dictator tax at lower and more benevolent rates. We have thus that

$$\frac{\partial \tau^*}{\partial A}\begin{cases} \dfrac{\partial \tau^{high}}{\partial A} > 0 \\ \dfrac{\partial \tau^{low}}{\partial A} < 0 \end{cases}$$

Besides, under this setting the effect of the initial income ( $y_0$ ) varies with both types of equilibria as well, concretely, we have that

*Figure 3.6. Multiple equilibria: The effect of A on optimal taxation*
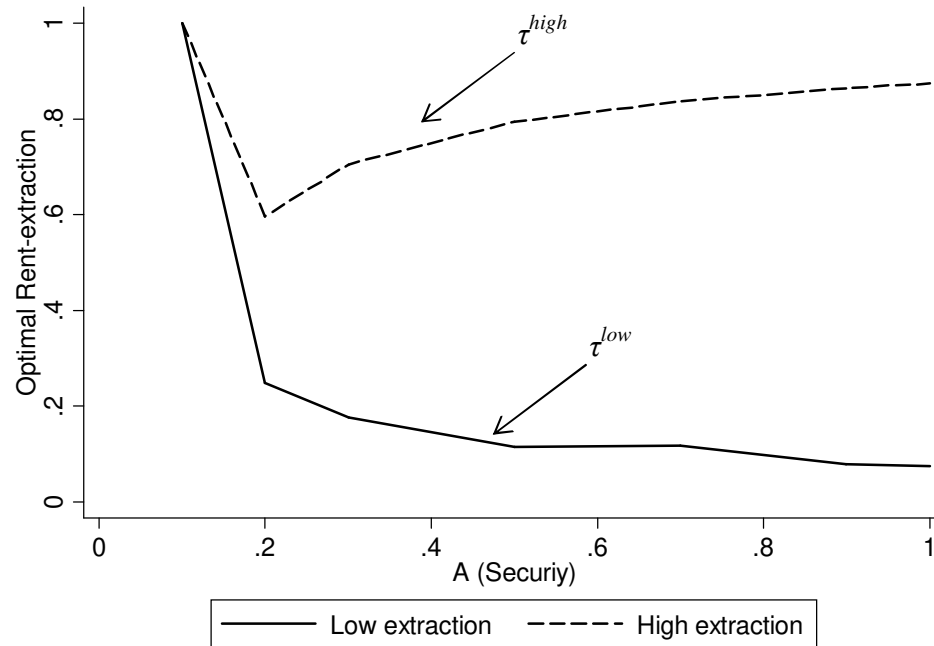
Note: u=-20

$$\frac{\partial \tau^*}{\partial y_0} \begin{cases} \dfrac{\partial \tau^{high}}{\partial y_0} > 0 \\[2em] \dfrac{\partial \tau^{low}}{\partial y_0} < 0 \end{cases}$$

so, for the high extraction rulers, a higher initial income only means a better chance to grab a bigger piece of the cake given their reduced chances to remain in power in the second period.

In sum, when exponential political survival probabilities are observed, two possible scenarios, with opposite effects on rent-extraction, growth and comparative statics results appear even under the very same underlying conditions. Rudimentary numeric calculations show that when two solutions exist -internal or corner-, the lower tax rate always provides the ruler with higher utility, so

$$U^D(\tau^{low}) > U^D(\tau^{high}) \quad \text{for all } A \geq 0.2$$

accordingly, under equilibrium, $\tau^{low}$ will be the chosen extraction rate[20] entailing that actually $\dfrac{\partial \tau^{low}}{\partial A} < 0$ and $\dfrac{\partial \tau^{low}}{\partial y_0} < 0$. Sensitivity maintains its negative effect.

### 3.7. Conclusions. *L'état c'est moi?*

In this chapter we have put the basis for a general model of the political economy of predation and accountability under

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[20] In the previous model, there also exist equilibria out of the range that are never chosen by the ruler since internal solutions always provide him with higher utility.

dictatorship. In doing so, we have defined the main concepts implied in the general formulation, such as the *accountability function* or the exit value (*judicial accountability*). The accountability function relates the rulers' policy choices with their chances of being unseated in the future, while the exit value simply represents the utility the dictator gets as a result of losing power.

Technically, we have defined the concrete forms of both the production function and the utility functions of the actors considered as well as the elements they consist of. To keep it as simple as possible, production has been assumed to be linear in capital and utility functions to be logarithmic. We have first solved the household's problem which yielded the optimal saving rate and, as a result, the rate of growth of income of the economy. The results show that if taxes are anticipated to be high, then, there is going to be a low level of private investment, and less output in the second period. The second step consisted in checking to what extent capital accumulation represents a constraint for a self-interested dictator (in a two period framework), in other words, whether the fully secure dictator is actually a "stationary bandit", using Olson's terminology. The solution for the two-period model shows that an isolated leader will rapaciously plunder the economy extracting rents at the maximum level.

Third, we have reported the first-order condition for the dictator's problem under accountability without specializing all the functions involved. The structure of this condition states that the ruler will increase the rate of extraction up to the point where his rents equal his loss in terms of lower expected probabilities of getting rents in $t+1$ instead of the exit value and the cost of reduced investment in future income, although this last part has proved to be ineffective in dodging the "grabbing hand". The probability function has been termed the political accountability function and has been specialized later on and made it to consist of two parameters. The security dimension ($A$), which is the intercept of the function and gauges the underlying stability of the dictator's rule. The second one is the sensitivity parameter ($B$), which is the

coefficient attached to the tax rate in the probability of remaining in power. The extent to what the tax rate, $\tau$, affects the probabilities of the dictator's survival is determined by this parameter then. Therefore, a high level of sensitivity implies that taxes have a bigger impact on the probability of survival.

So, the question is, what do dictators do? Under what political and economic conditions can we expect to find isolated rapacious rulers? Making an exercise of institutional engineering, for dictatorships to experience grow, their rulers should be kept accountable by two means: First, their level of security, independently of economic results, should be relatively low. On the other hand, sensitivity must be high; one should find some sort of socioeconomic conditions or institutional settings that may allow the affected groups to pressure the ruler when economic outcomes are bad. Likewise, predatory rulers are to be found in systems where security is very high while sensitivity is very low. Regarding the post-exit value, a low expected utility after leaving power will lead the ruler to restrain his greed, since the costs of losing power are high. So, if the level of political accountability is low and, in addition, the autocrat expects to be able to retain the power or leave the country in case opposition increases, corruption, confiscation and plundering will get even worse.

The economy matters as well. According to the results, lower rates of extraction will be found when the initial income and/or the rate of return to capital are high. So imagine an underdeveloped country, with poor capital endowments and small returns to it; imagine, besides, that the current dictator is secure in office, and the business and private sectors are weak so he is also insensitive. Imagine too, that he has a chopper in the backyard or a plane prepared to fly the country in case he feels really threatened. We know the result: Abusive rent-extraction, kleptocracy, negative growth rates, and poverty.

These results hold for different specifications of the form of the political accountability function. Nonetheless, there exists an alternative scenario with regard to security. In the model in which

the exponential accountability function was considered, the effect of security ($A$) on extraction turns out to be negative.

# CHAPTER 4. THEORIZING ABOUT THE POLITICAL ACCOUNTABLITY FUNCTION

## 4.1. Introduction

In the previous chapter we developed a model in which the dictator was constrained by a probability function when deciding the amount of rents he wanted to extract from the representative household. In its more simple formulation, this probability function was assumed to have the following linear form: $0 \leq (A - B\tau) \leq 1$. The function is, thus, defined by two parameters, $A$ and $B$, and the variable $\tau$, and will be referred as the accountability function. As it has been explained, $\tau$ stands for the tax rate the dictator applies to households' income in order to extract rents for his own discretionary use. The extent to which this rate of extraction affects the probabilities of the dictator's survival is determined by the sensitivity parameter $B$. And $A$ captures the autocrat's initial or structural level security.

Not all dictators are equally sensitive to performance when they are in power. Some seek legitimacy in their economic results in order to consolidate their position, whereas some others base their policies on a more or less deep ideological ground or use a democratic façade to make their decisions appear as being based upon the true popular will (Brooker, 2000). Moreover, it is not clear the extent to which we can affirm that there actually exists some kind of legitimacy under authoritarian regimes derived from good economic performance. Some kind of rational compliance

towards who is ruling in a benefit-producing way would be more appropriate in defining the process taking place under non-democratic rule.

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, and the opposition parties may resort to an *impeachment* or a motion of confidence 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. Authoritarian rulers must face, then, what Wintrobe (1998) calls the *Dictator's Dilemma*, which makes reference to the lack of information the dictator has about his actual level of support among the population. In the absence of routine ways to remove leaders, questions about constituency arise, so under certain conditions a dictator will have to pay attention to the claims of broader sectors of society, while under others, these groups can be repressed and their demands ignored.

The aim of this chapter is to theorize about and to disentangle the conditions and variables that may make a given dictator to be (or not) secure in power and under which conditions he is going to be sensitive (in accountability terms) to the performance of the economy he governs with relative autonomy. Concretely, under what conditions does taxation become an important (and significant) variable for the ruler's survival? And under what conditions security levels exhibited by rulers are going to differ? To elucidate it, the chapter is structured as follows: Section 4.2 defines the mechanisms through which political actors may overthrow the incumbent dictator and their implications for the accountability process. In Section 4.3 a simple game-theoretic model is developed to account for regime openness and accountability. Sections 4.4 and 4.5 theorize about the determinants of security and sensitivity taking into account the insights of the model. Section 4.6 concludes by detailing the hypotheses to be tested in the following chapters.

## 4.2. The mechanisms of accountability

We define as *accountability mechanisms* the means by which each of the actors may throw the incumbent ruler out or, in other words, the technologies for replacing leaders (Przeworski, 2003), which basically diverge in how costly they are.[1] As we specified in Chapter 2, we refer to accountability functions as those that relate sanctions to performance, and "to the mechanisms by which "the society" effectuates these sanctions as accountability mechanisms" (Przeworski, 2003: 93). This implicitly entails a distinction between different groups with unequal destabilizing capabilities and interests which is generally missing in models about government turnover.[2] The possibility of a coup by some elite members is the unique 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).

Moreover, 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). In the same vein, Geddes affirms that "different kinds of authoritarianism break down in characteristically different ways" (Geddes, 1999a: 117). Concretely, Geddes' (1999a) 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

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[1] 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 such events may involve.

[2] A recent exception is the work by Maravall (2005) on government survival in democratic systems.

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.

Elites may replace leaders through either formally or informally regulated ways of succession, 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, the privileged access to the incumbent dictator coalition members enjoy as well as their capacity to build their own support groups make possible a rapid change. The former method is put in practice maybe foreseeing the potential struggles for power after the 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. Luis amended the constitution in order 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.[3] Under monarchy regimes, the successor is designed mainly by the rule, either written or traditionally transmitted, of inheritance principle.[4] 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, after 61 years as monarch, Sobhuza died and Prince Makhosetive Dlamini was selected as his successor and 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.[5]

In other cases those pertaining to the ruling elite have turned to a coup or, specifically, a *palace putsch* in promoting the upcoming 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 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 1933. In a bloodless coup

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

[4] 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.

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

on July 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 attempt (Geddes, 1999a). 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 remote (see the descriptive data in Chapter 6). Back in the 70s, Tullock (1974) stated that participation in such event is determined by personal gain or loss (see also Roemer, 1985). 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 can not 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.[6] In Cuba, Batista was so confident of his

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

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 became frequent and the regime responded with a brutal repression. At last, the Cuban Revolution through a guerrilla war led by Fidel Castro and Ernesto Guevara ousted Batista in 1959.

## 4.3. A simple model

### 4.3.1. Basics

The early literature on non-democratic regimes tended to focus on repression as the main instrument to retain power, theorizing, thus, about the repressive, coercive and control capabilities -and strategies- of different types of regimes and driven principally by the turning point in that issue that the emergence of totalitarian systems represented (see Arendt, 1951; Friedrich and Brzezinski, 1961; Schapiro, 1972; Kirkpatrick, 1982). Although common sense may lead us to think of dictatorships as characterized 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. Through cooptation, rulers decrease the probability of upheaval by other groups by fragmenting them (Bertocchi and Spagat, 2001).

All dictators use a combination of cooptation and repression to lengthen their tenure. For instance, Wintrobe (1990, 1998 and 2001) characterizes different types of dictatorships according to their use of both repression and loyalty in order to maximize either power or self-enrichment. For the Soviet case, Gerhenson and Grossman (2001) state that the *nomenklatura* determined the extent of co-option and the level of repression by equating marginal benefits and marginal costs of both activities so as to maximize the utility of their standard of living conditional on their members remaining in power.

Let us put the problem in formal terms. Assume there is one policy dimension, *a*, where $a \in [0,1]$. This policy consists of the degree of regime openness, that is, the degree of control over policy and accountability of the authoritarian regime materialized in its degree of institutionalization. There are three unitary actors involved in the game: *D*, the incumbent dictator; *E*, the elite, and *O*, the opposition to the regime. The status quo level of regime control and isolation is 1, involving no control at all. Indirect utilities, with Euclidean preferences, are linear in policy outcome, so

$$U^i(a) = -|a - a_i|$$

where $a_i$ stands for the ideal policy of actor *i*, $i \in \{D, E, O\}$. For the sake of simplicity, let us assume that $a_E = 1$ and $a_O = 0$, that is, elite members prefer the regime to be tightly closed and not to share their influence in the decision-making process, so they can exclusively benefit from corruption and cronyism or any other policy of their interest. On the contrary, the opposition forces prefer a fully open regime, namely, democracy.

The timing of the game is as follows (see Figure 4.1): First, the ruler (*D*) must decide whether to repress the opposition or make it an offer on policy initiating, thus, negotiations observing $a_D$. Should he choose to repress, he succeeds in keeping the opposition under control with probability $1-h$, while he fails with probability *h*. If the dictator effectively represses opposition, policy a remains at its initial level, 1, and he must pay a cost (of repression), $\pi$, where $\pi \in [0,1]$. If the opposition wins the struggle, they set regime control at its preferred level, *a* = 0.

If the ruler chooses to approach the opposition, then *O* may accept the offer and participate within the regime's institutions or rebel. If the opposition rebels, it succeeds with probability *p* and he sets its most preferred regime and policy. The probability of

losing the struggle is, hence, $1-p$, so $a$ remains at 1 and $D$ faces repression costs. We further assume that $p > h$ due to the fact that the opposition may interpret the approach of $D$ as a signal of a certain degree of weakness, so some information is revealed on that side.

*Figure 4.1. The logic of institutionalization and cooperation under dictatorship*
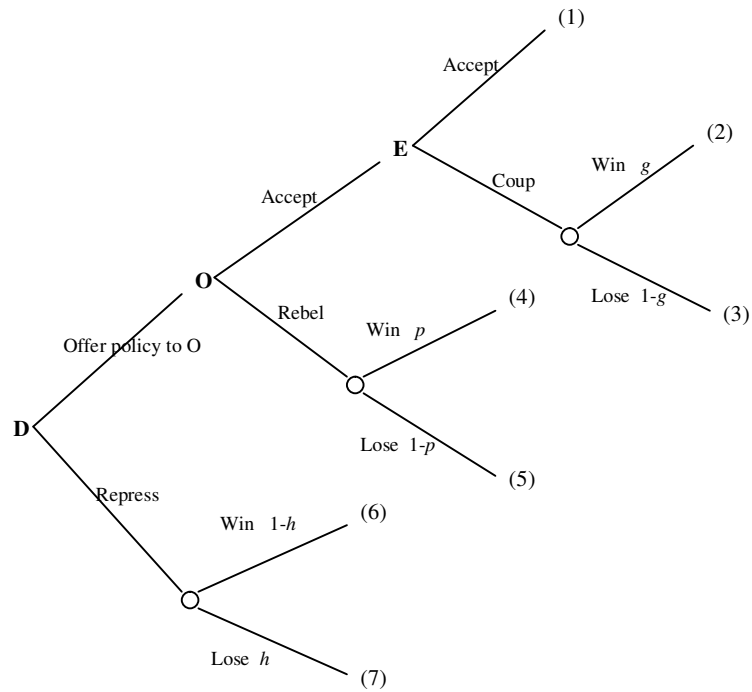


Finally, if the opposition accepts, it is the turn of the elite -*E*- to decide whether to accept the agreement reached or to stage a coup. If a coup is staged, it is successful with probability $g$, $a$ remains at 1 and the dictator is replaced; whereas the coup is

effectively repressed with probability $1-g$. If the elite loses, policy is set at $a = x$, i.e., that agreed between $D$ and $O$. It is also assumed that $g > p$, so the capability of the elite of toppling the dictator is much higher than that of the citizen opposition. Alternatively, if the elite accepts, $a$ is fixed to $a^e$ and because of the economic cooperation of the opposition, there is benefit $\theta$ in terms of tax revenue and cooperation, where $\theta \in [0,1]$.[7] Therefore, if natural resources and commodities or foreign aid abound, this benefit tends to zero as no cooperation is needed to raise revenue from either taxes on international trade or the benefits of public enterprises. Table 4.1 summarizes the payoffs of the players under the alternative scenarios regarding policy $a$.

Note that losing an struggle for power has a cost $\omega_i$ for each of the players, where, again, $i \in \{D, E, O\}$ and $\omega \in [0,1]$.

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[7] The logic is similar to that in Bourguignon and Verdier (2000). In their setting, education, provided to a portion of lower-class individuals, yields a public return.

*Table 4.1. Results and pay-offs of the game*

| Outcome | Policy | Pay-offs | | |
|:---:|:---:|:---:|:---:|:---:|
| | | **D** | **E** | **O** |
| 1 | $a=a^e$ | $-\lvert a^e - a_D \rvert + \theta - \pi'$ | $-\lvert a^e - 1 \rvert + \theta$ | $-\lvert a^e - 0 \rvert$ |
| 2 | $a=1$ | $-\lvert 1 - a_D \rvert - \omega_D$ | $-\lvert 1-1 \rvert - \pi$ | $-\lvert 1-0 \rvert$ |
| 3 | $a=x$ | $-\lvert x - a_D \rvert + \theta - \pi'$ | $-\lvert x-1 \rvert - \omega_E$ | $-\lvert x-0 \rvert$ |
| 4 | $a=0$ | $-\lvert 0 - a_D \rvert - \omega_D$ | $-\lvert 0-1 \rvert - \omega_E$ | $-\lvert 0-0 \rvert$ |
| 5 | $a=1$ | $-\lvert 1 - a_D \rvert - \pi$ | $-\lvert 1-1 \rvert - \pi$ | $-\lvert 1-0 \rvert - \omega_O$ |
| 6 | $a=1$ | $-\lvert 1 - a_D \rvert - \pi$ | $-\lvert 1-1 \rvert - \pi$ | $-\lvert 1-0 \rvert - \omega_O$ |
| 7 | $a=0$ | $-\lvert 0 - a_D \rvert - \omega_D$ | $-\lvert 0-1 \rvert - \omega_E$ | $-\lvert 0-0 \rvert$ |

### 4.3.2. Analysis and equilibria

As we use backwards induction to identify the equilibria, we must start with the decision of the elite. The elite will accept as long as $U^E(Accept) \geq EU^E(Coup)$, that is, if

$$-|1-a^e|+\theta \geq g(-|1-1|-\pi)+(1-g)(-|x-1|-\omega_E) \quad (4.1)$$

which can be transformed into

$$a^e \geq m_E = 1-\theta + g(-\pi)+(1-g)(1-x-\omega_E) \quad (4.2)$$

where $x \leq m_O$ (see below). So $m_E$ is, in fact, the maximum level of control ($a$) the elite will accept given its bargaining power as determined by $g$, since it is the policy result that makes it indifferent between accepting and trying to seize power;[8] if the degree of institutional accountability allowed by $D$ is lower than that, a coup is certainly going to take place. Note that a bigger $\theta$ makes the elite more willing to accept a lower level of a, that is a greater level of accountability. On the contrary, a bigger capacity to successfully overthrow the current ruler, makes the maximum level they would accept higher, i.e., the level of regime openness they are willing to tolerate decreases with their capacity to seize power.

Let us turn now to the opposition's decision. Again, $O$ will only accept $D$'s offer if, given that $E$ accepts, $U^O(Accept \,|\, E_{Accepts}) \geq EU^O(\text{Rebel})$, therefore

$$-|a^e-0| \geq p(-|0-0|)+(1-p)(-|1-0|-\omega_O) \quad (4.3)$$

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[8] We assume that if the elite is completely indifferent it would rather accept than to face an uncertain struggle.

Rearranging terms we get

$$a^e \le m_O = (1-p)(1+\omega_O) \qquad (4.4)$$

So $m_O$ stands for the minimum level of regime institutionalization and openness that the opposition will accept given its relative bargaining power as determined by $p$. The implication of this is quite straightforward: The dictator will not call the opposition to start any negotiation if his offer is going to be higher to that set in (4.4), because then the utility of repressing would be higher given that $p > h$.

Finally, the incumbent dictator must decide whether to repress or to begin to negotiate with $O$ a new institutional setting with limited accountability. $D$ observes his preference $a_D$, which we assume, for simplicity, to be uniformly distributed over the interval $a_D \in [\mu, 1]$. Suppose, then, that going to a level lower than $\mu$ actually involves beginning a transition to democracy so all privilege and benefits from power may disappear for the incumbent ruler. The expected payoff of repressing is

$$EU^D(\text{Repress}) = h\left(-\left|0-a_D\right|-\omega_D\right) + (1-h)\left(-\left|1-a_D\right|-\pi\right) \qquad (4.5)$$

The dictator prefers to repress rather than getting a policy result, $a^e$, non acceptable by the elite (since it is $< m_E$) given that $EU^D(\text{Repress}) > EU^D(Approach\ O\,|\,Coup)$ for a sufficiently high $g$.[9] The same occurs with respect to $O$, that is, if the offer the

---

[9] That is, if $g \ge g' = \dfrac{\theta - x + 1 - h(1+\pi-\omega_D)}{1+\omega_D - x - \pi}$, which we assume to be so, in other words, the dictator prefers to repress the opposition

dictator is willing to make is higher than $m_O$, the opposition will rebel, so the ruler is better-off by repressing without revealing any information. Therefore

$$EU^D(\text{Repress}) > EU^D(\text{Approach } O \,|\, \text{Rebellion})$$

since, as stated above, by assumption, $p > h$.

As a result, $D$ will only proceed to negotiate policy if $m_O \geq m_E$, that is, if the maximum accountability level acceptable to the elite is smaller or equal to the minimum level of regime openness that the opposition would accept. On the contrary, if $m_O < m_E$, no agreement will be reached and a will remain at its initial level, 1. The accountability result, $a^e$, and the decision of $D$ will be based, then, on the expected benefits of regime openness through the mobilization of cooperation, $\theta$, and on $a_D$, dictator's own preferences.

Figure 4.2 shows the underlying conditions that induce $D$ to start the negotiation with the aim of co-opting $O$ into a regime new institutional structure. In case $a_D$ lies in region I -which is actually very unlikely- and $m_E > \mu$, the ruler will set the regime openness level at the maximum possible permitted by the constraint posed by the elite, that is, at $m_E$. If $a_D$ lies in region II, $D$ can choose his most preferred outcome within the interval defined above, $a_D \in [\mu, 1]$. If $a_D$ is bigger than $m_O$, the ruler will choose an openness level equal to the minimum level of aperture and control that the opposition would accept, that is, $a^e = m_O$ as long as $a_D = \dfrac{m_O + 1}{2}$ (region III in the figure).

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rather than facing a coup or a palace putsch whatever the benefits of cooperating with $O$ might be.

Finally, if $a_D > (m_O + 1)/2$, the dictator would not approach $O$ unless the switching from $a^e = 1$ to $a^e = m_O$ (which is the maximum he would offer in this situation) pays-off in terms of revenue benefits, $\theta$. For this to happen, $\theta$ will have to fulfill the following condition

$$\theta \geq \theta' = h(-|0 - a_D| - \omega_D) + (1 - h)(-|1 - a_D| - \pi) - m_O - a_D + \pi'$$
(4.6)

*Figure 4.2. The conditions for regime openness and accountability*
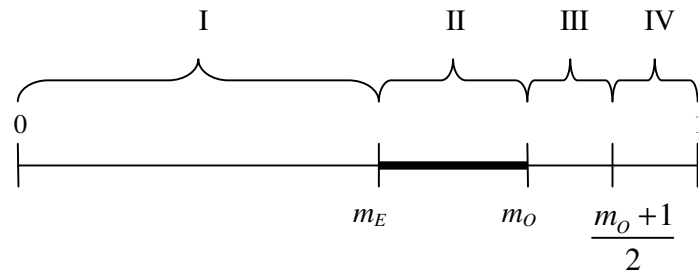


where $\pi'$ denote repression costs under institutionalized regime, where, besides, $\pi' < \pi$. If $\theta < \theta'$, the dictator will opt for keeping the regime closed with total political autonomy at $a^e = 1$, the status quo level. Table 4.2 summarizes the equilibria and the conditions for their existence.

The effect of $\theta$ is twofold in determining the equilibria. On the one hand, by lowering the policy level the elite is willing to accept - $m_E$ - it eases that the condition $m_O \geq m_E$ effectively holds. Indeed, $m_O \geq m_E$ means, from (4.2) and (4.4), that

$$(1-p)(1+\omega_O) \geq 1-\theta + g(-\pi) + (1-g)(1-x-\omega_E) \quad (4.7)$$

which holds, hence, if

$$\theta \geq \theta'' = 1 + g(-\pi) + (1-g)(1-x-\omega_E) - (1-p)(1+\omega_O) \quad (4.8)$$

On the other hand, we also know that as long as $\theta \geq \theta'$, the dictator will prefer a limited level of regime openness ($a^e = m_O < 1$) even though his most preferred level is actually $a_D = 1$.

*Table 4.2. Equilibria of the game and their conditions*

| Conditions | | Openness equilibrium |
|---|---|---|
| $m_O < m_E$ | | $a^e = 1$ |
| $m_O \geq m_E$ | $a_D > \dfrac{m_O+1}{2}$, $\theta < \theta''$ | $a^e = 1$ |
| | $a_D > \dfrac{m_O+1}{2}$, $\theta \geq \theta''$ | $a^e = m_O$ |
| | $m_O < a_D \leq \dfrac{m_O+1}{2}$ | $a^e = m_O$ |
| | $m_E \leq a_D < m_O$ | $a^e = a_D$ |
| | $a_D < m_E$ and $m_E < \mu$ | $a^e = m_E$ |

What are then the key determinants of the levels of accountability of a given regime and their levels of security and sensitivity? As said, two factors determine the equilibria of the game: Firstly, the need for cooperation to obtain revenues and, second, the relative strength of both the opposition and the elite. Sensitivity levels are the result of the presence or absence of natural resources or foreign aid, since they determine whether cooperation is needed or not to collect revenues, $\theta$. So tax policy enters into politics as, independently of group strength, cooperation is needed and more openness is offered in exchange. Secondly, regardless of the ruler's rents availability and taxation, the other actors in the game are endowed with a certain capability to depose the incumbent dictator. These probabilities $g$, $p$ and $h$ determine the overall level of security of his tenure. Summing up, security and sensitivity are functions of the following parameters

$$\text{Political Accountability} \begin{cases} A = A(g, p, h) \\ B = B(\theta) \end{cases}$$

Concerning the degree of institutionalization of authoritarian regimes and their associated levels of security and sensitivity, their combination may be more subtle regarding that $g$, $p$ and $h$ play a key role in their configuration as well. Formal institutions (such as parties and legislatures) are, according to the model, the result of the combination of the strength of the potential opposition and the necessity to mobilize cooperation to increase tax revenue, which is consistent with what other authors have pointed out (Smith, 2005; Gandhi and Przeworski, 2006). As just said, the increasing benefits of mobilizing cooperation when aid or primary commodities are scarce, lead the elite as well as the ruler to accept a more open institutional system; while the organizational capacity allows each of the actors who may represent a credible threat to dictators' stability in office to push for a more favorable policy outcome. For instance, a higher $p$ allows the opposition to set his minimum acceptable degree of openness at a lower level

according to (4.4), while, on the contrary, for the case of the elite, a higher *g* involves a reduction in the maximum level of institutionalization it is willing to accept.

Recall that in determining the degree of regime institutionalization and accountability there is also an important empirically unobservable factor playing a role, namely, the dictator's own preferences, $a_D$.[10] Preferences may be assigned or deduced *ex post*, but not generally known *ex ante*. Dictators may differ in the level of openness they are willing to implement and accept. Some dictators became impressed by the soviet experience so, as Smith points out, "there are also reasons to believe that the strength of single-party regimes might vary more than others because of diffusion. That is, the attractiveness of the mass-mobilizing party model presented a powerful model for regime formation across the post-colonial world" (2004a: 3). This was precisely the case of many post-colonial regimes that engaged in what has been termed 'African Socialism'. Similar processes could happen for leaders who were educated in western democracies and who, consequently, may develop a preference for democratic institutions to be later possibly applied in their countries of origin. In sum, there are two basic sets of determinants of institutions *I*

$$\Pr(I = j) = F \begin{cases} \text{Observable factors} \begin{cases} \text{Access to rents} \to \theta \\ \text{Strength of actors} \to g, p, h \end{cases} \\ \text{Unovservable factors} \to a_D(D \text{ preferences}), \text{others} \end{cases}$$

where $j \in \{1, 2, 3\}$ stands for the different degrees of institutionalization present in authoritarian regimes, which will be detailed below.

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[10] There may be other unobservable variables as well that could be more difficult to identify.

The conclusion is that institutions are endogenous and, as we will show in the following chapters, this has profound empirical consequences when estimating their effect on any policy or economic result, especially when there are also unobservable factors potentially affecting the presence or not of such institutions.

Keeping this in mind, the relation between institutionalization and sensitivity is straightforward and predicted to be monotonic, that is, the greater the inclusiveness of regime's institutions, $a^e$, the higher the level of control and influence over policy offered by the ruling elite. Security, though, shows a different pattern. A limited degree of institutionalization, like, $a^e = m_O$, indicates that $m_O$ is relatively close to 1, so the opposition is not too strong, while, at the same time, the elite, although possibly stronger, gets some of the benefits of cooperation in exchange for its support and, as $x$ is smaller as well, it is more willing to accept some regime inclusiveness (see (4.2)). On the contrary, a high level of institutionalization, such as a multi-party system,[11] is the result of the combination of a more powerful opposition and a big expected benefit, $\theta$, from economic cooperation. Figure 4.2 shows that as the opposition becomes stronger, the minimum level of representation it would accept, $m_O$, moves leftward -closer to 0-, therefore $\theta$ must be bigger so as to assure that $m_O \geq m_E$, which happens if $\theta \geq \theta'$. Finally, note that, according to the model, for a sufficiently high $g$, the dictator prefers the status quo ($a^e = 1$) to any institutional opening, so the dictator keeps a closed system while loyalty from a strong elite must be bought through the delivery of private goods, what makes him very dependent on the availability of rents.

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[11] Also known as "electoral authoritarianism", "anocracy", or "hybrid regime."

Figure 4.3 portrays the predicted relationships according to the model between institutionalization, security and sensitivity, which, taken as hypotheses, will be empirically tested in Chapter 6.

*Figure 4.3. Institutionalization and its associated levels of security and sensitivity*
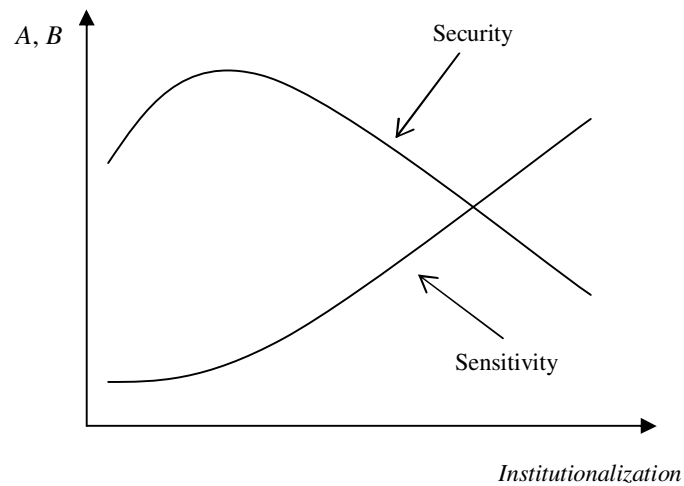


## 4.4. The determinants of security

The overall security of a dictator depends on his capacity to co-opt a particular fraction of the population and repress the rest of them. Simultaneously, the cooptation necessities are determined by the organizational strength and collective action capacity of the groups, that is, $g$, $p$ and $h$, so that

$$A = A(g, p, h)$$

The next subsections review the literature seeking to trace the potential variables that may determine the capacities of the various groups and, consequently, the dictator's structural security.

### 4.4.1. Elite members and relative strength

The main risk for a dictator's survival stems from his own support or ruling elite as we contended in the model above by assuming that $g > p, h$. The issue goes back to Machivelli (1950 [1532]) who in the sixteenth century stated 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" (p 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 (Egorov and Sonin, 2005). 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).[12] 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 and, moreover, decide individually whether or not to withdraw their

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[12] 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).

support. In case the leader is overthrown, it is assumed the new leader will have to be chosen from among the "kingmakers."[13]

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 (1992, 1998) 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 their 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 does, 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 a determinant support must be properly rewarded by the ruler satisfying the preferences of those in the elite to avoid being given the cold shoulder. As a result, the 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

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[13] The logic is also valid in communist states. Brezhnev (General Secretary of the Communist Party of the Soviet Union from 1964 to 1982, and twice Chairman of the Presidium of the Supreme Soviet -head of state-, from 1960 to 1964 and from 1977 to 1982) formed his own power coalition based on patron-client networks after Khrushchev was forced to resign. At the core of his administration were the Dnepropetrovsk politicians (those who had moved up with him since the 30s) and other elite members who served with him (Willerton, 1987).

generated and allocated to their closest collaborators.[14] When primary commodities and natural resources abound, dictators can create big monopolies that can be distributed among the elite members. Besides, revenues can be collected by taxing international trade and from the benefits of public enterprises, without requiring an extensive and efficient tax administration, and export and import licenses delivered. Furthermore, primary sectors do not generally require a strong business class, modern administration and qualified workers. 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. 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 Marcos' supporters, were able to monopolize the coconut industry. Marcos ordered through presidential decree all coconut processing companies to sell out or affiliate with UNICOM, whose Board was chaired by Enrile (Bello *et al.* 1982).

Other good sources of rents are oil and mineral wealth. The huge amount of oil revenues makes 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, 2004b). The evidence reported by Smith (2004b), although referred to regimes and not to leaders, indicates that oil wealth is robustly associated with regimes' longer durations and lower levels of protest. Indeed, Kuwait and Qatar have been ruled by the same dynasties since the eighteenth and nineteenth centuries respectively.[15] "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

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[14] And, potentially, their most dangerous enemies.
[15] The Sabahs in Kuwait and the al-Thani in Qatar.

receiving a sizable portion of oil revenues, the merchants renounced to their historical claim to participate in decision making" (Crystal, 1989: 433). Under these conditions, i.e., in poorly diversified economies, elites' income and position is highly dependent on the dictator's stability and decisions, so they become more dependent on him.[16]

Conversely, when resources are scarce, benefits are distributed using institutions such as a single-party regime. Party organizations, as said above, provide system members with a durable frame where to resolve differences, bargain and advance in influence. As a result, dominant party systems generate and maintain a cohesive leadership cadre (Brownlee, 2004a). In Smith's words, "during 'routine' periods, strong parties provide a means for incorporated groups to present their political and policy preferences to the regime, channeling interests in much the same way that Huntington foresaw in the single-party rule of the 1960s. During periods of crisis, the crucial task of party institutions is to provide a credible guarantee to in-groups that their long-term interests will be best served by remaining loyal to the regime" (2005: 431). Geddes (1999a) proposes that cadre interactions within a one-party system resemble those of the Stag-hunt game, that is, a sort of incentive structure in which the best option for elite factions is to cooperate in order to hold office. 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.

Party structures may also become essential during succession periods. Factional disputes for leadership can be addressed within the organization without altering the stability and functioning of the regime. The Mexican PRI is a clear example of this pattern.

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[16] And, consequently, more prone to "fall in disgrace", that is, to lose all privileges as a result of an arbitrary decision made by the leader. See Kapuściński (1989) for an excellent description of these processes under Haile Selassie's regime.

Moreover, especially one-party regimes, large sectors of the population can also be integrated in what Kasza (1995a) calls "administered mass organizations" that are "formal organizations structured and managed by the state's ruling apparatus to shape mass social action for the purpose of implementing public policy" (1995a: 218). These organizations extend state control in many different ways, namely, following Kasza (1995a): Material dependency, consumption of time, organization of support, offices and honors and self-directed local administration.[17]

The specific strength of elite members may vary according to the leader's own position. Both civilian and military rulers may, thus, face a higher threat from their own collaborators and elites. Rival factions within the army may become the major threat for military dictators due to two factors. First, as members of the armed forces, factionalist groups have equal access to military equipment and weapons as the rest of its members. And, second, as Geddes (1999a) points out, the military may prefer to hand power to civilians if their cohesiveness is endangered by the exercise of power. Lacking a concrete source of legitimacy, civilian rulers may be threatened by both other elite members and the military.[18] In this case, rival factions may find easier to threat

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[17] See Kasza (1995a and 1995b) for more details.

[18] Some autocrats' lack of trust in the military, reflecting that vulnerability, led them to create personal guards or militias (directly appointed by themselves) for their protection in order to reduce their dependence on the military for security and undermine its cohesion. For instance, Eric Gairy formed in 1970 the paramilitary group known as the "Mongoose Gang" to face the opposition headed by the New Jewel Movement. Papa Doc Duvalier (Haiti's former President for Life) created in 1958 the Tontons Macoutes (Bogeymen) who were some kind of 'esoteric' police headed by Clément Barbot and organized as a private militia estimated to number 9.000-15.000 and used to terrorize and murder opponents. Recruits were drawn initially from the capital city's slums and equipped with antiquated small arms found in the presidential palace. They received no salary, relying instead on extortion and crime. Another clear example is Saddam's Iraqi Republican Guard, which began its life in the early 1980s. This organization served as the core

the incumbent's rule by staging a *palace putsch*. Monarchs hold the strongest position vis-à-vis their ruling coalition; since their power is based on tradition and dynastic rights which usually derive from God's will, any potential rival lacking these characteristics that make him suitable for governing will find it difficult to justify his seizure and stabilize his power (Ludwig, 2002). This is the basic reason why most of the *palace putsches* occurred within monarchical regimes are staged by members of the own royal family as noted in section 4.2.

Nonetheless, many leaders became heads of government after having had a leading role in the struggle for independence from their colonial states. These rulers may find themselves more secure in power as the legitimacy gained though their anti-colonial activism might well deter other elite members -and the military- from plotting against him due to the lack of citizen support. Such were the cases, for example, of Julius Nyerere, Habib Bourguiba and Kenneth Kaunda, who after leading the fight for independence became their countries' first presidents,[19] and remained in power for more than twenty years unchallenged.[20] Likewise, the process of a new elite building after independence makes those favored by the new leader more dependent on him for obtaining privileges and keeping their position.

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around which an elite offensive force was built. It had to be used during the war with Iran since the Republican Guard forces were much better trained and equipped than the Regular Army. All of the RGFC troops were volunteers.

[19] Tanganyika (which later became Tanzania), Tunisia and Zambia, respectively.

[20] Nyerere retired in 1985; Bourguiba was substituted due to his senility, and Kaunda conceded multiparty elections.

## *4.4.2. When people take the streets…The organizational capacity of citizens*

Let us now turn to the potential determinants of *p* and *h*, in other words, the collective strength of the opposition.[21] We need to pay attention to the underlying conditions that may foster or hinder popular mobilization. At this respect, resource mobilization theory has recently proposed a new way to study and understand protest movements and rebellion beyond relative deprivation arguments[22] and strictly rationalistic approaches.[23] Accordingly, although deprivation might be a necessary condition, it is not a sufficient one. Departing from the assumption that movement actions are rational, existing conflict will lead to the emergence of social movements if some changes altering the amount of resources, group organization and opportunities for collective action take place. "The major issues, therefore, are the resources controlled by the group prior to mobilization efforts, the processes by which the group pools resources and directs these towards social change, and the extent to which outsiders increase the pool of resources" (Jenkins, 1983: 532-533). In this vein, the rise of what has been called "electoral authoritarianism" or "hybrid regimes" -among some other names- may provide such movements with those opportunities stressed by this late approach given the conditions under which they are created, as shown in the model above. The allowance of a limited level of autonomy by regime authorities provides opposition members with more room

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[21] Both probabilities have essentially the same determinants, but *p* is assumed to be higher than *h* because after approaching *O*, some information about the actual capacity of the regime to repress is revealed as noted above. This assumption will be empirically tested later on.

[22] On relative deprivation see, for example, Auvinen (1997), Dudley and Miller (1998), Feierabend, Feierabend and Gurr (1972) and Gurr (1970).

[23] See, among others, Grossman (1991), Muller and Weede (1990) and Weede and Muller (1998).

for organizing and coordinating previously latent and clandestine groups.

The international pressure exerted by democracies has had a big and positive effect on the organizational strength and resource availability of the opposition forces and, consequently, on the creation of institutions in authoritarian systems in order to escape from this more hostile climate. As Diamond correctly notes, "thus the trend toward democracy has been accompanied by an even more dramatic trend toward pseudodemocracy" (2002: 27).

Developed and stable democracies have given financial and strategic support to some opposition movements or have resorted to economic sanctions with the aim of weakening foreign, and very usually authoritarian, governments.[24] "Sanctions might increase their effectiveness [of opposition groups] in mobilizing collective action against the regime by signaling the support of foreigners for the opposition's cause" (Kaempfer *et al.*, 2004: 37). The number of democracies in the world has been sharply increasing since the mid seventies, what allows multilateral sanctions on dictatorial governments -especially if they are backed by some international organization- to become more effective as well as to increase the number of those unilaterally established (Drezner, 2000; Kaempfer and Lowenberg, 1999). Indeed, as Marinov (2005) reports, while there were only five countries subject to sanctions around 1950, the number had increased to 47 by the mid 90s. Recent evidence shows that economic pressure serves to destabilize the rule of those leaders it targets (Marinov, 2005).

In other cases, support to opposition groups comes in a more direct way from democratic governments as well as non-governmental organizations. For instance, the Anti-apartheid Movement, founded in London in 1959, was created by South-African exiles and their supporters to mobilize international support for the African National Congress and the Pan Africanist

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[24] The list of countries under US unilateral sanctions can be checked in: http://usaengage.org.

Congress. Solidarity, the union that headed the anticommunist opposition in Poland, was financially aided by American Trade Unions; at the same time, international agencies refused to grant debt-ridden Poland economic aid until it legalized Solidarity. At the state level, examples abound as well. US administration had been both training and funding Iraqi anti-Saddam groups such as the Iraqi National Accord[25] and the Iraqi National Congress[26] before the invasion in 2003. In Europe, the Friedrich Ebert Foundation "provided financial and other support for Socialist politicians during dictatorships in Spain and Portugal" (Pinto-Duschinsky, 1991: 55).

Nonetheless, the effectiveness of these measures 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, and cooperation between them exists, cross-border smuggling may become more difficult for opposition groups. The provision of military help by friendly countries and the establishment of operative bases in foreign countries will most probably be hindered as well as the possibility of crossing the borders to avoid domestic prosecution.

Finally, 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. In general, it is argued that higher ethnic fractionalization hinders broad popular collective action by increasing information costs and distrust between groups, so despite it may ease intra-group mobilization, it can, at the same time, hamper inter-group coordination (Acemoglu, Robinson and Verdier, 2004; Padró-i-Miquel, 2004).

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[25] Funded by the Central Intelligence Agency, British intelligence, and the Saudis, the INA staged a failed coup attempt in 1996.

[26] The INC had received millions in U.S. aid for military training.

When broader sectors of society are considered, patronage networks are impossible to reach everybody in view of the fact that the resources in the hands of dictators are limited or even scarce (considering that a proportion of them is devoted to self-enrichment) (Gibson and Hoffman, 2002). In this case, only public goods might be effective in keeping the masses toothless. Foreign aid may also help 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 greedy cronies' share of the spoils.

### 4.4.3. Military intervention. To stay or not in the barracks

Although, in general, the military can be regarded as a part of the ruling elite in authoritarian regimes, they are an "especial" group or conglomerate with 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 control over the weapons of a given country and the skills to use them "effectively." However, this 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.[27] The factors mentioned for the case of the elite which served to reinforce leader's security in relation to rival groups may be as essential in this case as in the political and economic elites' in shaping the scope of the costs of challenging the incumbent's position.

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

There is a large amount of empirical -both quantitative as qualitative[28]- literature about military intervention and it has identified several factors that may bring it about. I will only review the most important or most commonly included in the analyses since, generally, they are not exclusively focused just on dictatorships but consider both democratic and authoritarian regimes.

In her seminal work, O'Kane (1981) identifies two main preconditions under which coups are more likely to occur. The first one has to do with export of primary goods dependence in poor countries (especially democracies). That dependence makes the economy of a country more sensible to price crises and, hence, external shocks dramatically affect 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,[29] 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 and show that high rates of economic growth tend to inhibit coup occurrence (see also Galetovic and Sanhueza, 2000). They 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) emphasizes 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 explanatory factors of coups.

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

[29] 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).

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, they seize power with the purpose of re-establishing order as, in their view, incumbent government has failed to do so (Finer, 1976; Nordlinger, 1977). More recently, Galetovic and Sanhueza (2000) argue that coup 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.[30] But through co-optation and leverage delivered by allowing political parties (Johnson, Slater and McGowan, 1984), the opposition can be to some extent controlled, avoiding, thus, riots and massive protests 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).

## 4.5. The conditions for sensitivity

Many dictators survive to acute economic crisis, and some have remained in power for several years even in spite of widespread corruption and that negative growth figures for long periods of time. For instance, José Eduardo dos Santos stayed 22 years in power in Angola even though the average growth rate during his rule was as bad as -1.08;[31] Samuel Doe ruled Liberia for ten years during which GDP per capita decreased on average at a rate of -3.50; Kenneth Kaunda (Zambia) was able to rule for 27 years while average per capita income growth was negative

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[30] 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.

[31] The data may not cover the entire period.

(concretely, -.776).[32] Other examples are Jerry Rawlings, Mathieu Kerekou, Mobutu Sese Seko, François Duvalier, Sukarno, Saddam Hussein, the king Fahd, etc.

Previous cross-national research has already shown that growth has little effect on democratization (Gasiorowski, 1995; Limongi and Przeworski, 1994). This tells us that the effect of growth on survival is not constant across rulers and regimes, but that some underlying conditions determine whether this effect may be significant or not, which we hypothesized to be the availability of rents

$$B = B(\theta)$$

As it has been stressed, authoritarian rulers and regimes differ with respect to the segments of their societies from which they obtain support and revenues and, consequently, to which they must be more responsive. The group interested in growth is a multi-class sector, formed by private-sector business groups, middle-class and popular-sectors. As Haggard and Kaufman note, "the private sector is well placed to play an organizational and financial role within the opposition" (1995: 30). Later on, they state:

> "A plausible hypothesis that combines economic conditions in both the long and short run 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

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[32] Actually, he once affirmed, "we are in part to blame, but this is the curse of being born with a copper spoon in our mouths" (cited in Ross, 1999).

description are also more likely to have prior histories of party politics, labor mobilization, and civic association." (1995: 36)

There are some conditions, instead, where these 'social groups holding substantial and independent organizational and material resources' are weak or even inexistent so their material resources are no longer crucial to regime stability. The key seems to be revenue policy and the literature about the "fiscal theory of governance" provides us with some important clues. This kind of theories contends that when citizen cooperation is not needed for revenue to be raised, governments have fewer incentives to defer to their interests.[33] Primary sectors do not generally require a strong business class, modern administration and qualified workers. Furthermore, Gylfason and Zoega (2002) argue that when the share of output that accrues to the owners of natural resources rises, the demand for capital falls; moreover, they also show that resource dependence slows down the development of the financial as well as the educational system.

Revenues are collected from different streams, and as we stated in the model above, economic cooperation is only needed if one of the main sources on which a government can rely are those more subject to higher free-riding and monitoring problems (Lieberman, 2002), namely, taxes on incomes, profits and capital gains; taxes on goods and services; taxes on property, and payroll taxes. But for certain governments, the main sources of revenue are others not precisely requiring either cooperation or an extensive administration. Following Ross, "theories of the rentier state contend that when governments gain most of their revenues from external sources, such as resource rents or foreign assistance, they are freed from the need to levy domestic taxes and become less accountable to the societies they govern" (1999: 312).[34] Under these circumstances, i.e., when countries get most of their revenue from one stream or from foreign aid, the expected benefits of

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[33] See, for example, Levi (1988), More (1995), Ross (2004) and Hoffman and Gibson (2006).

[34] See also Karl (1997).

mobilizing cooperation through institutionalization, $\theta$, are negligible. Figures 4.4. a, b and c show the different revenue streams as a percentage of the GDP for three different types of countries: Oil-exporting countries, primary-commodity exporting countries, and countries without a considerable amount of natural resources.[35]

Indeed, a simple look at the data on revenue of the *World Development Indicators* reveals that oil-exporting countries get on average 61.7 percent (18.4% of the GDP) of their revenues from non-taxed sources, while non-exporting authoritarian regimes get only 18.8% of their revenues (4.4% of the GDP) from this stream. Primary-commodity exporting countries, instead, levy most of their incomes from taxes on international trade, concretely, 29% on average of their revenues comes from this stream (6.30% of the GDP). On the contrary, revenue policy is proven to be much more balanced and diversified in economies where the amount of natural resources is not so overwhelming. Note that in Figure 4.4.c none of the revenue sources is greater than 5% of GDP and that the differences between them are minor; even their collections of security taxes and other taxes (which include property taxes) more than double those of resource-rich states: 1.33% and 1.11% for resource-poor countries, while only 0.57% and 0.57% for resource-rich ones. As Rasizade asserts, "a regime with oil revenue is less accountable to ordinary citizens; it does not have to collect their trifling taxes or meet their tedious demands. A portion of the petrodollars must be spent on the armed forces to keep the masses in line, but the rest can be split among the political elite" (2002: 353).

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[35] The sub-samples are based on the following variables: 'oil exporting country', which is a dummy variable coded 1 if the average ratio of fuel exports to total exports in 1990-1993 exceeded 50%, 0 otherwise; and 'primary commodity exporting country', which is a time invariant dummy variable coded 1 if the average ratio of non-fuel primary products exports in 1990-1993 exceeded 50% of total exports, 0 otherwise.

*Figures 4.4. a, b, c. Revenue composition (as a percentage of the GDP) and economic endowments*

**a) Oil-exporting countries**



**b) Primary commodity exporting countries**

c) No resources
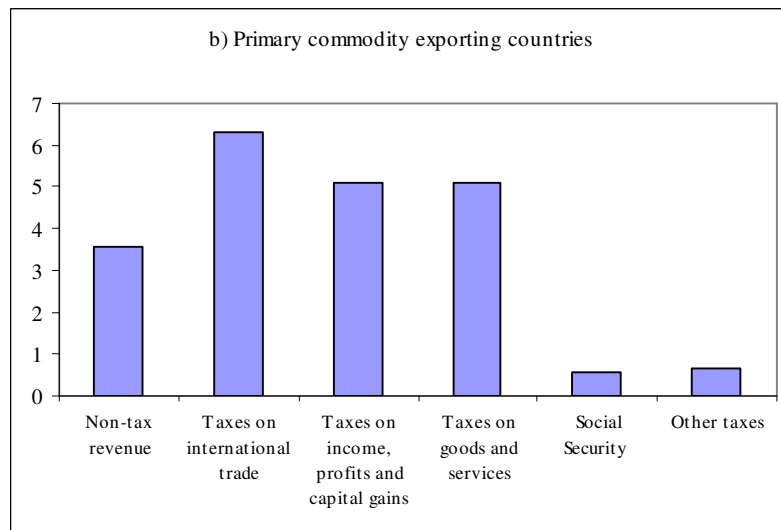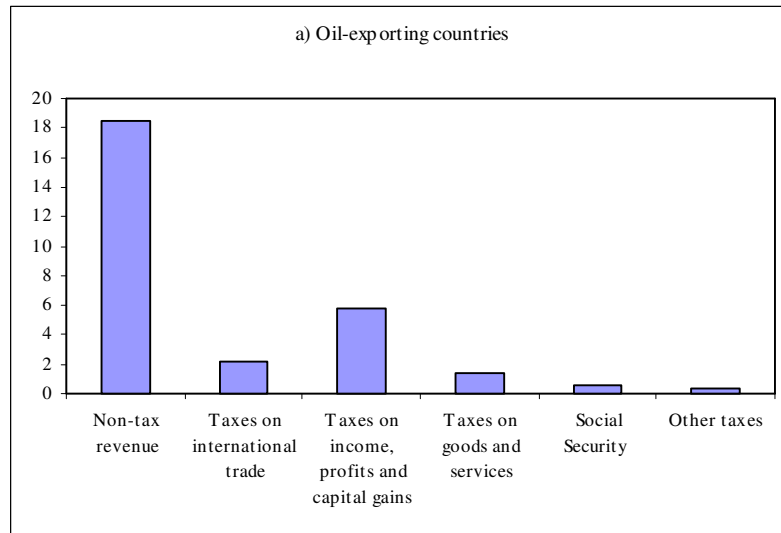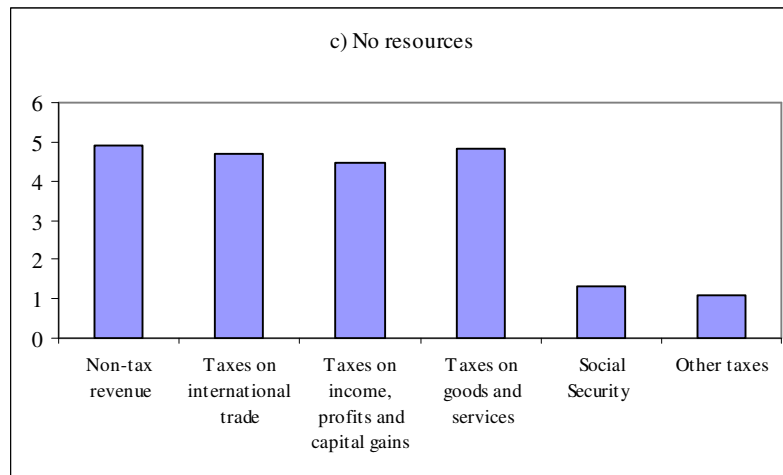
Similarly, concerning foreign aid, some authors have already noticed how aid may reduce government accountability and the demands for reform via its effect on revenue policy (Moore, 1995; Brautigam, 2000) and foster rent-seeking (Svensson, 2000). Indeed, the data show that there is a strong negative correlation between aid per capita and the percentage of revenue from taxes on income, profits and capital gains and from taxes on goods and services. Specifically, the correlation is $\rho = -0.16$ for taxes on incomes, and $\rho = -0.25$ for taxes on goods and services. Hence, 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.[36] For example, 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

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

(Moore, 2004). In Zambia, aid was equivalent to 32.7 percent of GNP by 1993 (Bratton and Van de Walle, 1997). Indeed, there is no shame on 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.[37] E.g., 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 (Alesina and Weder, 1999).

These features help to understand, on the other hand, why in primary commodities exporting dictatorships the levels of protest are lower than in non-exporting ones (see Table 4.3). The annual average number of demonstrations, riots as well as strikes is significantly inferior in resource-rich dictatorships.[38] The pattern is almost identical for oil exporting and non exporting dictatorships with regard to the levels of social conflict.[39] And, regarding aid, the correlations are negative and significant. In sum, it seems clear that rent-rich dictatorships lack the characteristics that Haggard and Kaufman stress as essential for the existence of pressure towards an effective accountability with regard to economic performance. In fact, most of the dictatorial regimes that did not democratize during the 70s and 80s were in Africa and the Middle East, the most resource-rich regions in the world.

It is clear, thus, that resource exporting states have generally remained underdeveloped and have few chances to catch up since their growth rates have shown to be systematically lower as well (Sachs and Warner, 1995). Each one of the different explanations trying to account for this regularity focus on a different aspect, say, the economic factors, sectorial approaches, state-centered theories and so on; however, their degree of connection is high

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[37] Using UN votes as proxy for political alliances.
[38] The data are taken from Banks (1996).
[39] See Smith (2004b).

sharing, most of them, common arguments and mechanisms that link natural resources to underdevelopment.[40]

Table 4.3. Social conflict in resource-rich and resource-poor dictatorships

| | Social Conflict | |
|---|---|---|
| *Endowments* | Demonstrations | Riots |
| Oil | 0.25 (1.12) | 0.32 (1.28) |
| Primary commodities | 0.20 (0.87) | 0.23 (0.90) |
| Foreign aid | -0.10 | -0.11 |
| No resources | 0.53 (1.81) | 0.51 (1.72) |

Note: Standard deviations in parenthesis. For foreign aid, cell entries report the correlation coefficient. For the rest, cell entries are averages of the annual number of both kinds of protest. T-tests show that the differences are all significant at the 0.001 level. Correlations are significant as well at <0.001.

Social group centered approaches suggest that resource abundance enhances the political influence on non-state actors who favor growth impeding policies (Urrutia and Yukawa, 1988; Ross, 1999). Other theories, appealing to the leaders' motivations, defend that resource abundance induces policy-makers to act myopically and with excessive optimism, and even exuberance, overextracting resources and fostering clientelism that prevents efficient economic planning and economic diversification and, eventually, long-run development (Robinson, Torvik and Verdier, 2003).

The state-centered approach has two main branches: One, theories centered on the protection of property rights and state-owned enterprises, and, two, the theories of the rentier state. For

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[40] See Ross (1999) for an excellent review.

the first, nationalization of natural resources and the consequent management of this wealth by state-owned enterprises have introduced a high level of inefficacy and corruption that foreign multinationals had previously eradicated (Shafer, 1983; Brough and Kimenyi, 1986).

The theories of the rentier state have developed two main explanations. The first one develops the proposition that such abundance of external resources fosters predatory states, greater distributional conflicts and, then, the militarization of politics. The second argument links rent availability to rent-seeking behavior and corruption.[41] These versions are more useful to explain the lack of a strong private sector in primary commodity-exporting authoritarian regimes in conjunction with the elements offered by those approaches focused on social groups' interests and the leaders' motivations (see above) and the inefficacy of state-ownership.

## 4.6. Conclusions (or hypotheses)

This chapter has focused on developing empirically testable insights about the conditions that may determine the levels of security and sensitivity of a given dictator's rule and how they relate to institutions. The main conclusions derived from the model can be summarized as follows:

- Institutions under dictatorship are endogenous and determined by both observable and unobservable factors. The observed factors include the abundance of non-cooperative rents, and the strength of the actors, specially the opposition. Among other potential variables, dictator's own preferences represent a key unobserved determinant of institutionalization.

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[41] For a critical assessment of the theory of the rentier state see DiJohn (2002)

- The exogenous determinants of security are to be found in the variables affecting the relative strength of both the elite and the opposition groups. On the other hand, sensitivity levels are driven by the availability of non-cooperative rents such as non-tax revenues, taxes on international trade or foreign aid.
- Regarding the relationship between institutionalization, security and sensitivity, our predictions show that sensitivity is expected to monotonically increase with institutionalization. In contrast, security shows a different pattern: It increases at low levels of institutionalization and then sharply decreases.

The rest of the chapter has been devoted to find clues among the existing literature about what the determinants of the relative strength of both the elite and the opposition groups may be. At this respect, the following has been proposed:

- To keep the elites' loyalty when no cooperative rents are obtained, the rulers must resort to distribute rents stemming from natural resources and commodities. We have also predicted that elite strength may be lower in monarchies where power legitimacy hinges on tradition and dynastic membership. Furthermore, rulers may find themselves more secure in power as the legitimacy gained though their anti-colonial activism might well prevent other elite members from plotting against them.
- Past instability and external dependence are pointed by the literature to be major determinants of military interventions into politics as well as those affecting elite strength, such as colonial history or type of leader.
- Regarding citizen opposition, its organizational capacity is expected to be influenced by the following factors: Their initial organizational strength, which will be greater if the previous regime was a democracy; the difficulties posed by a big proportion of authoritarian regimes in the region;

the support offered by foreign democratic governments; the degree of ethnic fractionalization, which may hinder group coordination, and the creation of a multi-party system.

# CHAPTER 5. THE SOURCES OF REVENUE OF AUTHORITARIAN REGIMES

## 5.1. Introduction. Revenue sources

The model in the previous chapter contains a set of assumptions and results that must be carefully studied and tested. One of the most important concerns the capacity of dictatorial institutions to mobilize economic cooperation. Accordingly, the expected benefits of institutionalization in terms of tax revenues, $\theta$, were argued to be a decisive parameter driving the equilibria of the game. On the other hand, if $\theta \approx 0$, what happens if natural resources and primary commodities or aid abound, the dictator and the elite lack the incentives to open and accept institutions. As a result, there are two main contentions that need empirical validation: First, that, as shown in the equilibria, the creation of institutions is the result of the strength of the opposition and the need to mobilize economic support when resources are scarce; and second, that institutionalization effectively mobilizes economic support.

Revenues are essential for any state since they determine the size and scope of public policies, and even of ruler's self-enrichment. In Lieberman's words, "levels of tax collections are of intrinsic interest simply because they are a key source of government revenue that provides funding for welfare, defense, and other government programs around the world, and because of their influence on markets" (2002: 91). Yet taxes are not the only

source from which governments, especially authoritarian ones, gather their public resources. Indeed, non-tax revenues have represented more than 30% of total revenue in countries such as Congo, Egypt, Guinea-Bissau, Iran, Sri Lanka, or Myanmar; and even more than 70% in oil-exporting countries such as Kuwait or Bahrain. Hence, revenues and rent-extraction are not just taxes. Furthermore, taxes are not homogeneous in the sense they are imposed onto very different bases and may entail a very dissimilar level of administrative and political costs. The choice, then, between the various alternatives is not just a matter of taste but responds to both strategic as well as economic considerations.

Recent studies on the tax effort of countries and their tax mix have begun to pay attention to institutions as a significant source of cross-country variability, although dictatorships in all their forms have generally been, however, neglected or simply included as a reference category to which democratic systems are compared in terms of the size and scope of public policies (Cheibub, 1998; Boix, 2003; Mulligan *et al.* 2004).

Nonetheless, dictatorships are not homogeneous; they differ in their institutional configuration as well. Some ban all kind of parties and representative institutions, while others create a single party through which control is extended and support mobilized, and others even take the form of quasi-democracies, allowing the existence of multiple parties within a legislature. We hypothesize that these different forms of organization will have an effect on how dictatorial regimes collect their revenues. We have to be cautious, nonetheless, since institutions exist under certain conditions and do also respond to strategic considerations of rulers, as we contended in Chapter 4. The questions to be answered are then: Are institutions the result of the need to mobilize economic cooperation? Do dictatorial institutions have any effect on the revenue policy of authoritarian regimes after controlling for the conditions that may generate them?

To address these questions this chapter is organized as follows: Section 5.2 presents the main arguments about the endogeneity of institutions and their potential effect on revenue

policy. Section 5.3 explores the three basic factors determining the combination of revenue sources -apart from institutions- according to the existing literature. The methodology employed to estimate the empirical models is described in Section 5.4. In the next section, we report the results of the multinomial models for dictatorial institutions, and subsequent to that, the revenue data are described and the results of the selection corrected models detailed. Section 5.6 concludes.

## 5.2. Institutions, cooperation and revenues

Under democracy there is general agreement among researchers that "if taxpayers perceive that their interests (preferences) are properly represented in political institutions and consider government to be not wasteful but helpful, their willingness to vote for higher levels of taxation and comply with their tax obligations will increase" (Bird *et al.* 2004: 16). This proposition has received broad empirical support in the literature (Lassen, 2000; Bird *et al.* 2004), so the questions that almost automatically emerge are then: Is this true for authoritarian regimes? Can institutions under dictatorships effectively mobilize economic support?

To be systematic we need to proceed by imposing some classification that captures the appropriate dimensions within authoritarian regimes for the study of their revenue policy. In view of that, we distinguish three types of authoritarian regimes according to their formal institutional configuration: i) Non-institutionalized dictatorships;[1] ii) regimes with a single institution, i.e., either a non-partisan legislature, a single party, or

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[1] Often named personalist regimes; see, for instance, Jackson and Rosberg (1984) and Geddes (1999a). According to the former, "personal rule is an elitist political system composed of the privileged and powerful few in which the many are usually unmobilized, unorganized, and therefore relatively powerless to command the attention and action of government" (Jackson and Rosberg, 1984: 424).

both; and, iii) fully institutionalized dictatorships, where both multiple parties and a legislature exist. Recent studies stress that these institutions serve to co-opt the potential opposition groups and mobilize support and cooperation through the distribution of perks, privileges and, sometimes, policy concessions and influence (Brownlee, 2004a; Smith, 2005; Gandhi and Przeworski, 2006). Institutions, then, reflect the broadness of the regime in terms of group inclusion, so it can be expected that different dictatorial regimes will have a different impact in the way and the alternative instruments used to extract resources from the societies they govern.

Non-institutionalized dictatorships do not tend to ask for cooperation and their stability is based on a narrow power coalition as the potential opposition is weak and can be severely repressed by the regime forces. As Haggard and Kaufman put it, "the capacity of rulers in very poor countries to prolong their domination was facilitated by the relative weakness of organized interests. Highly dependent private sectors and geographically dispersed rural cultivators lacked the independence or organization to launch sustained protest against declining economic conditions" (1995: 36). Furthermore, the usual presence in these countries of exportable commodities or mineral wealth rules out the necessity to solicit economic cooperation and rents are delivered to the members of the supporting coalition through deep patronage networks (Gibson and Hoffman, 2002; Bueno de Mesquita *et al.* 2003). Extraction of rents is less dependent in such cases on taxes on incomes and profits, which require higher levels of cooperation and compliance from a broad sector of the population and an effective and extensive administration. Which are, then, the sources of revenue of this sort of regimes?

Under such conditions, neopatrimonial rulers have incentives to create state-owned enterprises and agricultural monopolies to have full control over resources and divert them as a typical expression of 'parochial' corruption (Scott, 1972). Dictators can create public enterprises or big monopolies to be distributed among elite members and cronies while collecting revenues from

their activity. Besides, in predominantly agricultural and commodity-exporting economies, revenues can be collected by taxing international trade without requiring an extensive and efficient tax administration, as well as export and import licenses can be delivered and sold to close collaborators. For instance, in Rwanda, during Habyarimana's rule (1973-1994), 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).

Non-tax revenue comes basically from oil and mineral wealth. Revenues from oil make the state turn into a distributive machine which must decide just which social groups are to be favored in the process of oil-based rent-seeking (Smith, 2004b). Indeed, in Kuwait and Qatar, Crystal notes that "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 to their historical claim to participate in decision making" (1989: 433).

Parasitic behavior by the self-serving bureaucracy becomes widespread. Any administrative service and paperwork, from issuing licenses and permits to sanctions, may serve under these regimes to extort the public and to exact valuable goods from citizens, while government property is often sold on the black market (Scott, 1972).

Besides, in order to stabilize their tenure, kleptocratic rulers often resort to a divide and rule strategy (Acemoglu, Robinson and Verdier, 2004), that is, they thwart any cooperation attempt between citizens to throw the ruler out by means of imposing punitive taxation on mobilized citizens, while redistributing benefits to loyal ones. Discriminatory extraction is more easily imposed through, for example, fines and fees, which can be

arbitrarily applied to concrete individuals or sectors of the society.[2]

All in all, it is expected that non-institutionalized regimes will have a greater reliance on non-tax revenues and on taxes on international trade than more institutionalized dictatorships, constituting these two sources, at the same time, the main streams of revenue of this sort of dictatorships.

Voluntary tax compliance[3] is easier to be found in regimes where citizens receive in exchange some influence, transparency and control, albeit very limited, on the decision about resource allocation (Ferejohn, 1999). "Particularly when sufficient numbers of people do not accept the state's demands for taxes as legitimate, collections are likely to suffer" (Lieberman, 2002: 94) and, as a result, free-rider problems as well as political opposition may emerge. Taxes on income and profits and on goods and services are more difficult to collect; indeed, an effective and broad administration is needed, and cooperation among citizens has to be mobilized to avoid tax evasion and opposition. As Lieberman puts it, "when it comes to questions of capacity and collective action, collections of taxes on income, profits, and capital gains still reflect levels of state-society and intra-society coordination and cooperation" (2002: 100). There is, in fact, an extensive amount of literature relating taxation to progressive democratization and accountability.[4] The basic claim goes as follows: The necessity to raise taxes from new bases or increase the existing ones leads governments to open their institutions and become more representative in exchange. The likely price for institutionalized dictatorships might be an increase in their levels of contestation.[5]

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[2] Fines and administrative fees are included in the non-tax revenue category; see below the definitions of the variables.

[3] Or "quasy-voluntary compliance" in Levi's (1988) terms.

[4] See, for instance, Bates and Lien (1985), North and Weingast (1989), Huntington (1991), Brennan and Buchanan (2000 [1980]), and Ross (2004).

[5] We explore this proposition in the following chapter.

Mobilizing support can only be achieved by institutionalized dictatorships and, especially, by fully-institutionalized regimes, where by allowing limited representation and political organization of the potential opposition the regime is able to increase its levels of perceived legitimacy, efficiency and credibility.[6] Through one-party systems 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 they can pursue their interests by influencing policy decisions, while it allows the dictators to mobilize cooperation (Gandhi and Przeworski, 2004; Smith, 2005). Parties can, besides, organize support throughout the country, so the government's control and administration can reach a broader part of the state territory (Kasza, 1995a, 1995b).

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 sought to create its own party that was to be called Future Party and 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).

Similarly, legislatures provide the opposition with a forum where demands can be expressed and agreements reached with the corresponding regime elites. For instance, in Brazil, during military rule, the legislature was dominated by two parties, the pro-government ARENA,[7] and the official opposition

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[6] These are the three factors identified by Fauvelle-Aymar (1999) that would influence taxpayers' behavior and, as a result, the tax capacity of the government.

[7] Aliança Renovadora Nacional.

organization, MDB.[8] Nevertheless, in 1967-68, both parties rejected a government-sponsored tax bill and an international trade bill (Gandhi, Gochal and Saiegh, 2003; Gandhi and Przeworski, 2006). In the USSR, the Supreme Soviet saw activated, especially after Stalin's death, its 'kontrol' function[9] which, as Vanneman puts it, "it probably represents a moderate answer to the demands of the more radical economic and political reformers" (1977: 166). Moreover, 'kontrol' involved "investigating and auditing at all levels of soviets by the commissions" (Vanneman, 1977: 105). At the legislative level, the subcommissions system just created turned into "a rather effective means of combining public opinion sampling with expertise sampling" (1977: 162).

Furthermore, the composition of those legislatures reflects very similar representative patterns concerning the more prominent groups or sectors present in them. In Zambia, under Kaunda's presidency, over 40 per cent of successful candidates in the National Assembly were businessmen or small traders or had business interests (Tordoff, 1977), the sectors more potentially affected by taxes on profits and incomes. Likewise, the 32 percent of the leaders in the Spanish Cortes under the Francoist regime were listed in the directory of corporation and large business leaders and the great majority of them had high education levels[10] (Linz, 1979: 105). In Kenya, during Kenyatta's rule, no businesses were nationalized and promises about tax and other incentives (for instance, the creation of a stock market) were made to new investors (Hopkins, 1979). Consequently, we hypothesize that the more institutionalized the authoritarian regime is; the higher the percentage of taxes that will be collected from incomes, profits and capital gains, property, from goods and services as well as payroll ones.

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[8] Movimento Democrático Brasileiro.

[9] It could translated as monitoring or supervising function.

[10] The percentage of members of the Spanish authoritarian legislature who had only primary education was below 7% (Linz, 1979: 105).

### 5.3. Other factors determining the revenue structure

The basic theoretical models explaining the tax structure of countries identify three basic factors determining the combination of revenue sources (Hettich and Winer, 1988; Hettich and Winer, 1997; Kenny and Toma, 1997; Kenny and Winer, 2001): i) The size and availability of the potential tax bases; ii) enforcement and collection costs, and iii) the substitution effects. Next subsections are devoted to summarize the different mechanisms through which these alternative factors outlined above may affect tax structures in the concrete context of authoritarian regimes.

*5.3.1. The tax bases*

The tax base refers to the assessed value of a set of assets, investments or income streams that is subject to taxation. Intuition says that an increase in the size of a concrete tax base leads to a higher reliance on it. In other words, the tax bases define the extraction possibilities of governments and influence the instruments they may use in order to raise taxes.

This is especially true for oil and primary commodity exporting countries. Almost no country uses severance taxes (taxes on goods and services) to get revenues from oil (Kenny and Winer, 2001); this would, in general, imply a privatization of its extraction and commerce. Indeed, according to the *WDI* data,[11] taxes on goods and services as a percentage of the GDP represented only 1.4% in oil exporting countries, and 4.92% in non-exporting ones. A similar pattern applies to many primary commodity exporting countries. In order to maximize revenue, dictatorships have opted for nationalizing these sectors, so revenues are raised through the huge profits of these public

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[11] World Development Indicators (World Bank, 2002).

enterprises.[12] As a result, non-tax revenues and taxes on international trade are expected to be higher in these economies, while taxes on income and profits lower. This is in fact the logic of the so-called Rentier States (Yates, 1996; Karl, 1997), which some authors argue it could be also applied to states enjoying large foreign aid receipts.[13]

Accordingly, an economy largely based on trade would rely more on international trade taxes, and, arguably, less on other sources of revenue. Trade is generally measured by the sum of imports plus exports as a percentage of the GDP and the existing empirical evidence is contradictory (Riezman and Slemrod, 1987; Easterly and Rebelo, 1993).

Regarding the social structure, a high proportion of dependent people may undermine the capacity of levy taxes on incomes due to the diminution of the labor income tax base. On the contrary, the percentage of population living in urban areas is predicted to have the opposite effect since it proxies the size of potential industrial and services workers.

### 5.3.2. Enforcement and collection costs

Collecting taxes involves administrative costs. Governments with limited administrative reach raise resources from sectors easy to tax. "One major factor which prevents an increase in the number of taxed commodities is the administrative cost of taxation" (Yitzhaki, 1979: 475). Lieberman (2002) offers a general classification in terms of state capacity and monitoring requirements involved by each tax revenue stream and the potential free-rider problems entailed. According to him, those involving more collection costs are the taxes on income, profits

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[12] Seventy-five percent of the total oil production in the world and 90% of the reserves are in the hands of state-owned enterprises (Morrison, 2005).

[13] See Therkildsen (2002) for a discussion.

and capital gains, and on property. At a medium level of difficulty we find the taxes on consumption and social security contributions. Finally, the revenue stream involving the lowest level of administration capacity would be the international trade taxes.

Accordingly, the cost of supervising incomes, profits, properties, and the exchange and production of goods and services should be significantly lower in more densely populated areas and in those with higher levels of urbanization. Conversely, revenues from foreign trade are cheaper and simpler to collect: Taxes on exports and imports can be raised at few points of entry and exit of products, requiring, thus, a reduced administrative apparatus. Besides, in this case, elaborate accounting and supervision is not strictly necessary and evasion is rather complex (Kubota, 2005).

On the other hand, as Kenny and Winer point out, "some taxes, such as the income tax and goods and services taxes, require widespread literacy; obviously, tax forms cannot be filled unless the taxpayer can read" (2001: 31). This capacity is more difficult to be found in sparse agriculturally based societies.

### 5.3.3. Substitution effects

Tax revenues reflect an economic and political equilibrium. Accordingly, the choice of the extraction instruments responds to collection costs and political feasibility (in terms of cooperation, opposition and tax evasion). These political-economic conditions and determinants of the tax mix inform us about the presence of substitution effects. Countries relying on a particular tax instrument due to political-economic constraints will, consequently, tend to rely less on other sources of revenue.

The substitution logic leads governments to focus their tax efforts on the relatively bigger and accessible tax bases of their countries. This is the logic the literature argues it exists in most of oil producing countries. Countries in which oil is exported do not depend on income taxes. Similarly, countries with a larger

percentage of trade to the GDP will rely more on taxes on international trade, and less on other bases.

Accordingly, the positive effect of one variable capturing the size and collection costs of a given tax base may turn into a negative effect on other types of revenue sources as alternative revenue sources are part of the same political-economic equilibrium.


## 5.4. Methodology: Estimating the effect of institutions

As discussed in section 5.2 and formally shown in Chapter 4, institutions in dictatorships are created in order to perform specific political and economic functions. Therefore, they are not randomly distributed among dictatorship spells. Consequently, in order to study their effect -if any- on any policy one must control for the conditions (both observable and unobservable) under which they exist, otherwise the estimated coefficients would suffer from selection bias. In other words, we cannot simply add a variable for institutions in the right hand side of a regression model as it is generally done. An example will help to clarify the importance of controlling for selection: The equilibria of the model in Chapter 4 made clear that regime inclusiveness (i.e., institutionalization) is the result of two sort of factors; some are observable, such as non-cooperative rents availability ($\theta$) and the organizational strength of the other actors of the game ($g$, $h$, $p$, specially the opposition), while others are unobservable, such as the dictator's own preferences ($a_D$). Selection bias may be produced by observable factors. As multi-party systems are more abundant in resource-poor countries, it might well be that their greater reliance on taxes on incomes and profits is caused to this fact, leaving no role to institutions. Therefore, we must correct for selection on observables.

Furthermore, suppose that leaders of developing countries educated in western universities, convinced of the benefits of democratic institutions, prefer more institutionalized and pluralist

regimes and, at the same time, are more prone to ask citizens for economic cooperation in order to raise taxes. Unobserved variables would be affecting in this case both the dependent variable as well as our main independent variable, and, as a result, any estimation not controlling for that fact would be biased as well.

All in all, our aim is to estimate a model of the following form

$$Y = X\delta + \beta I + \varepsilon \tag{5.1}$$

where $I$ stands for institutions, X stands for a vector of observable variables, and $Y$ is the dependent variable (revenue in this case); thus, potential unobservable factors are captured by the error term, $\varepsilon$. If any of these unobservable factors also affects the institutional design of the regime, $I$, that is, if $Cov(I,\varepsilon) \neq 0$, then the estimated coefficients $\beta$ would be biased due to selectivity.

As a result, we need to model and study the causes of the causes as a first step or, in this concrete case, the conditions under which dictatorial institutions are created and exist. To correct this potential selection bias, we follow Heckman's (1979) two step method. Accordingly, in the first place, institutions become the dependent variable of a probit or logit model such as (suppressing time subscripts)

$$\Pr(I = j) = Z\alpha + \upsilon \tag{5.2}$$

where $Z$ stands for a vector of observed determinants of institutions, while $\upsilon$ captures the unobserved factors, and $j$ represents each institutional organization.[14] From this model and under some distributional assumptions,[15] we get the inverse Mill ratios, which allow us to correct for the unobserved factors and rule out the endogeneity problem. In the case of dictatorial

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[14] Say, $j=0$ for non-institutionalized dictatorships, $j=1$ for regimes with a single institution, and $j=2$ for fully institutionalized regimes.

[15] Concretely, that $\varepsilon$ and $\upsilon$ are jointly normally distributed.

institutions, we have used a multinomial logit model and used Lee's (1983) method to get the inverse Mill ratios, $\lambda_j$. The logic of the procedure is exactly the same though.

In the second stage, we turn back to policy and estimate for each sub-sample of *j* (institutions) the following equation (suppressing again time and space subscripts to simplify notation) augmented by the Mills ratios ($\lambda_j$)

$$Y_j = \hat{\delta}_j X_j + \phi_j \lambda_j + \eta_j \qquad (5.3)$$

The resulting coefficients $\hat{\delta}_j$ are now unbiased due to the inclusion of the Mill's ratios, so they can be used to calculate for the entire sample what the value of *Y* would have been had those countries been under institutions *j* (generating the corresponding counterfactuals), that is

$$\hat{Y} = \hat{\delta}_j X \qquad (5.4)$$

Finally, we can calculate the selection-corrected averages for each institutional configuration for the whole sample, $\bar{\hat{Y}}$, and the difference between these averages will inform us about the actual net effect of institutions on policy or economic outcomes.

## 5.5. Description of the data and results

### 5.5.1. The endogeneity of institutions under dictatorship

As it has been already remarked, dictators use institutions to mobilize political and economic support and co-opt the potential opposition. There are, then, two main observable factors determining the existence or creation of institutions under

authoritarian rule, namely, the presence of natural resources and strength of the opposition.

The presence of exportable resources makes economic cooperation become irrelevant for dictator's rents and revenue extraction through taxes. As defended by the "taxation leads to representation" argument, if little revenues are levied from taxes whose collection needs compliance, no representation will be offered in exchange (Ross, 2004). We include, thus, a dummy variable capturing the presence of either oil or primary commodities in the country.[16] As foreign aid may be another good source of non-cooperative rents, we also incorporate the variable 'aid per capita' in our models.

Regarding the organizational strength of the other actors (basically the potential opposition), we measure it using several variables. The increasing number of democratic systems in the world has added an extra source of pressure for political liberalization over authoritarian rulers. Under these conditions, many authoritarian rulers resort to provide the regime with some democratic credentials, such as elections and multi-party systems, to pass as democracies. Therefore, we include in the analysis the variable 'democracy share in the world' which is simply the percentage of democratic regimes (other than the regime under consideration) in the world in a given year. Conversely, we introduce the proportion of dictatorships within the same region. The propensity towards repression of opposition present in a given country is measured, following Gandhi and Przeworski (2006), by the sum of past transitions to authoritarianism. However, we also take into consideration the fact that if the regime has previously been a democracy; the opposition may have a stronger a democratic culture as well as a higher organizational capacity used to carry out a more effective political opposition. Consequently, we include a dummy variable coded 1 if the previous regime was a democracy. Coordination problems within the opposition groups

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[16] See the Appendix for a description of the data used throughout this chapter.

are more likely to arise when confrontation among distinct ethnic groups may arise (Padró-i-Miquel, 2004), so to take into account this possibility we incorporate the index of ethnic fractionalization in the model.

Furthermore, the type of head of government might partially capture the preferences of rulers for the degree of regime openness, $a_D$, tending to be, those of civilian and military nature, more on the left than those of monarchs since they can not rely on tradition and dynastic rights to stabilize their tenure (see the model Chapter 4). This possibility is captured by a dummy variable coded 1 if the effective head is -or ever was- a member of the military by profession, 0 if civilian or monarchy. Similarly, we constructed a dummy for civilian rulers. The potential erosion of leadership is captured by the number of years the ruler has been in office prior to that year.

We have also considered the possible effect of other control variables that take into account the colonial history of countries. This has been done by including a dummy variable coded 1 for every year in countries that had been a British colony after 1919, 0 otherwise.

The dependent variable, 'institutions', is categorical and takes value 0 if the dictatorship has no institutions, 1 if there exists one party (single-party system), a legislature or both, and 2 if two or more political parties exist in the legislature. This classification is consistent with other existing ones which focus on some empirical consequence of institutions[17] (Gandhi, 2004; Howard and Roessler, 2006) and coherent with the new emerging theoretical

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[17] The classification by Howard and Roessler (2006) follows a step by step procedure in which regimes are divided according to whether they hold elections, if these are contested, and if they are free. Regimes with no elections are called 'closed authoritarian'; those with elections are 'hegemonic authoritarian', and those with contested elections are named 'competitive authoritarian'. However, we prefer our formal institutional classification as the celebration of elections may be the result of contextual circumstances and regime legitimacy crisis.

interest on competitive authoritarian regimes (Diamond, 2002; Levitsky and Way, 2002; Ottaway, 2003). Table 5.1 shows the result of two alternative logit models, multinomial and ordered logit.

*Table 5.1. The determinants of institutions under dictatorship: Multinomial and ordered logit*

| Independent Variables | Multinomial logit | | Ordered logit |
|---|---|---|---|
| | Single institution | Multiple institutions | |
| Constant | -1.01** | -1.72*** | |
| | (0.472) | (0.491) | |
| Resource rich | -0.368*** | -1.37*** | -.935*** |
| | (0.126) | (0.135) | (.081) |
| Aid per capita | -0.003*** | -0.004*** | -.002*** |
| | (0.0009) | (0.001) | (.0006) |
| Military ruler | 0.945*** | 2.44*** | 1.51*** |
| | (0.159) | (0.206) | (.130) |
| Civilian ruler | 3.30*** | 4.04*** | 1.97*** |
| | (0.190) | (0.229) | (.120) |
| Democracies in the world | -2.07*** | 4.35*** | 4.42*** |
| | (0.700) | (0.723) | (.443) |
| Dictatorships in region | 0.765** | -1.98*** | -1.76*** |
| | (0.355) | (0.354) | (.227) |
| Ethnic fractionalization | 0.219 | -0.274 | -.287** |
| | (0.202) | (0.220) | (.131) |
| Past transitions to dict. | 0.058 | -0.976*** | -.868*** |
| | (0.120) | (0.146) | (.098) |
| Years in power | 0.081*** | 0.089*** | .041*** |
| | (0.008) | (0.008) | (.004) |
| Democracy before | -1.25*** | 0.599** | .523** |
| | (0.268) | (0.283) | (.206) |
| British colony | | | -.203** |
| | | | (.081) |
| Observations | 2980 | | 2980 |
| LR-Chi2 | 1406.25*** | | 897.98*** |

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

In general, all the variables are highly significant and with the expected signs. The presence of exportable resources and foreign aid has a strong and negative impact on the likelihood of creating or allowing institutions within the regime (both types), especially multiple institutions. The effect of ethnic fractionalization is negative as well for both types of institutions; this confirms the collective action view according to which the dictator thwarts rebellion taking advantage of pre-existing differences in the population.

The years in power have a positive impact too; probably institutions are used to restore loyalty after progressive leadership erosion. Even the Shah turned to the one-party system (with the Rastakhiz Party) in the last years of his rule (1975) in a last attempt to handle the increasing discontent due to the worsening of the economic conditions in Iran. The idea of imposing such a system was raised in 1974 by a participant in the Queen's Council, Gholamreza Afkhami, a Ph.D. from an American university and professor of political science at the National University of Iran (Amini, 2002).

Given that the monarchy is the reference category; both military as well as civilian leaders are more prone to create institutions, especially the latter. Monarchies, on the one hand, resort to more traditional forms of loyalty and legitimacy and, on the other hand, most of them exist in oil exporting countries in the Middle East. The nature of the previous regime has a different effect for each of the two institutional varieties (and is significant in both cases). The effect on the likelihood of allowing a multi-party system having previously been a democracy is positive (and significant), which is fully consistent with our predictions. On the contrary, a democratic past has a negative impact on the existence of a one-party system or a regime with a legislature (in the multinomial model). Having been a British colony in the past also diminishes the probabilities of developing some kind of institution.

The international pressure exerted by democratic countries has a big and positive effect on the creation of institutions in

authoritarian systems in order to shield from the attention of a more hostile international context. As cited earlier, "the trend toward democracy has been accompanied by an even more dramatic trend toward pseudodemocracy" (Diamond, 2002: 27). Conversely, a high number of autocracies within the same region hinders institutionalization.

### 5.5.2. Authoritarian institutions and revenues: Some descriptive patterns

Let us now turn to the dependent variables and their observable patterns. The data for the revenue categories are taken from the *World Development Indicators* and cover the period 1970-2000. We study the five main sources of public revenue, namely: Non-tax revenue; taxes on income, profits and capital gains; taxes on international trade; taxes on goods and services; social security taxes, and other taxes.[18] In the *WDI* dataset these variables are measured as a percentage of current revenue, so we have transformed them to get the corresponding standardized percentages with respect to the GDP. Table 5.2 reproduces the definitions as provided by the World Bank's *WDI*.

Figure 5.1 shows the averages, for the whole time period considered, of the five variables under study as a percentage of current revenue for each of the institutional arrangements of all dictatorial regimes that existed in that period and for which data was available. As it clearly appears, there are systematic differences between non-democratic regime types that are consistent with our theoretical predictions. Non-institutionalized regimes get most of their revenue from both taxes on international trade (25.3% of revenue) as well as non-tax revenue (28.2% of current revenue), which are the sources of revenue that involve

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[18] Hence, we agree with Fauvelle-Aymar (1999) in considering essential for the full understanding of revenue policy, especially among developing countries, the inclusion of non-tax revenues.

less monitoring and collection costs. On the contrary, fully institutionalized dictatorships present a more balanced tax mix, relying mostly on taxes on incomes, profits and capital gains - which represent 25.8% of their total revenues-, and on taxes on goods and services -which constitute 25.3% of their current revenue-. Dictatorships with a single institution appear as an intermediate model.

*Table 5.2. Definitions of the revenue sources according to the WDI*

| Revenue stream | Include… |
| --- | --- |
| *Non-tax revenue* | …requited non-repayable receipts for public purposes, such as fines, administrative fees, or entrepreneurial income from government ownership of property and voluntary, unrequited non-repayable receipts other than from governmental sources. |
| *Taxes on income, profits, and capital gains* | …taxes on the actual or presumptive net income of individuals, on the profits of enterprises, and on capital gains, whether realized on land, securities, or other assets. |
| *Taxes on international trade* | …import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes. |
| *Taxes on goods and services* | …all taxes and duties levied by central governments on the production, extraction, sale, transfer, leasing, or delivery of goods and rendering of services, or on the use of goods or permission to use goods or perform activities. |
| *Social security taxes* | …employer and employee social security contributions and those of self-employed and unemployed people. |
| *Other taxes* | …employer payroll or labor taxes, taxes on property, and taxes not allocable to other categories. |

History provides us with bizarre examples. For instance, as mentioned above, coffee exports represented the 60-80% of the revenue in Rwanda during the Habyarimana regime. Oil revenues account for more than 90% of total revenue in Kuwait in 1986-1991 under Sheikh Jabir Al Ahmad Al Jabir Al Sabah rule. In 1989, the government of Myanmar headed by Than Shwe began decentralizing economic control and has since liberalized some portions of the economy. However, the profitable industries of gems, oil and forestry remain in the hands of the military government, and represent more than 50% of total state revenue.

In sum, the data reveal that the two main sources of revenue under dictatorship are either non-tax revenue or taxes on income, profits and capital gains. In fact, both sources of state resources seem to act as substitutes to each other, as the high and negative correlation, $\rho = -0.395$, between them shows. We also find a strong negative relationship ($\rho = -0.435$) between the percentage of revenue coming from non-tax sources and the share levied from taxes on international trade. This correlation is even higher, $\rho = -0.596$, for non-institutionalized authoritarian regimes, which depend much more heavily on these two extractive instruments, as mentioned above.

This pattern seems to reflect two alternative approaches of governments with respect to the resources and products prevailing in the country. When the agricultural and commodity-exporting sectors are the prevailing ones, dictatorships, particularly those with no institutions, resort to taxes on international trade in order to get revenues from this sector. Indeed, the correlation between the share of agriculture as a percentage of the GDP and taxes on trade (as a percentage of current revenue) is 0.53 in non-institutionalized regimes,[19] whereas the correlation with non-tax revenues is -0.47.

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[19] 0.40 for the whole sample.

*Figure 5.1. The composition of revenues under dictatorship (% of current revenue)*
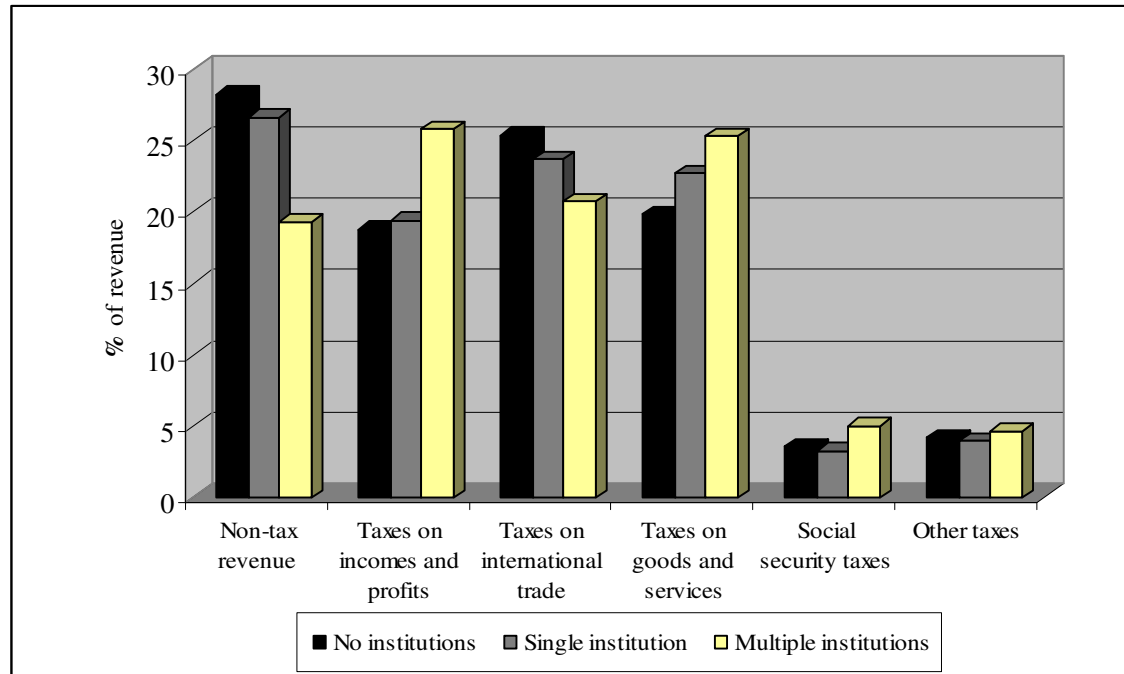


Note: Time period: 1970-2000. Source of revenue data: *World Development Indicators.*

*5.5.3. The control variables: Tax bases and collection costs*

As remarked in the theoretical sections, there are other factors that may be affecting the structure of revenues under any type of regime due to their influence on i) the size and availability of the potential tax bases, and on ii) how costly to collect some types of taxes is. The variables used to capture these two dimensions (in accordance with the existing literature on the topic) are the following:

With regard to the size of the tax bases, the first and more obvious variables to be included are those measuring the presence of exportable resources such as oil or primary commodities. Both variables are expected to exert a positive effect on non-tax revenue and taxes on trade respectively and, possibly, a negative one on taxes on incomes and profits. Similarly, we include the variable 'aid per capita' to control for cases where its high amount permits the ruler to apply lower rates to incomes and profits. In opposition, more developed and diversified economies are able to rely more on tax revenues, specifically on taxes on incomes and profits. Thus we take into account the potential effect of the log of GDP per capita as a determinant of a country's tax structure (Fauvelle-Aymar, 1999).

The degree of trade openness is captured by including the sum of exports and imports as a percentage of the GDP, and it is obviously expected to have a positive effect on the level of revenue levied from taxes on international trade due to both its effect on the size of the tax base as well as on the low collection costs associated to commerce as remarked.

Other variables are related simultaneously to both tax base and collection costs effects: Population density, the percentage of the total population living in urban areas, and the value added of the agricultural sector as a percentage of the GDP. These three variables capture similar dimensions since all reflect the stage of development and the social structure of a given country. And just affecting the level of collection costs, we have added to the models the variable 'surface', which gauges the area of the

country in squared kilometers. We also include a variable measuring the absolute size of the government's budget, that is, current revenue as a percentage of the GDP, to control for scale effects (Kenny and Winer, 2001).

Other control variables included are: The age dependency ratio, to capture the potential societal pressure for a bigger size of government, and the degree of ethnic fractionalization to control for differential treatment of groups within society to reduce accountability.

### 5.5.4. The selection-corrected models of revenue

Let us first summarize and remind what we expect to find. Unless natural resources or foreign aid abound, dictators rely on more costly sources of revenue for which compliance and cooperation, mobilized through institutions, are required. These, say, cooperative sources include principally taxes on income, profits and capital gains, property taxes, payroll taxes, and taxes on goods and services. Back to the model in Chapter 4, the tests performed here will allow us to either accept or reject the assumption that institutionalization involves expected benefits in terms of tax revenue, $\theta$.

For the estimation of the models we have used two alternative methods as shown in Table 5.3. However, the most reliable results are derived from the Seemingly Unrelated Regressions models. Given that each component of the revenue policy is part and result of a political-economic equilibrium in which the government chooses the best strategy to maximize revenue, the variables are simultaneously determined, so they are part of a system of equations.[20] The coefficients have been estimated using panel data techniques applying panel corrected standard errors too. The

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[20] Breusch-Pagan tests have been run to check for dependent equations.

selection-corrected coefficients for the SUR models are reported in the appendix of this Chapter.

Table 5.3 summarizes both the observed and the selection-corrected averages of each source of revenue for each one of the differently institutionalized dictatorship types (standard deviations in parentheses). To make the data comparable, the dependent variables are now measured as a percentage of the GDP. The observed results and differences between sub-samples are entirely coherent with our theoretical predictions.

Note that the portrait one gets from analyzing the observed data does not change that much once controlled for the conditions under which dictatorial institutions exist. The order of the averages only changes for the taxes on international trade and for the social security ones when one controls for selection. In fact, and especially for the case of taxes on international trade, it is after controlling for selection that the results coherently confirm our theoretical hypotheses.

The main results obtained from our analyses can be summarized as follows. Dictators that ban all kind of political institutions basically rely on two sources to get their revenues, to be precise, non-tax revenues and taxes on international trade, that is, those entailing less costs and not needing compliance. On average, non-institutionalized regimes collect from non-tax sources about the 8 percent (as a percentage of the GDP) of their resources, whereas taxes on international trade represent about the 6% of the GDP. Alternatively, the more institutionalized a dictatorship is, the larger amount of revenues it can levy from a more monetized economy by means of mobilizing cooperation, in other words, the more effectively it can tax incomes, profits, goods and services and property. The existence of $\theta$ is confirmed.

*Table 5.3. Averages of revenue streams (as a % of GDP) in dictatorships under different institutional arrangements*

| Revenue source | Estimation method | Type of Dictatorship | | |
|---|---|---|---|---|
| | | No institution | Single institution | Multiple institutions |
| Non-tax revenue | Observed | 7.74 (12.61) | 6.46 (10.16) | 4.86 (5.44) |
| | SURE | 7.90 (12.25) | 4.86 (7.80) | 5.50 (7.63) |
| | Panel corrected errors with lag | 8.07 (12.33) | 4.87 (7.89) | 5.50 (7.80) |
| Taxes on income, profits and capital gains | Observed | 3.78 (3.84) | 4.46 (4.58) | 5.84 (3.96) |
| | SURE | 4.46 (3.42) | 5.21 (4.01) | 5.47 (4.33) |
| | Panel corrected errors with lag | 4.75 (3.62) | 5.21 (4.00) | 5.41 (4.35) |
| Taxes on international trade | Observed | 4.38 (4.10) | 5.65 (8.80) | 4.51 (3.80) |
| | SURE | 6.14 (5.28) | 5.65 (6.47) | 4.18 (5.57) |
| | Panel corrected errors with lag | 5.97 (6.08) | 5.67 (6.46) | 4.27 (5.72) |
| Taxes on goods and services | Observed | 3.34 (3.09) | 4.54 (5.73) | 5.11 (2.93) |
| | SURE | 3.99 (3.98) | 4.59 (4.11) | 4.99 (4.44) |
| | Panel corrected errors with lag | 4.16 (4.42) | 4.57 (4.13) | 4.98 (4.51) |
| Social security taxes | Observed | 0.80 (1.54) | 0.98 (2.32) | 1.16 (1.99) |
| | SURE | 0.57 (1.22) | 0.72 (1.33) | 0.66 (1.32) |
| | Panel corrected errors with lag | 0.60 (1.26) | 0.72 (1.34) | 0.67 (1.33) |
| Other taxes | Observed | 0.75 (1.24) | 0.83 (1.05) | 0.98 (1.02) |
| | SURE | 0.63 (0.68) | 0.83 (0.98) | 0.88 (0.99) |
| | Panel corrected errors with lag | 0.63 (0.72) | 0.83 (0.98) | 0.88 (1.00) |
| Observations | | 306 | 539 | 541 |

Note: Cell entries are the observed and the selection corrected averages. Standard deviations in parentheses. The number of observations corresponds to the data available for each type of dictatorship ($j$).

The strategies for revenue collection are quite evident; non-institutionalized regimes not only depend more on non-tax revenue and on taxes on international trade than the other types of dictatorships do, but they also rely more on these two sources of revenue than on any other. In contrast, more institutionalized regimes present a much more balanced reliance on the alternative revenue streams at their disposal, diversifying revenue at a greater extent. Note that the difference in the averages of the four main types of taxes is lower than 2 percentage points for authoritarian regimes with either a single or multiple institutions (see Table 5.3).

The next question to be addressed after confirming the existence of such systematic differences between differently institutionalized dictatorships is whether these differences are relevant at the statistical level. Table 5.4 reports the differences between the averages for each institutional arrangement and shows the results of the corresponding *t*-tests. The sign of the difference should be interpreted as follows: "No inst. vs. single inst." means that the average of second institutional setting is subtracted to the average of the first, so a negative difference shows that the average of the second –"single inst." in this example- is bigger than that of the first –"no inst."-. In general, the differences are still significant -in particular for the SUR models- after controlling for selection bias, so we can confirm that 'institutions matter' for revenue policy, even under dictatorship, and that they effectively mobilize economic cooperation offering limited accountability in exchange.

To sum up, the degree of institutionalization of a dictatorial regime is, independently of the conditions (observable and unobservable) under it exists and develops, an important determinant of its revenue policy. The dependence on revenue streams that do not require the cooperation or compliance of the citizens is much greater for non-institutionalized regimes. Even after controlling for the conditions under which these regimes exist, the differences in the averages with respect to more institutionalized regimes are still systematic and statistically

*Table 5.4. Results of the t-tests and differences between averages for differently institutionalized dictatorships*

| Revenue source | Estimation method | Comparisons | | |
|---|---|---|---|---|
| | | No inst. vs. Single inst. | No inst. vs. Multiple inst. | Single inst. vs. Multiple inst. |
| Non-tax revenue | Observed | 1.27 | 2.87 | 1.60 |
| | | t=1.50* | t=3.78*** | t=3.22*** |
| | SURE | 3.04 | 2.39 | -0.640 |
| | | t=6.27*** | t=4.98*** | t=1.75** |
| | Panel corrected errors with lag | 3.19 | 2.56 | -0.624 |
| | | t=6.53*** | t=5.27*** | t=1.68** |
| Taxes on income, profits and capital gains | Observed | -0.675 | -2.05 | -1.37 |
| | | t=2.17** | t=7.32*** | t=5.28*** |
| | SURE | -0.750 | -1.01 | -0.259 |
| | | t=4.26*** | t=5.47*** | t=1.31* |
| | Panel corrected errors with lag | -0.465 | -0.663 | -0.197 |
| | | t=2.58*** | t=3.50*** | t=1.00 |
| Taxes on international trade | Observed | -1.26 | -0.135 | 1.13 |
| | | t=2.37*** | t=0.48 | t=2.74*** |
| | SURE | 0.486 | 1.96 | 1.47 |
| | | t=1.74** | t=7.64*** | t=5.16*** |
| | Panel corrected errors with lag | 0.304 | 1.70 | 1.40 |
| | | t=1.02 | t=6.12*** | t=4.87*** |
| Taxes on goods and services | Observed | -1.19 | -1.76 | -0.570 |
| | | t=3.38*** | t=8.26*** | t=2.06** |
| | SURE | -0.601 | -1.00 | -0.402 |
| | | t=3.14*** | t=5.04*** | t=1.98** |
| | Panel corrected errors with lag | -0.409 | -0.820 | -0.411 |
| | | t=2.02** | t=3.89*** | t=2.01** |
| Social security taxes | Observed | -0.178 | -0.364 | -0.185 |
| | | t=1.20 | t=2.75*** | t=1.40* |
| | SURE | -0.148 | -0.093 | 0.054 |
| | | t=2.44*** | t=1.55* | t=0.859 |
| | Panel corrected errors with lag | -0.118 | -0.067 | 0.051 |
| | | t=1.93** | t=1.10 | t=0.809 |
| Other taxes | Observed | -0.076 | -0.225 | -0.148 |
| | | t=0.95 | t=2.84*** | t=2.33*** |
| | SURE | -0.206 | -0.256 | -0.050 |
| | | t=5.15*** | t=6.32*** | t=1.07 |
| | Panel corrected errors with lag | -0.201 | -0.251 | -0.050 |
| | | t=4.92*** | t=6.09*** | t=1.07 |

Note: ***$p<.01$  **$p<.05$  *$p<.10$. In each cell, the first value is the difference between averages, and the second, the t-statistic and its level of significance from one-sided tests.

significant. For non-institutionalized systems, this difference is bigger than 3 percentage points with respect to regimes with a single institution and about 2.7 with fully institutionalized ones in the case of non-tax revenue. A similar figure is observed with regard to taxes on international trade.

The existence of $\theta$ can be traced by looking at the -statistically significant- higher percentage of revenue from taxes on incomes and profits, goods and services and other taxes that more institutionalized regimes are able to collect (as a percentage of GDP). The results are monotonic, that is, more institutionalization leads to a higher percentage of tax revenues levied from bases that require compliance and cooperation from the citizens.

## 5.6. Conclusions

The model in Chapter 4 contains a set of assumptions and results that must be carefully tested. One of the most important concerns the capacity of dictatorial institutions to mobilize economic cooperation. This fact was captured by the existence of some expected benefits of institutionalization in terms of tax revenues, $\theta$, which were argued to be a decisive parameter driving the equilibria of the game as independently of the overall security of the ruler, the need for revenue could compel him and some elite sectors to incorporate the opposition into a more broad regime institutional structure.

Revenue policy reflects the dictators' strategies to levy resources and may indicate how they relate with the society and how they approach other policy choices. Unaccountable personalist rulers willing to maximize their own self-enrichment will not either seek any cooperation from the society they govern in order to extract resources. Consequently, unable or not compelled to ask for any cooperation from the citizenry, these sort of rulers resort to other means rather than costly taxation in order to get their revenues and discretionary rents.

When natural resources do not abound, and foreign aid is scarce, authoritarian regimes must seek the economic cooperation of some social sectors due to the fact that these other tax bases at their disposal involve higher administrative costs and more extended free-riding possibilities for taxpayers. In exchange for compliance, these regimes offer limited political organization and representation within authoritarian institutions. As a result, the more institutionalized the regime is, the higher the percentage of revenue it should be able to collect from taxes on incomes, profits and capital gains, taxes on goods and services, taxes on property and payroll ones taxes.

What does all this imply at the empirical level? Our logistic regressions for institutions have made clear that they are endogenous. Dictatorial institutions are the result of the need to mobilize cooperation to raise revenues when resources and foreign aid are scarce. But they also respond to cooptation motivations, so as the strength of the potential opposition augments so does the level of openness of the regime.

On the other hand, our selection-corrected results make evident that revenue policies of differently institutionalized dictatorships vary according to strategic and economic considerations. Specifically, authoritarian institutions play a key role in mobilizing support and allowing the revelation of preferences and information among citizens. Non-institutionalized regimes rely basically on two sources of revenue: Taxes on international trade and non-tax revenue for which no compliance is needed and which involve little administrative complexities.

On the other hand, in more institutionalized dictatorships the reliance on the alternative revenue streams is much more balanced, collecting a similar percentage (on average) from taxes on income, profits and capital gain, taxes on goods and services, taxes on international trade and even non-tax revenues. The higher the degree of institutionalization of the regime, the higher the percentage of taxes it is able to collect from income, profits and gains, from goods and services, and from property and payroll.

These findings inform us about the logic of sensitivity under authoritarianism and confirm the general claim "no taxation without representation."

**Appendix to Chapter 5: The selection corrected coefficients**

*Table 5.A. Selection-corrected coefficients for non-institutionalized authoritarian regimes (SURE)*

| Independent variables | (1) Non-tax | (2) Income tax | (3) International tax | (4) Goods and services tax | (5) Social security tax | (6) Other tax |
|---|---|---|---|---|---|---|
| Lag | 0.204*** | 0.597*** | 0.605*** | 0.712*** | 0.803*** | 0.549*** |
| | (0.025) | (0.028) | (0.035) | (0.026) | (0.030) | (0.026) |
| Log GDP per capita | 1.383* | 0.546** | -0.373 | -0.656*** | -0.159 | -0.153** |
| | (0.725) | (0.262) | (0.273) | (0.162) | (0.099) | (0.074) |
| Oil-exporting | 6.427*** | 1.014** | -3.208*** | -1.460*** | 0.005 | -0.227* |
| | (1.231) | (0.423) | (0.490) | (0.268) | (0.159) | (0.123) |
| Primary commodity | 0.208 | 0.148 | -1.041*** | 0.412*** | -0.150 | 0.057 |
| | (0.722) | (0.255) | (0.279) | (0.156) | (0.098) | (0.075) |
| Foreign aid | 0.010*** | -0.001 | -0.003** | -0.001 | -0.000 | 0.001* |
| | (0.004) | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) |
| Ethnic fract. | -2.913** | -0.777* | 0.365 | 0.123 | 0.332* | 0.343** |
| | (1.281) | (0.453) | (0.479) | (0.271) | (0.180) | (0.135) |
| Pop. Density | 0.011*** | -0.002** | -0.001 | 0.000 | -0.000 | -0.000 |
| | (0.002) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) |
| Trade | -0.042*** | -0.001 | 0.032*** | -0.006** | 0.000 | -0.002** |
| | (0.011) | (0.004) | (0.005) | (0.002) | (0.001) | (0.001) |
| Urban pop. | 0.004 | -0.035*** | 0.005 | 0.022*** | 0.013*** | 0.009*** |
| | (0.022) | (0.008) | (0.008) | (0.005) | (0.003) | (0.002) |
| Agriculture | 0.047 | -0.018 | 0.042*** | -0.024*** | 0.007 | -0.005 |
| | (0.035) | (0.012) | (0.013) | (0.008) | (0.005) | (0.004) |
| Surface | -0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Age dependency | 5.920* | 0.275 | 2.710** | -0.805 | -0.459 | 0.163 |
| | (3.051) | (1.077) | (1.141) | (0.665) | (0.449) | (0.312) |
| Current rev. | 0.616*** | 0.035** | 0.062*** | 0.050*** | 0.004 | 0.004 |
| | (0.044) | (0.016) | (0.016) | (0.010) | (0.006) | (0.004) |
| $\lambda_0$ | 0.326 | 0.010 | 0.181** | -0.180*** | -0.049* | -0.035 |
| | (0.217) | (0.077) | (0.081) | (0.046) | (0.030) | (0.022) |
| Constant | -21.62*** | -1.073 | -0.844 | 5.453*** | 0.732 | 0.824 |
| | (6.908) | (2.436) | (2.579) | (1.583) | (0.975) | (0.710) |
| Observations | 219 | 219 | 219 | 219 | 219 | 219 |
| Chi-2 | 1587.33 | 1582.19 | 1585.87 | 3604.93 | 1925.01 | 1482.46 |

Standard errors in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

*Table 5.B. Selection-corrected coefficients for dictatorial regimes with a single institution (SURE)*

| | Revenue variables | | | | | |
|---|---|---|---|---|---|---|
| *Independent variables* | *(1)* nontaxgdp | *(2)* inctaxgdp | *(3)* inttaxgdp | *(4)* gstaxgdp | *(5)* sstaxgdp | *(6)* othertaxgdp |
| Lag | 0.796*** | 0.827*** | 0.792*** | 0.864*** | 0.977*** | 0.890*** |
| | (0.019) | (0.027) | (0.025) | (0.019) | (0.015) | (0.021) |
| Log GDP per capita | -0.580 | -0.022 | -0.093 | 0.068 | -0.009 | -0.005 |
| | (0.377) | (0.230) | (0.351) | (0.176) | (0.037) | (0.038) |
| Oil-exporting | 1.398** | 0.659** | -0.900* | -0.679** | -0.036 | 0.071 |
| | (0.568) | (0.335) | (0.518) | (0.266) | (0.054) | (0.055) |
| Primary commodity | -0.457 | 0.248 | -0.316 | 0.077 | -0.006 | 0.011 |
| | (0.315) | (0.195) | (0.289) | (0.147) | (0.031) | (0.032) |
| Foreign aid | -0.002 | 0.008*** | 0.003 | -0.000 | -0.001 | 0.000 |
| | (0.004) | (0.003) | (0.004) | (0.002) | (0.000) | (0.000) |
| Ethnic fract. | 0.647 | -0.816** | 0.415 | -0.172 | 0.071 | 0.066 |
| | (0.555) | (0.347) | (0.500) | (0.255) | (0.054) | (0.055) |
| Pop. Density | -0.001 | 0.001*** | -0.001* | 0.000 | -0.000 | 0.000* |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Trade | 0.004 | -0.003 | 0.013*** | -0.004 | 0.000 | 0.001 |
| | (0.005) | (0.003) | (0.005) | (0.003) | (0.001) | (0.001) |
| Urban pop. | 0.039** | -0.044*** | -0.017 | -0.000 | 0.002 | 0.002 |
| | (0.017) | (0.010) | (0.015) | (0.007) | (0.002) | (0.002) |
| Agriculture | 0.016 | -0.047*** | 0.019 | -0.005 | 0.001 | 0.002 |
| | (0.017) | (0.011) | (0.015) | (0.008) | (0.002) | (0.002) |
| Surface | -0.000 | -0.000** | 0.000* | -0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Age dependency | -0.692 | -1.681** | -0.875 | 0.627 | 0.172 | 0.246* |
| | (1.317) | (0.796) | (1.207) | (0.609) | (0.129) | (0.134) |
| Current revenue | 0.045*** | 0.021*** | 0.079*** | 0.018*** | 0.000 | -0.001 |
| | (0.008) | (0.005) | (0.012) | (0.006) | (0.001) | (0.001) |
| $\lambda_1$ | -0.139 | 0.146 | 0.143 | 0.086 | -0.002 | -0.005 |
| | (0.159) | (0.097) | (0.145) | (0.074) | (0.016) | (0.016) |
| Constant | 2.425 | 5.264*** | 0.267 | -0.118 | -0.219 | -0.331 |
| | (3.236) | (1.980) | (2.949) | (1.506) | (0.313) | (0.325) |
| Observations | 340 | 340 | 340 | 340 | 340 | 340 |
| Chi-2 | 5722.98 | 3190.25 | 7186.52 | 10638.84 | 5377.79 | 3758.49 |

Standard errors in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

*Table 5.C. Selection-corrected coefficients for fully institutionalized regimes (SURE)*

| Independent variables | (1) nontaxgdp | (2) inctaxgdp | (3) inttaxgdp | (4) gstaxgdp | (5) sstaxgdp | (6) othertaxgdp |
|---|---|---|---|---|---|---|
| | | | *Revenue variables* | | | |
| Lag | 0.556*** | 0.844*** | 0.742*** | 0.961*** | 0.950*** | 0.907*** |
| | (0.034) | (0.023) | (0.033) | (0.018) | (0.014) | (0.021) |
| Log GDP per capita | 0.445 | 0.498*** | -0.056 | -0.015 | -0.045 | -0.069* |
| | (0.292) | (0.170) | (0.251) | (0.121) | (0.048) | (0.041) |
| Oil-exporting | 0.617 | 2.243*** | -0.710 | 1.292** | -0.017 | 0.071 |
| | (1.360) | (0.752) | (1.167) | (0.563) | (0.214) | (0.191) |
| Primary commodity | -0.579* | 0.393** | -0.426 | 0.076 | 0.055 | -0.130*** |
| | (0.321) | (0.185) | (0.280) | (0.135) | (0.050) | (0.046) |
| Foreign aid | 0.015*** | -0.003 | 0.003 | -0.005** | -0.001 | -0.001** |
| | (0.004) | (0.002) | (0.004) | (0.002) | (0.001) | (0.001) |
| Ethnic fract. | 1.340*** | -0.491* | -0.116 | -0.340* | 0.088 | 0.199*** |
| | (0.464) | (0.269) | (0.387) | (0.193) | (0.077) | (0.067) |
| Pop. Density | 0.001*** | -0.000 | -0.000 | 0.000 | -0.000** | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Trade | -0.008* | 0.004* | 0.005 | -0.002 | 0.001 | 0.002*** |
| | (0.004) | (0.002) | (0.004) | (0.002) | (0.001) | (0.001) |
| Urban pop. | -0.028** | -0.021*** | 0.004 | 0.001 | 0.003* | -0.000 |
| | (0.011) | (0.007) | (0.010) | (0.005) | (0.002) | (0.002) |
| Agriculture | -0.031 | 0.003 | 0.040** | -0.007 | 0.002 | -0.001 |
| | (0.019) | (0.011) | (0.016) | (0.008) | (0.003) | (0.003) |
| Surface | 0.000 | 0.000*** | -0.000 | -0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Age dependency | 3.647*** | 0.062 | -0.009 | 0.586 | -0.148 | 0.213 |
| | (0.952) | (0.515) | (0.788) | (0.391) | (0.146) | (0.132) |
| Current revenue | 0.201*** | 0.050*** | 0.043*** | 0.015** | 0.005* | 0.005** |
| | (0.019) | (0.010) | (0.013) | (0.007) | (0.003) | (0.002) |
| $\lambda_2$ | 0.195* | 0.013 | -0.320*** | 0.112** | -0.025 | 0.011 |
| | (0.118) | (0.066) | (0.103) | (0.049) | (0.019) | (0.016) |
| Constant | -7.166*** | -3.354** | -1.497 | 0.568 | 0.031 | 0.208 |
| | (2.495) | (1.353) | (2.093) | (1.032) | (0.387) | (0.338) |
| Observations | 334 | 334 | 334 | 334 | 334 | 334 |
| Chi-2 | 2597.59 | 5588.20 | 1555.96 | 5347.18 | 10951.87 | 6196.84 |

Standard errors in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

# CHAPTER 6. THE EMPIRICS OF THE POLITICAL ACCOUNTABILITY FUNCTION

## 6.1. Introduction

We now move on to the empirical research of the alternative mechanisms of accountability -the technologies for throwing leaders out, as Przeworski (2003) names them- and the two components of the political accountability function -*security* and *sensitivity*-, and to put under scrutiny the rest of the theoretical propositions developed in Chapter 4. We will proceed as follows:

First, we will explore the variables determining the strength and organizational capacity of the elite, the military and the opposition and, therefore, the rulers' levels of security, following the theoretical statements made throughout the Chapter 4. Secondly, we turn to sensitivity and explore whether it is true that non-cooperative rents make rulers less accountable with regard to rent-extraction and taxation as the fiscal theories of governance propose. Finally, we will turn our attention to formal institutions and put under empirical scrutiny our hypotheses concerning institutions and their associated levels of security and sensitivity.

All in all, the aim of this Chapter is to confront the theory and the assumptions involved in it with the objective of understanding the determinants of political accountability under dictatorial regimes at empirical two levels. On the one hand, we concentrate on rulers as the units of analysis to study whether the factors

proposed in Chapter 4 help to explain their probability of survival. Secondly, we focus on institutions and analyze, keeping in mind that they are endogenous, how they relate to the two dimensions of political accountability in order to understand the mechanisms whereby they may affect growth.

In the previous Chapter we have already demonstrated that dictatorial institutions help to shape the fiscal policy of regimes by increasing the share of revenues levied from, especially, incomes, profits, and goods and services. At the theoretical level this implies that given that institutions succeed in mobilize economic cooperation, they have to grant a higher degree of leverage to the opposition groups as a consequence of the trade-off between taxation and representation. Therefore, institutions can be well expected to increase the level of dictators' political accountability with regard to taxation.

The Chapter is then organized as follows: Section 6.2 presents the empirical models that explain the determinants of security under dictatorship by analyzing the mechanisms of accountability. Section 6.2 also presents the analyses on the determinants of the levels of sensitivity by studying the effects of tax increases in resource-rich and resource-poor economies and in those which receive large amounts of foreign aid. We also run general models of dictators' survival to test the overall effect of the various variables. In Section 6.3, we turn to dictatorial institutions and seek to classify them according to their estimated levels of security and sensitivity using alternative measures for both dimensions. Section 6.4 summarizes the main results.

## 6.2. On the determinants of security and sensitivity

### *6.2.1. Mechanisms of accountability, group strength and security*

Not all dictators' tenures end in the same way.[1] As contended in Chapter 4, the threats to dictators' power might come from either their own elite, the military or from opposition groups. This fact has been generally neglected by the literature on leadership duration (Bienen and Van de Walle, 1991, 1992). Elite members and the armed forces resort to plots, pressures to resign, coups and assassination in order to take over power. The way by which the latter may trigger the ruler demise is a massive popular action (strikes, revolutions, riots, guerrilla war, etc.). Revolutionary movements -to use a general term- should be actually broad coalitions if they are to be powerful and effective. Lower classes ally with the middle and even the upper class for the sake of a common goal (Goodwin, 2001). In Goodwin's words, these movements use to be "(1) multiclass movements that were unified by (2) widespread anger against state authorities (…)" (1994: 582). As coordination is essentially difficult, "the possibility of a popular revolution is extremely remote" (Brough and Kimenyi, 1986: 40).

Accordingly, there are several actors involved in the leadership change process resorting to alternative accountability mechanisms and not all of them are influenced by the same considerations and, hence, variables (Gallego, 1996, 1998). The relative strength of each of these actors was captured in the model by the probabilities $h$, $p$ and $g$, where $g$ is the probability that the elite successfully ousts the dictator, and $p$ and $h$ are the structural probabilities of the ouster being carried out by the opposition forces. Consequently, we argued that security will be a function of the variables determining the probabilities outlined above

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[1] 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.

$$A = A(g, p, h)$$

$$\text{where} \quad \frac{\partial A}{\partial g}, \frac{\partial A}{\partial (p,h)} < 0$$

where, to repeat, A is the security parameter of the political accountability function as defined in Chapter 3. So group strength is thought to undermine leader's overall stability.

### 6.2.1.1. Dependent and independent variables

To test our hypotheses from the model regarding security levels, we must first test the assumptions involved in them. To be able to so and in order to distinguish those distinct probabilities and describe their explanatory factors, we have constructed a new variable named *WAYOUT*[2] which identifies and codes which actor has been the main one involved in the leadership demise: The power elite, the military, the 'people' or some foreign country.[3] If each group has its own preferences and organizational capacities, then, different variables will be significant in reducing the probabilities of elite, military and popular seizures. Table 6.1 reports the frequencies of the variable *WAYOUT*. Recall that one

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[2] See the Appendix for more details on the construction of the variable.

[3] It has been given, though, priority to 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). Leaders that died in power are not generally coded unless succession was already established.

of our main assumptions in the theoretical model in Chapter 4 was that the probability of being toppled or replaced by the elite is, in general, much higher than that of being overthrown by a revolutionary movement, that is, $g \square p, h$. Indeed, as it can be seen, most of ruler changes, 60.05 percent (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 the succession process. Actually, 56 out of the 242 leader changes (23.14%) that took place within the elite were explicitly violent or because of some open factional conflict within the coalition.

*Table 6.1. Mechanisms of accountability and actors involved*

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

Note: Cell entries are the number of ousters led by each actor and the percentages over the total.

The second most common way to get rid of autocrats is a military coup. 27.54 percent (111) of ruler changes were carried out by the armed forces, which can be considered, in some way, to be part of the power coalition. 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 the citizen opposition, either through violent or non violent

action. It is worth mentioning too 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 were the armed forces.

Concerning the independent variables, they intend to capture the factors specified at the theoretical level in Chapter 4. So, for the elite we argued that a non-institutionalized regime will depend on the availability of rents (from exportable economic sectors such as oil and commodities) to buy off support by means of the delivery of private goods. Consequently, we introduce a variable capturing whether the country is resource rich or not. 'Resource rich country' is a dummy variable coded 1 if the average ratio of oil or primary-commodity exports to total exports exceeds 50%, 0 otherwise.

If rents are scarce, the ruler delivers benefits and policy concessions through a one-party system or a legislature, or mobilizes cooperation through a multi-party system to increase tax revenue. To measure institutionalization we use two dummy variables: 'single institution', coded 1 if either a single-party, a legislature or both exist, and 'multiple institutions', coded 1 if a legislature with two or more parties exists, 0 otherwise.

Furthermore, we outlined the possibility that elite members may be more threatening if the incumbent ruler is either military or civilian. Here we use dummy variables as well: First, 'military', coded 1 if the effective head is or ever was a member of the military by profession, 0 if civilian or monarchy; and, second, 'civilian', coded 1 if the effective head is civilian. 'Monarch' is the omitted category. The potential legitimacy gained by leading the fight for independence of the country is captured by a dummy, 'colony before', which takes value 1 if the country was previously a colony, 0 otherwise.

With regard to citizen opposition, as long as resources are available to the regime, cooperation is unnecessary so limited political autonomy will not be granted, and no representation offered either. Organizational capacity may be enhanced by the support from foreign democracies and international organizations,

while it could be hampered by the presence of authoritarian neighbors in the region, as suggested in Chapter 4. To capture the potential influence of the international context we include two variables: The yearly proportion of democracies in the world and the proportion of dictatorships within the same region. Apart from these external factors, organizational strength may be result of the regime history in the sense that if the previous regime was democratic, although afterwards banned and repressed by the new regime, pre-existing organizations can use their social capital and mobilizational capacity to oppose the new authoritarian ruler. Consequently, we use a dummy variable coded 1 if the previous regime was a democracy, 0 otherwise. Similarly, if in exchange of economic cooperation ($\theta$), the dictator has granted limited representation, the mobilizational capacity of opposition groups augments, so the dummy for 'multiple institution' should be positive for the case of exits triggered by citizen collective movements. Moreover, we include the index of ethnic fractionalization in order to find out whether diversity hinders coordination between groups. Foreign aid per capita is used to capture the dictator's capacity to buy off support through the delivery of public goods. Finally, we also control for the number of past transitions to authoritarianism to gauge regime repressiveness.

It is worth mentioning that in survival models 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 logarithm of the trend or different polynomials -such as cubic transformations- (Box-Steffensmeier and Jones, 2004).

### 6.2.1.2. Results. Multinomial logit

Table 6.2.*A* and *B* show the results of the multinomial models with and without the institutional dummies.[4] The necessity to differentiate exit modes is, given the results, out of any 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 considered.

*Table 6.2.A. Modes of exit and their determinants: Multinomial logit*

| | Dependent variable: WAYOUT | | | | | |
| | *g*=Pr(Elite/coalition) | | *g*=Pr(Military) | | *p, h*=Pr(citizens) | |
| *Independent Variables* | (1) | (2) | (1) | (2) | (1) | (2) |
|---|---|---|---|---|---|---|
| Constant | -3.10*** | -2.76*** | -1.92* | -1.84 | -4.92*** | -4.21** |
| | (0.739) | (0.770) | (1.15) | (1.29) | (1.64) | (1.70) |
| Resource-rich country | -0.309* | -0.288 | 0.107 | 0.164 | -0.769* | -0.716* |
| | (0.180) | (0.181) | (0.236) | (0.243) | (0.420) | (0.427) |
| Aid per capita | -0.0008 | -0.0003 | -0.001 | -0.0008 | -0.017* | -0.017* |
| | (0.001) | (0.001) | (0.003) | (0.003) | (0.009) | (0.009) |
| Military ruler | 0.821** | 0.432 | 1.96*** | 2.12** | 1.20 | 1.29 |
| | (0.381) | (0.438) | (0.745) | (0.964) | (0.813) | (0.927) |
| Civilian ruler | 0.816** | 0.696* | 1.66** | 2.23** | 0.540 | 0.826 |
| | (0.370) | (0.400) | (0.737) | (0.943) | (0.810) | (0.883) |
| Democracies in the world | 1.76* | 1.25 | -1.98 | -2.89* | 4.22** | 3.80* |
| | (0.921) | (0.946) | (1.43) | (1.49) | (2.15) | (2.26) |
| Dictatorships in the region | -0.929** | -0.712* | -1.52** | -1.49** | -1.76* | -1.98* |
| | (0.409) | (0.423) | (0.625) | (0.638) | (1.05) | (1.06) |
| Previously democracy | 0.506** | 0.343 | 0.008 | -0.147 | 1.27** | 2.40*** |
| | (0.238) | (0.332) | (0.339) | (0.515) | (0.509) | (0.873) |
| Colony before | | -0.653** | | -0.749** | | -0.326 |
| | | (0.260) | | (0.351) | | (0.643) |

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[4] The estimates for the foreign intervention mode of exit in the multivariate models 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 (see, for instance, Bueno de Mesquita and Siverson, 1995); besides, there are only three genuine cases in our dataset.

| Independent Variables | g=Pr(Elite/coalition) | | g=Pr(Military) | | p, h=Pr(citizens) | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (1) | (2) | (1) | (2) |
| | *Dependent variable: WAYOUT* | | | | | |
| Past transitions to dict. | | 0.069 (0.142) | | 0.086 (0.254) | | -0.734 (0.508) |
| Ethnic fractionalization | 0.524* (0.314) | 0.449 (0.321) | -0.071 (0.398) | -0.176 (0.411) | -0.794 (0.759) | -1.01 (0.770) |
| Log years in power | -0.458*** (0.085) | | -0.313*** (0.117) | | 0.501** (0.230) | |
| Duration | | -0.112*** (0.025) | | -0.077** (0.031) | | 0.063 (0.057) |
| Duration$^2$ | | 0.002*** (0.0006) | | 0.002*** (0.0008) | | -0.0001 (0.001) |
| Observations | 3078 (1) | | | | 3078 (2) | |
| LR-Chi2 | 170.16*** | | | | 211.29*** | |

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

*Table 6.2.B. Modes of exit and their determinants: Multinomial logit*

| Independent Variables | g=Pr(Elite/coalition) | g=Pr(Military) | p, h=Pr(Citizens) |
|---|---|---|---|
| | (3) | (3) | (3) |
| | *Dependent variable: WAYOUT* | | |
| Constant | -2.84*** (0.747) | -1.86 (1.18) | -5.33*** (1.71) |
| Resource-rich country | -0.306* (0.181) | 0.104 (0.236) | -0.575 (0.426) |
| Aid per capita | -0.001 (0.001) | -0.002 (0.003) | -0.019* (0.009) |
| Military ruler | 0.936** (0.393) | 2.10*** (0.756) | 0.920 (0.820) |
| Civilian ruler | 1.22*** (0.396) | 2.29*** (0.768) | 0.174 (0.830) |
| Democracies in the world | 1.34 (0.931) | -2.07 (1.42) | 3.85* (2.25) |
| Dictatorships in the region | -0.851** (0.417) | -1.39** (0.638) | -1.56 (1.04) |
| Previously democracy | 0.379 (0.241) | -0.162 (0.346) | 1.44*** (0.504) |
| Ethnic fractionalization | 0.669** (0.317) | 0.193 (0.407) | -0.879 (0.763) |

|  | Dependent variable: WAYOUT | | |
|---|---|---|---|
| | *g*=Pr(Elite/coalition) | *g*=Pr(Military) | *p, h*=Pr(Citizens) |
| *Independent Variables* | (3) | (3) | (3) |
| Single institution | -1.10*** | -1.46*** | 0.795 |
| | (0.264) | (0.340) | (0.766) |
| Multiple institutions | -0.536** | -1.02*** | 1.49** |
| | (0.227) | (0.329) | (0.716) |
| Log years in power | -0.316*** | -0.079 | 0.346 |
| | (0.094) | (0.133) | (0.242) |
| Observations | 3078 (3) | | |
| LR-Chi2 | 185.42*** | | |

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

Overall, the results confirm our main hypotheses. To reduce the hazard of being threatened by the members of the elite or power coalition having deliverable resources is an important factor as column 1 shows. To keep the elites' loyalty private goods must be delivered. Resources coming from abroad in the form of aid are also helpful although not significant. 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.[5] Curiously, two variables predicted to have an effect on revolutionary movements led by the opposition play a role here as well. First, the proportion of democracies in the world seems to weaken dictators at a general level by increasing the political costs of holding power (Marinov, 2005), so the relative strength of the elite augments; whereas more dictatorships in the region may improve the relative capacity of the incumbent ruler. As we also expected, elite members may

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[5] Londregan, Bienen and Van de Walle (1995) reject the hypothesis that states that if the leader pertains to the largest ethnic group, the lower the probability of losing power is. Instead, they show that for leaders from smallest ethnic groups, the probability of unconstitutional replacement is not affected by ethnicity, while it actually is for leaders of larger ethnic groups.

more effectively threaten civilian as well as military rulers (the two dummy variables are positive and highly significant) than monarchs do. Military intervention is more likely if the ruler is either civilian or military too. In contrast, military coups are less likely in regimes surrounded by other dictatorships in the region. On the other hand, note that the effect of resource abundance is positive although not significant, what is consistent with those studies that pointed out that external dependence is a potential cause of coups. Being a new country after colonization reduces the likelihood of a coup by both the elite and the military (see model 2) as predicted.

Turning to the 'society driven' ruler change, the results confirm again the theoretical predictions about the organizational capacities of groups. Note that in this case the effect of ethnic fractionalization is negative -although not significant- 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, especially, Padró-i-Miquel, 2004). Ethnic diversity tends to prevent group coordination. On the other hand, the inherited organizational structures from the previous democratic regime increase the mobilization capacity of the opposition. Concerning the international factors, as hypothesized, a higher proportion of democracies in the world fosters opposition against dictatorship, while, again, the regional share of authoritarian systems hampers it. Non-cooperative rents, such as resources and aid, renders offering political autonomy to the opposition unnecessary for levying revenues, so the dictators turns to repression rather than to mobilize cooperation.

In the model in column 3 (Table 6.2.*B*) we have added the dummy variables for institutions. Institutionalization help to keep elites' loyalty, as shown in the model in Chapter 4, since it helps to mobilize economic cooperation and increase expected revenue ($\theta$ in the model). Besides, a single party or a legislature provide an arena for political conciliation within the ruling elite that represents more than simply patronage distribution. The party

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 (Geddes, 1999a, 1999b; Brownlee, 2004a). This is basically why a system of limited institutionalization such as a single party-rule or a legislature is closer to the elite preferences of no or little regime openness, so its effect is greater.[6]

The results also confirm another of our main assumptions in the model, namely, that regime openness involves a greater level of accountability and mobilizational capacity of the opposition with the coefficient for 'multi-party system' being significant at the 0.05 level. As the table reports, the greater the level of institutionalization is, the higher the probability of an outbreak from the citizen opposition. The taxation to representation arguments seems to apply. If cooperation brings more efficiency to state's tax collection (as demonstrated in Chapter 5), a higher degree of autonomy has to be granted to citizens within regime institutions.

### 6.2.2. Non-cooperative rents and sensitivity

The second contention from the model concerned sensitivity and the presence of non-cooperative rents in the country. Specifically, it was argued that as long as cooperation is not needed no accountability will be offered in exchange to the opposition. In resource-rich countries most of revenues are levied either from non-tax revenue, taxes on international trade or foreign

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[6] In terms of our model, given that elite preferences are $a_E = 1$, that is, no institutionalization, it can be assumed that

$$-\left|a_{j=1} - 1\right| < -\left|a_{j=2} - 1\right|$$

where *j*=1 represents a regime with a single institution, and *j*=2 a multi-party system.

aid, so using the parameters employed in the model we can state that

$$B = B(\theta)$$

$$\text{where } \frac{\partial B}{\partial \theta} > 0$$

where, recall from the model in Chapter 4, $\theta$ stands for the expected benefits of mobilizing economic cooperation; hence, as aid and resource exports abound $\theta \to 0$, so, equally, $B \to 0$. And, recall from model in Chapter 3, $B$ is the sensitivity parameter of the political accountability function.

The argument, although not new, has never been directly tested. There is some evidence linking the need to raise tax revenue to democratization (Ross, 2004) and some relating non-tax revenue availability to greater authoritarian stability (Morrison, 2005), but none explicitly testing whether resource abundance reduces the sensitivity of governments -authoritarian in this case- to increases in taxes and extraction.

Back to Table 6.2, some evidence supporting our proposition can already be found. In columns 5 and 6, the two variables capturing the presence of non-cooperative rents, foreign aid per capita and the exportable resources dummy, both significantly reduce the likelihood of a takeover by the opposition forces. Note, besides, that the effect is significant but not strong, as it was predicted in Chapter 3 (see Figure 3.3).

To provide our argument with a more meaningful and specific test we have run survival models for dictators (using logistic regression) dividing the sample according to the variable 'resource-rich country' and 'foreign aid per capita' and introducing a variable which captures the increases in taxes on incomes, profits and capital gains. The marginal effect of this variable will serve us to get a rough measure of sensitivity. The dependent variable is now *HEADOUT*, which takes value 1 the year a ruler is overthrown or resigns regardless of the actors

involved, and 0 otherwise. The rest of the variables follow the specification of Table 6.2 in the previous subsection.

Nonetheless, the actual level of sensitivity can not be directly deduced from the coefficient obtained from the logistic models. Recall that under the linear specification of the political accountability function (see Chapter 2), the sensitivity parameter $B$ is in fact the slope of the probability function, that is,

$$\frac{\partial p(\tau)}{\partial \tau} = \frac{\partial (A - B\tau)}{\partial \tau} = -B$$

In the logit model, the coefficients $\beta$ gauge the marginal effect of the variables on the log of the odds, not on the probability of the event, so for the $k$th independent variable $x$, say, the increase in taxes, we actually have that

$$\frac{\partial \Pr(y=1)}{\partial x_k} \neq \beta_k$$

given that in logit models the marginal effect, which we take in this case as proxy for the level of sensitivity, is actually

$$\frac{\partial \Pr(y=1)}{\partial x_k} = \frac{\partial F(\mathbf{x}'\beta)}{\partial x_k} = f(\mathbf{x}'\beta)\beta_k = P(1-P)\beta_k$$

The results for the alternative sub-samples are reported in Table 6.3 and show the predicted patterns (see the rows in bold). Both the coefficients and marginal effects of an increase in taxes on incomes monotonically increase as the we set more strict constraints on the availability of non-cooperative rents, and so does their level of statistical significance.[7] Therefore, sensitivity levels grow as resources shrink or, the other way round, as the

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[7] The pattern is similar for taxes on goods and services.

need for cooperation becomes more imperative. The effect of an increase on income taxes becomes significant at the 0.10 level as an explanatory factor for dictators' survival when only those countries with no exportable resources or commodities are considered, while the marginal effect is more than seven times bigger than that of rent-rich counties. In addition, when foreign aid is scarce -see the third column- the estimated marginal effect of tax increases almost doubles and the variable is significant at the 0.05 level.

The actual size of the effect can be better observed in Figure 6.1, elaborated from the estimates in Table 6.3. The *x*-axis measures the average tax increase for each sub-sample in Table 6.3, whereas the y-axis represents the estimated dictators' probability of survival (the rest of the variables are kept constant at their means). The differences in sensitivity levels are made evident by the sharp decreases in the probability of keeping power as taxes rise for rulers whose access to non-cooperative rents (resources and foreign aid) becomes more and more restricted, especially for those with resource-poor economies and foreign aid under sample average.

According to these results, one could easily argue given that resource availability reduces accountability, why is it that countries where resources abound do in general tax less incomes and capital gains. The logic is simple, they do not do it to avoid risks -as revolutionary movements usually emerge as a result of the coordination between lower urban lower and middle classes (Goodwin, 2001)- while they overtax other economic sectors and groups. This happened in Ghana, for instance, a primary commodity exporting country, where during the 60s and the 70s the authoritarian governments from Khruma to Rawlings used the monopoly purchasing power of the Cocoa Marketing Board to indirectly tax farmers at outrageous rates by lowering the prices (Bates, 1981). Direct taxes were not applied, but punitive government extraction was in place through other means. The export of cocoa and other products provided the government with

almost half of its revenues principally via taxes on international trade.

*Table 6.3. Sensitivity and non-cooperative rents: The effect of tax increases on dictators' stability (coefficients and marginal effects)*

| | Dependent variable: HEADOUT | | |
|---|---|---|---|
| | *Resource availability in the country* | | |
| *Independent variables* | Resource rich or foreign aid receiver | Resource poor | Resource poor and aid under average |
| Constant | -2.17** | -2.32* | -1.73 |
| | (1.01) | (1.27) | (1.56) |
| Democracies in the world | 0.176 | 1.004 | 0.066 |
| | (1.23) | (1.71) | (1.89) |
| Dictatorships in the region | -0.548 | -1.55** | -2.26*** |
| | (0.555) | (0.681) | (0.769) |
| Previously democracy | 0.113 | 0.663*** | 0.642*** |
| | (0.153) | (0.192) | (0.198) |
| Ethnic fractionalization | 0.602 | 0.980* | 0.698 |
| | (0.401) | (0.586) | (0.670) |
| Military ruler | 0.916* | 0.945 | 1.40 |
| | (0.510) | (0.801) | (1.08) |
| Civilian ruler | 0.848* | 1.11 | 1.51 |
| | (0.502) | (0.776) | (1.05) |
| Urban population (%) | -0.007 | -0.012 | -0.014* |
| | 0.006 | (0.007) | (0.008) |
| Foreign aid per capita | -- | -0.012** | -- |
| | | (0.005) | |
| **Δ Taxes on incomes, profits and capital gains** | **0.032** | **0.320**\* | **0.422**\*\* |
| | (0.098) | (0.181) | (0.188) |
| Log years in power | -0.378*** | -0.082 | -0.090 |
| | (0.118) | (0.160) | (0.166) |
| **Marginal effect of Δ Taxes** | **0.0021** | **0.0183** | **0.0304** |
| Observations | 1034 | 622 | 479 |
| LR Chi2 | 29.68*** | 44.25*** | 38.37*** |

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

*Figure 6.1. Non-cooperative rents availability and dictators' sensitivity*



Resource-rich or aid

Resource-poor

Resource-poor and
aid under average
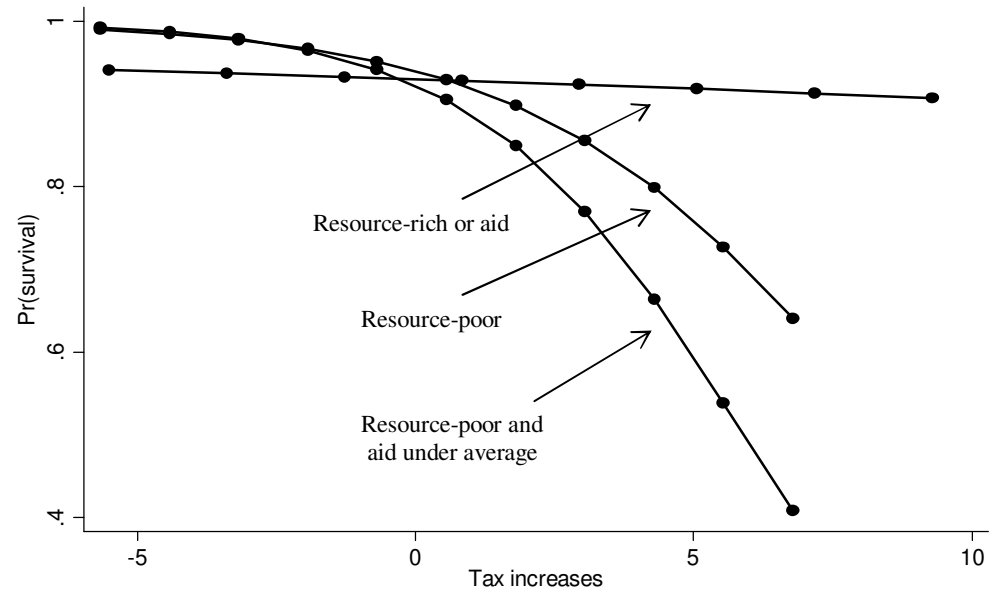
*6.2.3. A general specification. Dictators' survival*

Once identified the variables that shape the two dimensions of political accountability at the leadership level, it is now time to run general and strictly parsimonious models of dictators' survival. Two aspects must be kept in mind: First, according to Figure 3.2 (in Chapter 3), the variables affecting positively (negatively) security are expected to exert a positive (negative) and significant effect on the general probability of dictators' survival. On the contrary, according to Figure 3.3, the effect of the variables shaping the sensitivity parameter, albeit negative, is predicted to be small and, most probably, not significant, thereby confirming their correct identification. The reason for this is simple. As these variables determine the extent to which extraction or taxes are going to make the survival probability change, and as taxes are chosen by the ruler, so he does it knowing how sensitive he is and, therefore, rendering this parameter almost ineffective. In other words, as the effect of sensitivity on the accountability function depends on the rate of extraction chosen, the ruler manipulates it in order to control the amount of risk he is willing to take.

The dependent variable is *HEADOUT* again. Table 6.4 reports the results using alternative estimators. Although we can think of 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. In the case of discrete-time models, logistic as well as complementary log-logistic regressions have been run.[8] As the complementary log-log function is asymmetric, in datasets with

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[8] The results from the logistic models were almost identical to those from complementary log-logistic regressions so they have not been reported.

*Table 6.4. Dictators' survival, security and sensitivity (1946-2000)*

| | Independent variables | Weibull | Clog-log | Clog-log |
|---|---|---|---|---|
| | | | *Dep. Variable: HEADOUT* | |
| | Intercept | -2.29*** | -1.71*** | -3.19*** |
| | | (0.397) | (0.403) | (0.384) |
| *A (Security)* | Civilian | 0.833*** | 0.691*** | 0.926*** |
| | | (0.253) | (0.273) | (0.277) |
| | Military | 0.736*** | 0.587*** | 0.989*** |
| | | (0.280) | (0.300) | (0.282) |
| | Ethnic fractionalization | 0.030 | 0.052 | 0.279 |
| | | (0.209) | (0.211) | (0.206) |
| | Dictatorships in the region | -0.749*** | -0.738*** | -- |
| | | (0.281) | (0.280) | |
| | Democracies in the world | -- | -- | 1.24** |
| | | | | (0.609) |
| | Previously democracy | 0.354** | 0.316** | 0.423*** |
| | | (0.160) | (0.160) | (0.160) |
| | Previously colony | -0.617*** | -0.518*** | |
| | | (0.176) | (0.176) | |
| *B (Sensitivity)* | Resource-rich country | -0.125 | -0.132 | -0.214* |
| | | (0.127) | (0.127) | (0.127) |
| | Foreign aid per capita | -0.001 | -0.001 | -0.002 |
| | | (0.001) | (0.001) | (0.001) |
| *Duration* | | -- | -0.069*** | -0.081*** |
| | | | (0.016) | (0.016) |
| *Duration$^2$* | | -- | 0.001*** | 0.001*** |
| | | | (0.0004) | (0.0003) |
| *Ln_p* | | 0.007 | | |
| | | (0.045) | | |
| LR-Chi2/ Wald Chi2 | | 77.79*** | 95.16*** | 63.84*** |
| Observations | | 3070 | 3143 | 3004 |

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

few 'ones' (that is, failures) results could differ between them. 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.

The two variables identified above as determining the levels of sensitivity, resource availability and aid, are negative but not significant regardless of the estimation method. Only in the third specification, the 'resources' dummy turns out to be only slightly significant at the 0.1 level. In contrast, the rest of the variables, except ethnic fractionalization,[9] have statistically significant and stronger effects on the probability of demise regardless of the estimation method. Not being monarch makes the rulers less secure. So does having had a recent democratic past and a high proportion of democracies in the world. Conversely, if the previous regime was a colony or the number of authoritarian neighbors is high enough, the overall level of security augments.

Figure 6.2 shows the fitted survival and the cumulative hazard functions as estimated by the *Weibull* function in the continuous-time model in column 1. The figure, using average values of the covariates, portrays a negative non-constant effect of time (duration) on the survival function, which is the probability of survival up to time *t*. The function is monotone decreasing.[10]

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[9] Recall from Table 6.2 that this variable has contradicting effects. On the one hand, it increases elite intervention and, on the other hand, hampers popular mobilization.

[10] The hazard function is then monotone increasing.

*Figure 6.2. Fitted survival and cumulative hazard functions from Weibull model*
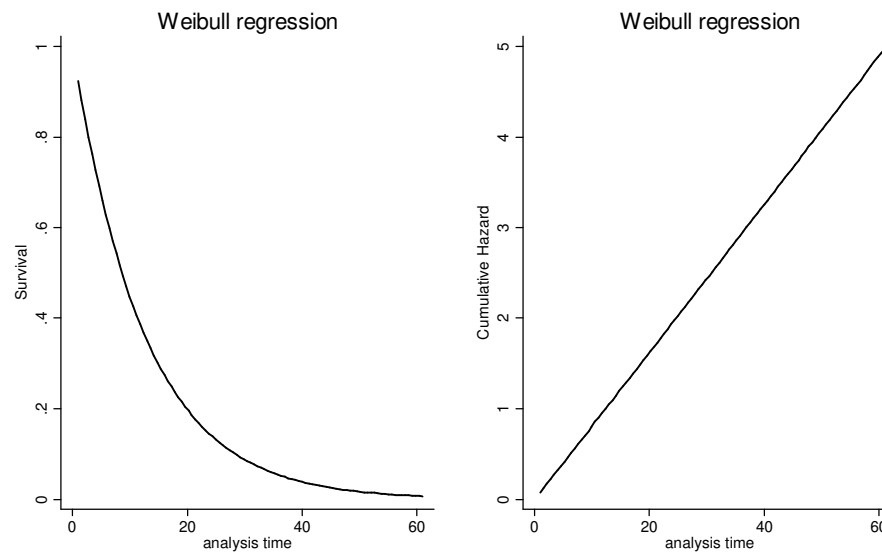
### 6.3. Political accountability and formal institutions

After having demonstrated that dictatorial institutions are endogenous and having, besides, explored the exogenous determinants of security, the question that remains to be answered is: Do institutions matter for security and sensitivity? If institutions are basically the result of the need for economic cooperation (which is a function of the presence of resources) and the mobilization strength of the potential opposition, do they actually have any effect? Or, rather, do their differences stem from the dissimilar underlying conditions under which they exist (which have already shown to exert an important effect on both dimensions)?

If it is true that single institutions such as one-party systems or legislatures serve, as argued, to channel elite demands, to co-opt the potential opposition, to distribute perks and privileges and to provide an stable *arena* for negotiation and conflict resolution, then one can expect to find a positive effect of this type of dictatorship on security and sensitivity levels, regardless of the conditions that explain their existence.

Similarly, multi-party systems within a legislature can have an effect on accountability regardless of the variables that determine their creation such as opposition strength. Permitting a higher level of autonomy as well as the creation of opposition parties may increase opposition groups' mobilization resources as a result of abandoning clandestineness and thereby furthering their control capacity over governmental policy decisions. Furthermore, recall that, as detailed in Chapter 5, this kind of mixed system was found to be much less likely to exist in countries where resources, primary commodities or foreign aid abound. Given that these two variables have been shown to hinder accountability to taxation, multi-party systems can be expected to be more sensitive than the rest.

In Chapter 5 we have already seen how institutions have an important impact on revenue policy. Concretely, it was shown institutionalization effectively serves to mobilize taxpayers'

compliance so taxes on incomes, profits, goods and services, and property represent a bigger share of total revenue in institutionalized regimes. As it is certain, it should be also true that institutions allow the opposition to better control ruler's decisions concerning certain policy areas such as taxation if their compliance is to be effectively obtained. Consequently, sensitivity can be expected to increase with institutionalization.

### 6.3.1. An indirect measure of security: Institutions, demonstrations and riots

One way to situate the institutional configurations under dictatorship in a map defining their respective levels of security is to look at their levels of unrest. Dictators face, to repeat, the so-called *Dictator's dilemma* (Wintrobe, 1998), which refers to the dictators' lack of information about his real level of support among the population, as no regular and institutionalized mean exists to measure it (such as elections), and dissent remains hidden. As a result, dictators must resort to what can actually be observed in the streets, namely, protest.

If dictators create judgments about their level of stability by just evaluating the observable levels of protests as a *proxy* for social discontent, we can approximate their overall stability by estimating selection-corrected models to ascertain under what type of institutions there are more subversive activities, say, riots and anti-regime demonstrations.

The methodology applied to correct for selection bias is the same we used when we estimated the models of revenue in Chapter 5. With this purpose we first estimate both Poisson as well as cross-sectional time-series models -using panel corrected standard errors- in which we include the Mill's ratios previously calculated. The two dependent variables are the number of riots

and demonstrations as defined in the Banks' dataset[11] which cover the 1946-1996 period for most of the world's countries (see the codebook in the Appendix). The selected independent variables are aimed at capturing the different explanatory factors that the theories about dissent and protest in the context of authoritarian regimes proposed.

Gupta, Singh and Sprague (1993) argue that repression deters protest activities at low and high levels in non-democracies where, therefore, the relationship can be represented by an inverted U-curve. We proxy repression by the number of purges, that is, following Bank's dataset definition, any systematic elimination by jailing or execution of political opposition within the ranks of the regime or the opposition. To test the non-linear relationship, the squared number of purges will be included too. We also incorporate the number of any politically motivated murder or attempted murder of a high government official or politician to test whether the instability and vulnerability atmosphere that this may generate furthers the number of visible protest activities.[12]

To control for cross-country diffusion of dissent, the average number of demonstrations and riots per year in each region is incorporated into the model (Bratton and van de Walle, 1997). In Oliver and Myers' words, social movements can be understood "as interrelated sets of diffusion processes" (1998: 2), so one should control for potential spillover effects.

Economic development conveys a lot of structural and social changes that may foster conflict. It increases the level of social complexity, involves more industrialization and urbanization and, hence, more distributional conflicts. So we include the real of GDP per capita and the squared income per capita. The hypothesis

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[11] Riots: Any violent demonstration or clash of more than 100 citizens involving the use of physical force.

Demonstrations: Any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti foreign nature.

[12] Both variables are taken from Banks (1996) too.

is that there is some threshold from which the cost of turmoil becomes so high that not protesting turns out to be the best strategy since too much is at stake in turning against the regime. We expect an inverted U-curve relationship between GDP per capita and protest. We also consider the percentage of urban population in order to control for the resource mobilization approaches.[13] Furthermore, real government share as a percentage of GDP in 1985 international prices is used as a proxy for the level of redistribution existing in the country.

To control for policy polarization and ethnic dominance we use the ethnic composition -the largest ethnic group's percentage of the population- of the society as a proxy. Regarding the nature of the previous regime, once democracy is overthrown, most of that organizations and groups will still try to carry out their activities, albeit clandestinely. Some democratic culture is likely to prevail and we guess it is not easy to erase. We capture the nature of the previous regimes by adding a dummy variable coded 1 if the country had been a democracy at any point prior to its entry into the sample, 0 otherwise. Finally, the dummies 'oil-exporting country' and 'primary commodity-exporting country' have also been added to the right-hand side of the equation to capture the presence of natural resources. Rents diverted from non-tax revenues may act as a conflict smoother (Smith, 2004b).

Table 6.5 reports both the observed and selection-corrected average number of demonstrations and riots under authoritarian regimes. There appears to be a high level of coherence in the order of the observed and the selection-corrected averages. The most secure regimes are those with either a single institution or no institution at all, whereas multi-party dictatorships present the highest levels of organized street-level protest.

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[13] "Urbanization, in conjunction with the growth of industrial capitalism and mass media and with the building of modern states, in general, has contributed to a shift from reactive, community based actions to proactive actions by large-scale special purpose association" (Auvinen, 1997: 180).

*Table 6.5. Political dissent and security under differently organized authoritarian regimes*

| Variable | Averages | Type of dictatorship | | |
|---|---|---|---|---|
| | | No institutions | Single institution | Multiple institutions |
| Demonstrations | Observed | 0.388 (1.22) | 0.280 (1.36) | 0.628 (1.89) |
| | Panel | 0.458 (1.02) | 0.187 (1.22) | 1.62 (1.35) |
| | Poisson | -1.58 (1.07) | -3.90 (2.38) | 0.879 (1.35) |
| Riots | Observed | 0.428 (1.26) | 0.251 (1.24) | 0.659 (1.91) |
| | Panel | 0.338 (.629) | 0.161 (1.01) | 2.27 (1.21) |
| | Poisson | -1.82 (1.27) | -3.50 (3.48) | 2.24 (1.46) |
| Observations | | 432 | 1073 | 577 |

Note: Cell entries are the observed and the selection corrected averages. Standard deviations in parentheses. The number of observations corresponds to those used to get the unbiased coefficients under each institutional setting.

The averages confirm the prediction raised in Chapter 4, which pointed out that a curvilinear relationship between institutionalization and security should exist. Table 6.6 shows the results of the *t*-tests that check the statistical significance of the net effect of institutions once controlling for the conditions under which they exist. The differences are all statistically significant at the maximum level, so we can conclude that institutions do have, certainly, an effect.

*Table 6.6. Differences between averages and t-test results under differently organized dictatorships*

| Variable | Averages | Comparisons | | |
|---|---|---|---|---|
| | | No inst. vs. Single inst. | No inst. vs. Multiple inst. | Single inst. vs. Multiple inst. |
| Demonstrations | Observed | diff=0.107 t=1.88** | diff=-0.239 t=3.03*** | diff=-0.347 t=5.88*** |
| | Panel | diff=0.271 t=7.74*** | diff=-1.16 t=31.45*** | diff=0.907 t=35.98*** |
| | Poisson | diff= 2.31 t=40.48*** | diff=-2.46 t=65.39*** | diff=-4.78 t=79.78*** |
| Riots | Observed | diff=0.177 t=3.29*** | diff=-0.230 t=2.87*** | diff=-0.407 t=7.18*** |
| | Panel | diff=0.177 t=6.77*** | diff=-1.93 t=64.50*** | diff=-2.10 t=60.82*** |
| | Poisson | diff= 1.68 t=20.68*** | diff=-4.06 t=95.62*** | diff=-5.74 t=69.37*** |

Note: "No inst. vs. single inst." means that the average of second institutional setting is subtracted to the average of the first, so a negative difference shows that the average of the second, "single inst." in this example, is bigger.

***$p<.01$ **$p<.05$ *$p<.10$. In each cell the first value is the difference between averages, and the second, the t-statistic and its level of significance.

In sum, if we take demonstrations and riots as a proxy for authoritarian rulers' perceived security; we find that dictatorships with a single institution (one party, a legislature or both) are those with a significant higher level of security, closely followed by those regimes with no institutions. The levels of insecurity are much higher under multi-party regimes whatever the indicator and estimation we consider. This is consistent with Gates *et al.*'s (2006) findings on institutions duration. Particularly, they show that dictatorships with high levels of political participation are the most unstable kind of the existing political systems.

*6.3.2. Security and dictatorial institutions. Alternative indicators*

Security and regime institutionalization were predicted to follow a curvilinear relationship in Chapter 4 (see Figure 4.4). The selection-corrected averages on protest reported above confirm it, whereas the results of the empirical model in Table 6.2 already indicate us how the process operates. The expected benefits associated with increasing institutionalization induce the elites to be more willing to accept regime openness in exchange. Moreover, albeit granted, a limited level of institutionalization is the most preferred outcome to elite members in order to keep a minimum power coalition. So in the second model in Table 6.2, one can easily observe that when institutions are introduced in the analysis, the effect of the 'single institution' dummy is stronger than that of 'multiple institutions' although, as shown in Chapter 5, cooperative-rent mobilization is actually more effective under the latter. On the other hand, as shown in the last column of Table 6.2.B, the likelihood of a takeover led by the opposition groups augments with institutionalization, particularly under multi-party systems for which the coefficient is significant.

Furthermore, and to better confirm our hypotheses, we develop another measure of security using the model estimated for sensitivity displayed below (see Table 6.8). We take the overall dictators' probability of being removed but setting taxes at a specific value, in this case, zero. The logic behind taking this specific probability is assuming that -back in our original model- the rate of extraction is in fact zero, therefore the accountability function, in this case, is just

$$(A - B*0) = A$$

and, thus, we get a general measure of security levels.[14] The starting points of the lines in Figure 6.3 and their order inform us

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[14] Given that we are estimating 'exit' probabilities, lower probabilities indicate greater security.

about this measure in a visual way. Note that the line of the predicted probability of survival under regimes with a single institution begins at the highest level of all when taxes are very low. It is closely followed by the security level of non-institutionalized regimes. When we set the rate of tax increase at zero and hold the rest of the variables constant,[15] the order of security levels between regime types is consistent with that we found using averaged levels of protest then. To repeat, the most secure type of rule is still the single institution regime, followed by the one with no institutions and, finally, the authoritarian governments with multiple institutions. Besides, as predicted, fully institutionalized systems are the most insecure of them all.

*Table 6.7. Estimated levels of security under differently institutionalized dictatorships*

| | Security measures (A) | | |
|---|---|---|---|
| *Regime type* | $\Pr(y = 1 \mid \Delta\tau = 0, Xs = mean)$ | Demonstrations | Riots |
| No institutions | 0.0803 | 0.458/ -1.58 | 0.338/ -1.82 |
| Single institution | 0.055 | 0.187/ -3.90 | 0.161/ -3.50 |
| Multiple institutions | 0.1106 | 1.62/ 0.879 | 2.27/ 2.24 |

Note: For the columns of Demonstrations and Riots, the first number is the average estimated using panel techniques, while the second is the average obtained using Poisson models. The estimates of the first column correspond to the first model in Table 7.

Table 6.7 summarizes the empirical information and measurements of security levels discussed so far. All the

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[15] These estimations have been done using the SPost commands. See Long and Freese (2003).

indicators developed and discussed prove the pattern we predicted in Chapter 4 (see, especially, Figure 4.3), in other words, institutionalization increases security when it is moderate (single institution), but when it exceeds that point (multi-party system), security turns out to be even lower than in regimes with no institutions.


### 6.3.3. Sensitivity, taxes and institutions

Sensitivity is a matter of group inclusion and mobilization as far as institutions are concerned. So as long as institutionalization involves broadening the scope of demands that can be channeled within the decision-making process, sensitivity is expected to increase. In Chapter 5 we demonstrated how economic cooperation is successfully mobilized by dictatorial institutions, what is translated into a higher percentage of revenue levied from taxes requiring compliance. However, this cooperation comes at the price of more effective control of policy decisions affecting taxes and revenue, as already remarked.

The results in Table 6.2 already offered a flavor of the underlying process. In column 6, one can see that, effectively, there is an increase in the chances of an opposition ouster as the regime openness -as captured by the two institutional dummy variables- augments, and that the threat of revolution decreases if dictators dispose of natural resources and/or foreign aid as no cooperation is required. To be more precise, we can compute the predicted probability of a rebellion using model 3 in Table 6.2.B for each of the institutional combinations while holding the rest of the variables constant at their sample means, formally

$$\Pr(y = 3 \mid Institutions = j, \mathbf{x} = mean)$$

where $y=3$ represents an opposition takeover and $j \in \{0,1,2\}$ stands for each institutional combination. The estimation shows that,

indeed, opposition intervention is more likely to occur under fully-institutionalized dictatorships. The probability is 0.0071. For regimes with a single institution, the probability decreases to 0.0040; and, finally, for regimes with no institutions it is just 0.0017. Therefore, if it is true that institutionalization fosters sensitivity -as it seems to be-, we can expect to find a stronger effect of performance variables on dictators' survival as the degree of institutionalization augments. We do so by dividing the whole sample into three sub-samples for each type of institution. We then run logistic models including a variable gauging taxation and controlling for other economic indicators such as government spending as a percentage of the GDP, the rate of inflation and the growth rate of the economy. Table 6.8 reports the results. The corresponding Mills ratios ($\lambda_j$) have been incorporated in each of the models in order to correct the coefficients by controlling for the conditions under which institutions exist.

The first model in the top of the table only includes the increases in taxes as a percentage of the GDP as independent variable (and the transformations aimed at controlling for duration dependence). An increment in the tax revenues of government entails an increase on the likelihood of being thrown out only in institutionalized regimes, and it is significant just in the case of multi-party dictatorships.

In the second model we control for other economic indicators,[16] but the result regarding tax increases still holds and marginal effects keep growing with the degree of institutionalization of the regime. Note, besides, that the effect of government spending is significant and negative only in fully institutionalized regimes where public goods may be provided to broader groups within society whose demands are better represented through the integration of the opposition within the widened regime institutions.

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[16] We follow a similar specification to that in Cheibub and Przeworski (1999).

*Table 6.8. Dictatorial institutions and sensitivity (logit models)*

| | Dependent variable: HEADOUT | | |
|---|---|---|---|
| | *Sub-sample* | | |
| *Independent variables* | No institutions | Single institution | Multiple institutions |
| Constant | -1.18** (0.498) | -1.59*** (0.619) | -1.93*** (0.478) |
| ΔTaxes as % of GDP | -0.117 (0.086) | 0.0142 (0.075) | 0.128* (0.070) |
| **Marginal effect of ΔTaxes as % of GDP** | **-0.0094** | **0.0007** | **0.0115** |
| Observations | 278 | 475 | 496 |
| *Independent variables* | No institutions | Single institution | Multiple institutions |
| Constant | -0.797 (0.632) | -3.42** (1.36) | -1.51* (0.836) |
| ΔTaxes as % of GDP | -0.174 (0.110) | .065 (.111) | 0.204** (0.102) |
| Growth income per capita | 0.013 (0.029) | -.109** (.048) | -0.051* (0.028) |
| Inflation | -0.011 (0.008) | .015 (.014) | 0.003 (0.002) |
| Government spending (% GDP) | -0.018 (0.023) | .003 (.040) | -0.045** (0.020) |
| **Marginal effect of ΔTaxes as % of GDP** | **-0.0138** | **0.0014** | **0.0155** |
| Observations | 196 | 303 | 406 |
| LR-Chi2 | 18.91*** | 19.59*** | 13.72** |

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

Figure 6.3 graphically shows the patterns estimated from Table 6.8 to better observe the logic of the results (the rest of the variables are held constant at their means). The increases in taxes, shown in the *x*-axis, have major effects on the autocrats' probability of survival (*y*-axis) under regimes with multi-party systems. The effect is negative too but no so strong for regimes with a single institution (and not significant), while for non-institutionalized autocracies is only slightly positive.

For example, the Stalin government -in the USSR- took advantage of its relative insensitivity due to resource availability by overextracting from the main economic sector by that time, agriculture. In the beginning, and in order to redistribute resources to the party members, urban classes and the military, the government implicitly overtaxed the agricultural sector by buying its products at very low prices. Once Stalin had consolidated his power, he resorted to a more direct strategy and proceeded to confiscate the lands, capital and cattle of farmers, being especially hard with the kulaks (the big farms), that is, those with more incentives to oppose these measures (see Olson, 2000).

*Figure 6.3. Estimated patterns of sensitivity for each regime type*
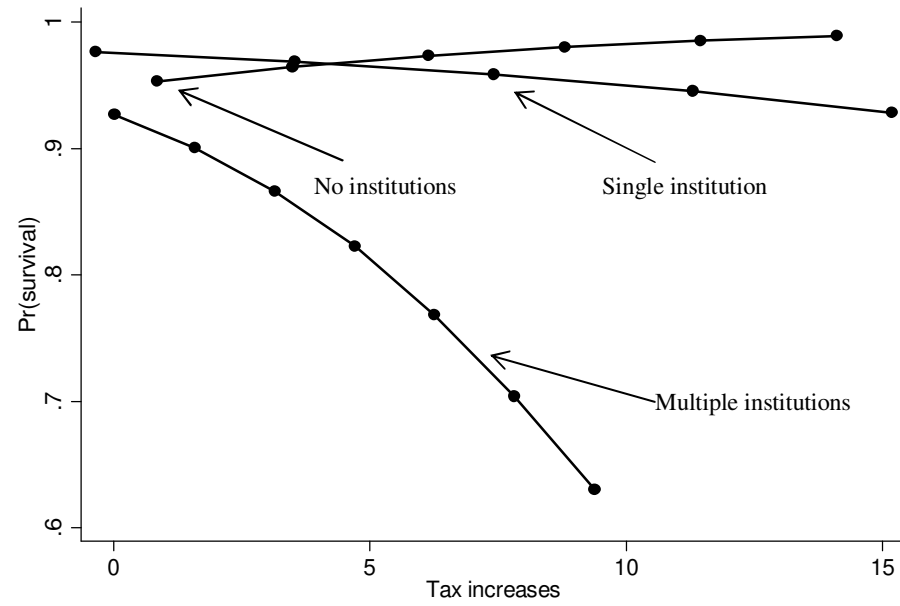
Note: Simulations performed using the results shown in Table 6.8 (bottom). Rest of the variables held constant at their mean values.

### 6.4. Conclusions

In this chapter we have empirically proved that authoritarian regimes differ in their levels of political accountability, in particular, in the dimensions of security and sensitivity defined in previous chapters. The objective was twofold: First of all, to study the exogenous determinants of authoritarian leaders' security and sensitivity; and second, to classify the authoritarian regimes, following their institutional structure, according to their levels of both security and sensitivity.

To do so, we have proceeded in basic three steps. The first one has consisted in stating that there are different sectors in society, with very dissimilar preferences and organizational strength, which make the levels of security vary according to different variables. The models that distinguish the type of exit of the dictator by focusing on the actor/group which seizes power have confirmed this contention. Rents obtained from resources or perks and privileges distributed through single institutions reduce the chances of a *putsch* by the members of the power elite. Besides, military as well as civilian rulers have been proved to be more insecure than monarchs. On the other hand, the international context and the available organizational resources play a key role in determining the effectiveness of the opposition in posing a credible threat on dictators' tenure.

Secondly, we have analyzed the economic conditions of sensitivity. The evidence shows that the existence of exportable resources, primary commodities and foreign aid makes rulers less sensitive to economic results and extraction, as cooperative rents become unnecessary for revenues to be raised, as the fiscal theories of governance defend. To test it, we have run survival models dividing the sample of rulers between hose with economies resource abundant or aid receivers, and those lacking this sort of rents. We show that as rents become scarce, the effect of tax increases on the likelihood of survival augments.

A general specification of a survival model has confirmed our previous contentions by putting together the variables determining

security and sensitivity at the leadership level. To do so, we have run both continuous-time and discrete-time duration models. The variables gauging security levels have, in general, strong effects on dictators' survival probability, while those capturing sensitivity are shown to exert a negative but tenuous effect. As these variables determine the extent to which extraction or taxes are going to make the survival probability change, the ruler chooses taxes knowing how sensitive he is and, therefore, rendering this parameter almost ineffective in practice.

The third and final step has consisted in empirically classifying regimes according to their levels of political accountability in the two dimensional space defined by the dimensions of security and sensitivity. Using alternative measures, dictators ruling regimes with multiple institutions are shown to be characterized by the highest levels of sensitivity and the lowest levels of security of all institutional combinations. Regimes with a single institution are the most secure of all, and less sensitive than regimes with multiple institutions. Finally, non-institutionalized dictatorships are the most insensitive and are relatively secure (a little bit less than regimes with a single institution).

# CHAPTER 7. THE JUDICIAL ACCOUNTABILITY OF DICTATORS

## 7.1. Introduction

This Chapter is devoted to investigate the post-exit utility parameter, $U^{exit}$, that dictators get with probability $(1-(A-B\tau))$ and, more concretely, the probability and conditions under which some of these post-exit scenarios and utilities occur. As shown in Chapter 3, the value of this parameter has a relevant role in determining the level of extraction and, as a result, the rate of growth of the economy. If it is expected to be very low, dictators will moderate their level of graft in order to try to remain in office and avoid, then, being toppled and potentially have to face fatal outcome -a very low or zero utility. On the contrary, when this utility is not too low the tax rate fixed by the dictator can be higher. As Ayittey puts it, "for far too long, African dictators and a cohort of elites have plundered their countries, committed atrocities against their people, and bolted to the West to enjoy their booty" (1994: 32).

We refer to this parameter as the *judicial accountability* of dictators because punishment may take as a consequence of losing power or its exercise. So the threat of punishment allows for accountability to exist, and the fact that it takes place once tenure is over and it is usually carried out through some sort legal means (by national or international courts) leads us to call it 'judicial'. In Benhabib and Przeworski's words, "criminal accountability

concerns actions and maps them on criminal sanctions" (2005: 7). Even though anti-corruption legislation may have been passed in several authoritarian regimes and international treaties on human rights protection may be signed, they are both barely applied by biased judicial institutions and are often ignored and/or modified at will. For instance, in Burkina Faso, under Compaoré's rule, two new anti-corruption bodies were created: The National Ethics Committee and the High Authority for Coordinating the Fight against Corruption. The members of both institutions are named by the President, so anti-corruption laws remain largely ignored. In his anniversary as President of Togo, Eyadema announced the establishment of the National Commission for the Fight against Corruption and Economic Sabotage. Nevertheless, Eyadema dismissed Togo's Prime Minister, Agbeyome Kodjo, when he accused Eyadema and his cronies of corruption. Punishment becomes under these circumstances a probabilistic matter and an uncertain result once rulers are out of power, but, as seen, almost impossible while dictators are still governing.

We proceed as follows: Next section explores the consequences for extraction of attaching to each post-exit scenario a probability. The third section presents, using historical examples, the alternative post-exit scenarios considered here and describe the new variable constructed. Sections 7.4, 7.5, 7.6 and 7.7 review, at the theoretical level and using game theory, the variables and conditions that may influence the "fate" of a dictator once he is out of power. Section 5 focuses on the potential obstacles to effective judicial accountability for new democratic governments; section 7.6 on the strength of the outgoing regime and ruler, and section 7.7 on the international context. Section 7.8 presents the variables and the results of the empirical models. Section 7.9 concludes.

### 7.2. Probabilistic judicial accountability and extraction

Post-exit scenarios might be difficult to foresee. Indeed, as pointed out in Chapter 2, we can think of the simplified term $U^{exit}$ as some sort of expected consumption once the dictator is not in power, $U^{exit} = \log(c^0)$, to which the dictator attaches a probability, $q$. Suppose, then, that there are only two post-exit scenarios, one that is relatively good for the outgoing ruler, $U^{high}$, such as exiling or remaining in his country unpunished; and another one that is bad, $U^{low}$, such as being imprisoned, where, obviously, $U^{high} > U^{low}$. Let thus $q$ be the probability that, once the ruler is out of power, he is punished, so he just gets $U^{low}$. As a result, the general dictator's problem drawn in Chapters 2 and 3 would be now written as follows

$$\max_{\tau} E \sum_{t=0}^{t=1} U^D(R_t) = U(R_0) +$$
$$\beta \left[ p(\tau) U(\tau\, y_1) + (1 - p(\tau)) \left[ q U^{low} + (1-q) U^{high} \right] \right]$$
$$\text{s.t. } 0 \leq p(\tau) \leq 1 \qquad\qquad (7.1)$$
$$\text{and s.t. to the household's problem}$$

So, after substituting $p(\tau)$ and $y_1$ as in the second section of Chapter 3,[1] we get the following first-order condition

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[1] That is, using the growth rate defined in Chapter 2 and a linear political accountability function, $(A - B\tau)$.

$$\frac{\partial \sum_{t=0}^{t=1} U^D(R_t)}{\partial \tau} = \tau^{-1} + \beta \left[ -B \left( \log \left( \tau \left( 1 + \frac{r\delta(1-\tau)-1}{1+\delta} \right) y_0 \right) \right) + \right.$$

$$\left. + (A - B\tau) \left( \frac{1 + r(1-2\tau)}{\tau(1+r(1-\tau))} \right) + B \left[ qU^{low} + (1-q)U^{high} \right] \right] = 0$$

(7.2)

Note then that now the optimal rate of extraction is a function of $q$ as well once we take $U^{low}$ and $U^{high}$ as given. Therefore, if we know that the lower the post-exit utility a dictator gets after losing power, the lower his level of plundering will be, it logically follows that a greater probability $q$ that the outgoing dictator gets a low utility will certainly lead to a lower level of rent-extraction. The simulations in Figure 7.1 makes this point clear for given values of $A$, $B$, $U^{low}$ and $U^{high}$. In sum, we have that, under equilibrium, $\partial \tau^* / \partial q < 0$ and, consequently, $\partial \gamma^* / \partial q > 0$, where $\gamma^*$ denotes the growth rate of the economy.

Indeed, applying the implicit function theorem to (7.2) we obtain the following expression

$$\frac{\partial \tau^*}{\partial q} = -\frac{F_q}{F_{\tau^*}} = -\beta \frac{B(U^{low} - U^{high})}{SOC} < 0$$

(7.3)

where *SOC* stands for second-order condition. The above expression is negative due to the fact that the second-order condition (in the denominator) is negative, while the numerator is also negative since, by definition, $U^{high} > U^{low}$.

*Figure 7.1. The relation between the rate of rent-extraction and the probability of punishment (q) to dictators*

Note: u_low=-14, u_high=-1
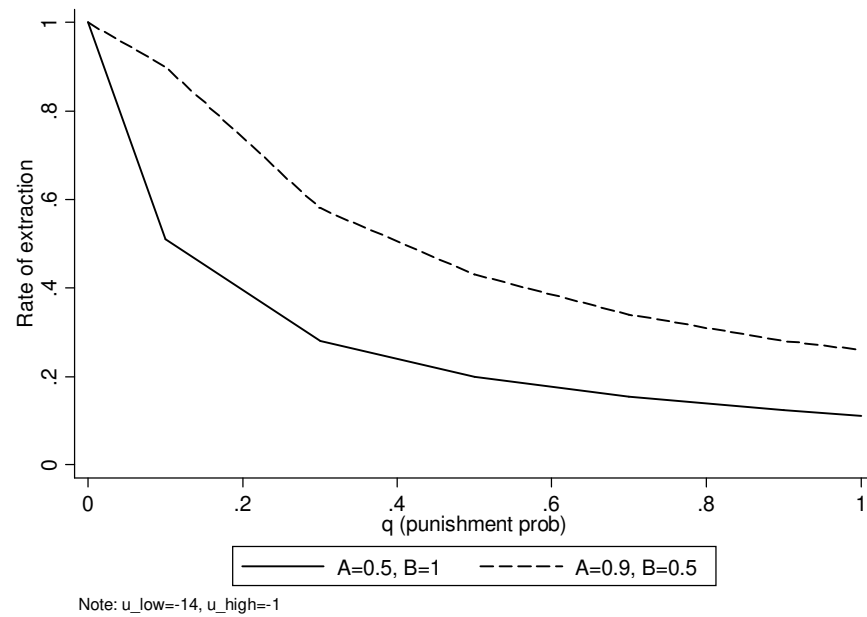
### 7.3. What after being in power? Dictators' fate

Given the possible post-exit scenarios just described, let us turn to whether they are to some extent predictable or there are some tendencies we can discern. To do so, let us first take a look at the data to see what has happened to dictators after leaving power. Table 7.1 shows the different 'exit' options and the number of rulers who experienced them. Data cover all the dictators in 199 countries who ruled at any time between 1946 and 2000 for whom information has been found.

*Table 7.1. Post-exit scenarios for dictators: 1946-2000*

| Post-exit scenarios | Frequencies | Percentage | Frequencies | Percentage |
|---|---|---|---|---|
| Still in power | 70 | 13.18 | | |
| Died in office | 63 | 11.86 | | |
| Live as civilian in the country | 163 | 30.70 | 214 | 54.18 |
| Public charge in the country | 51 | 9.60 | | |
| Exile/living abroad | 93 | 18.08 | 93 | 23.54 |
| Assassinated or in jail | 88 | 16.57 | 88 | 22.27 |
| Total | 531 | 100% | 395 | 100% |

Note: The frequencies show the number of dictators according to their post-tenure fate.

Clearly, the most common "result" after a dictator has been deposed or has left office is that he stays in the country and lives there as a civilian, at least in the short term.[2] 163 dictators (30%)

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[2] The coding of the variable has considered the scenario that took place just after the dictator left office and whether it lasted for a reasonable period of time. Thus, for example, Pinochet was coded 4,

remained in their countries without having to face any trial after leaving power or being removed.[3] When leader changes are peaceful, and often agreed, dictators do not usually have to fear any kind of punishment or accusation. Actually, most of those who stay in the country has previously left power voluntarily and opted for retirement or have been substituted following the rules of the institutionalized regime.[4] Largely in Latin America, the outgoing rulers imposed immunity laws as a condition for a peaceful transition to democracy in order to avoid or hinder prosecution for their past 'excesses' by the new democratic authorities. For example, in Argentina, a partial amnesty was granted by the Alfonsín administration, even for those who were prosecuted and convicted for their role in the military regime's repressive abuses. Both the Due Obedience law (*Obediencia Debida*), which gave amnesty to military personnel obeying orders, and the Full Stop law (*Punto Final*), which operated as a statute of limitations, were inspired by the premise that they would ease the transition to democracy.

51 rulers (9.6%) not only were able to stay in their countries without taking any risks, but they also assured for themselves a prominent position in the new institutions or remained in the existing ones. When regime transitions are mainly driven by the hard-liners (see O'Donnell and Schmitter, 1986), these try to reserve for themselves important offices from which they can either monitor the new policy-making process or simply take an active part in the decision-making. For example, although compelled to surrender his military command, Augusto Pinochet

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"public charge in the country", because it was the first result and it has not been until very recently that he had to face charges for corruption and assassination. Policy reversals at this respect have been infrequent (Skaar, 1999) although international pressure is becoming tougher currently.

[3] This includes members of the army who after handing power to civilians return to the barracks.

[4] Like in most Communist one-party regimes, the PRI regime in Mexico, and even some monarchies when succession takes place.

was guaranteed his lifetime senate seat by the Constitution that he himself imposed on the country as dictator in 1980. On February 24 2004, Albert René, Seychelles's president, announced that he would bow out in favor of Vice President James Michel. After abdicating, he continued as leader of the People's Progressive Front. All Mexican ex-presidents during the PRI regime have had important positions after their six-year term, excepting Carlos Salinas de Gortari.[5] For instance, Miguel de la Madrid was member of the Interaction Council and directed the *Fondo de Cultura Económica.*

The second most common "result" is exile. 93 (18%) dictators were able to fly their countries and took shelter in other dictatorships or even friendly democracies (often with former colonial links). In this case the result is driven by two sorts of context. The first one is the escape option; the dictator flights the country when he sees that the situation of social unrest of his country may endanger his own life. In the second case, it is the new power elite that sends former leaders to exile for reasons similar to those that decide to put them in prison, i.e., avoid the return of the "messiah." For instance, Idi Amin escaped from Uganda to Libya in 1979 at the invitation of the equally erratic Muammer Gaddafi. Jean-Claude "Baby Doc" Duvalier, Haiti's former President, has lived in exile in France since 1986. Paraguay's dictator, Alfredo Stroessner, after being toppled by a military coup, flight to Brazil where he lived in a well-guarded mansion in Brasilia until his death in 2006. King Mohammad Zahir Shah was deposed in 1973 by his cousin while taking mud baths at an Italian resort; the Afghani king settled into a rustic villa in a Roman suburb. Now in retirement, the former monarch has experienced a much more peaceful times than his relatives in Afghanistan.[6]

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[5] Salinas took exile to Ireland in 1995 after numerous corruption scandals involving his brother and himself were unveiled.

[6] For African rulers a new option for peacefully leaving power has been recently created by the American Government: The 'African President in Residence' chair at Boston University. Seemingly, the chair

Only a few less, 88, were killed by those seizing power, put in jail or under house arrest. This is by far the worst situation or result for an ex-dictator. In Romania, in December 1989, the army fraternized with the rebellions that were triggered after Ceausescu's order to fire to anti-regime demonstrators in Timişoara. Then, Ceausescu and his wife decided to flee the capital, Bucarest, in a helicopter. Faking an engine failure the pilot landed and the couple was captured. On December 25, the two were condemned to death by a military court and later executed. Chad's first President, Ngarta Tombalbaye eroded his main base of support, the military, through criticisms and regular purges. Fearing an upcoming plot, Tombalbaye ordered the arrest of several senior military officers. This was the last straw, and on April 1975, several units of N'Djamena's gendarmerie, acting under the direction of junior military officers, killed Tombalbaye during a mutiny. Mussolini was arrested in the lakeside town of Dongo with his mistress Claretta Petacci, while trying to escape dressed as a German soldier. He was executed the day after his capture, on April 28 1945, along with his mistress by military forces of the Italian Resistance.

Not as bad as being killed but bad anyway is being prosecuted and imprisoned. Those who have staged a coup or seized power by other means often put overthrown leaders in jail. They do so largely to avoid his potential reappearance after a period of re-organization and adaptation to the new political circumstances. A leader already deposed but free may constitute a too handy and close referent that can become an alternative in times of crisis, either political or economic. Those who were part of the former regime elite or coalition and, consequently, had privileged access

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does not require having been a democratic leader or respectful of human rights. Leaders are, thus, allowed to fly to Boston, get a nice house, travel freely around the country and have their own staff and security detail. Zambia's former dictator, Kenneth Kaunda (1964-1991), was the first Balfour African President in Residence at Boston University's African Presidential Archives and Research Center. Ruth Perry, Liberia's head of state, was the second.

to perks and other rents will be probably purged[7] by the new coalition in power and may constitute a source of opposition willing to see their 'benefactor' back in power if he is 'available'. Suharto replaced Sukarno as effective ruler of Indonesia after a military takeover in 1965 and confined him to house arrest until he died in 1970. Suharto as well as Sukarno was placed under house arrest on May 2000, when Indonesian authorities began to investigate the corruption occurred during his regime. Habib Bourguiba, Tunisia's former President for life, died under house arrest as well in 2000.

There is only one way to avoid any of these scenarios and it is to remain in power for as long as possible. This was achieved by 63 dictators who died while they were still in office, such as Franco in Spain. On the other hand, by the year 2000 there were still 70 authoritarian rulers in power for whom the result is uncertain.[8]

If we consider together the two options that imply staying in the country, we get a more simplified and understandable figure of how difficult punishing former dictators actually is (see the third and fourth columns in Table 1). Most of the dictators (54.18 percent) have been able to stay in the country without being punished once they are out of office. 23.5 percent managed to avoid punishment by leaving their countries and exiling. And only in 22.27 percent of the cases the outgoing ruler has been -more or less severely- punished by means of trials or executions.


## 7.4. A simple game-theoretic model

Post-exit fates enumerated so far may seem unpredictable at first sight. However, as long as strategic considerations are involved in them, as we suggest, we can trace the conditions under

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[7] Many others will be co-opted and become part of the new coalition.

[8] Some were overthrown soon after that year, so they were coded and included in the sample.

which they are made, look for the variables that best capture them and develop concrete hypotheses about its effect on the outcomes under study. To do so, we develop a simple game-theory model in the vein of those developed by Sutter (1995).

There are two players, the dictator -or ruling elite-, $D$, and the opposition, $O$, which is considered to act as a unitary actor. The timing of the game is the following: First, the dictator decides whether to keep power or give it up.[9] If he keeps power, the opposition must choose whether to rebel and try to seize power or to not revolt. If the opposition rebels, it wins with probability $p$, and fails with probability 1-$p$. On the other hand, if the dictator chooses to abdicate, then the opposition has three options: Kill him in haste or execute him, pardon him or punish him (put him in jail, house arrest or judge him). If they pardon the outgoing ruler, there is a probability $r$ that he will reintervene in politics in the future to take over power. If the opposition decides to punish the incumbent dictator,[10] then he has three choices, either to accept it, fight for power again or exile. If he fights in reaction to any punishment, he wins with probability $w$, and loses with probability $1-w$; whereas if he exiles, he is hosted by a neighbor or friendly country with probability $h$, and he is extradited with probability $1-h$. Figure 7.2 shows the game in extended form.

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[9] He may want to give power up for several reasons that we do not analyze here.

[10] We are implicitly assuming that there is some sort of signaling like in the case of Salinas de Gortari in Mexico.

*Figure 7.2. The transition and judicial accountability game*
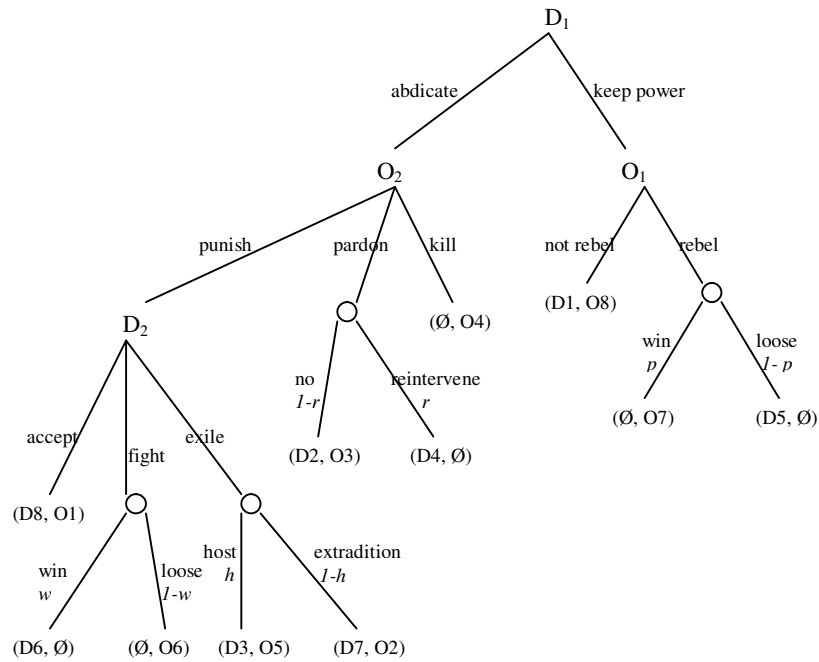


The payments of each player and their order are denoted by $D\Box$ and $O\Box$, where D1>D2>...>Ø and, obviously, O1>O2>...> Ø, respectively, and *D* stands for the dictator and *O* for opposition, as remarked earlier. The opposition prefers the dictator to give power up and punish him in some way for past abuses and avoid, thus, costly confrontations and any potential reintervention. The logic of the equilibria is very simple but helps to shed light to some determinants of peaceful transition of power and accountability. Table 7.2 summarizes the sub-game perfect equilibria and the conditions under which they exist.

*Table 7.2. Strategies and conditions of the equilibria of game 1*

| Equilibria | |
|---|---|
| $(D_2, D_1; O_2, O_1)$ | Conditions |
| (Accept, give up; punish, rebel) | $w < w_1 = \dfrac{D8 - hD3 - (1-h)D7}{D6}$ ; $p > p_1 = \dfrac{O8}{O7}$ ; $p > p_2 = \dfrac{D2 - D8}{D5}$ |
| (Accept, keep; punish, rebel) | $w < w_1$ ; $p > p_1$ ; $p < p_2$ |
| (Accept, keep; punish, no rebel) | $w < w_1$ ; $p < p_1$ |
| (Fight, keep ; punish, rebel) | $w > w_2 = \dfrac{D8 + hD3 + (1-h)D7}{D6}$ ; $w < w_3 = \dfrac{O6 - O4 - (1-r)O3}{O6}$ ; $p > p_1$ |
| (Fight, keep ; punish, no rebel) | $w > w_2$ ; $w < w_3$ ; $p < p_1$ |
| (Fight, give up ; pardon, rebel) | $w > w_2$ ; $r < r_1 = \dfrac{O3 - O4 - (1-w)O6}{O3}$ ; $p > p_1$ |
| (Fight, keep ; pardon, no rebel) | $w > w_2$ ; $r < r_1$ ; $p < p_1$ |
| (Fight, keep; kill, no rebel) | $w > w_2$ ; $r > r_2 = \dfrac{O3 - O4 + (1-w)O6}{O3}$ ; $p < p_1$ |
| (Fight, keep; kill, rebel) | $w > w_2$ ; $r > r_2$ ; $p > p_1$ |
| (Exile, keep; punish, no rebel) | $h > h_1 = \dfrac{wD6 + D8 - D7}{D3 - D7}$ ; $h < h_2 = \dfrac{O2 - O4 - (1-r)O3}{O2 - O5}$ ; $p < p_1$ |
| (Exile, keep; punish, rebel) | $h > h_1$ ; $h < h_2$ ; $p > p_1$ ; $h < h_3 = \dfrac{(1-p)D5 - D7}{D3 - D7}$ |
| (Exile, give up; punish, rebel) | $h > h_1$ ; $h < h_2$ ; $p > p_1$ ; $h > h_3$ |
| (Exile, keep; pardon, no rebel) | $h > h_1$ ; $r < r_3 = \dfrac{O3 - O4 - hO5 - (1-h)O2}{O3}$ ; $p < p_1$ |
| (Exile, give up; pardon, rebel) | $h > h_1$ ; $r < r_3$ ; $p > p_1$ |
| (Exile, keep; kill, no rebel) | $h > h_1$ ; $h > h_4 = \dfrac{(1-r)O3 + O2 - O4}{O2 - O5}$ ; $p < p_1$ |
| (Exile, keep; kill, rebel) | $h > h_1$ ; $h > h_4$ ; $p > p_1$ |

The results of this first game show how difficult it is to punish dictators because expected punishment (trial or death) will deter incumbent rulers from giving power up. In 12 out of 16 of the resulting equilibria the dictator chooses to retain power, even facing the probability of a rebellion. For the opposition to induce the ruler to abdicate, it is necessary a high probability of a successful rebellion in case he decides to keep power and a relatively good post-exit scenario, such as being pardoned -what occurs if the dictator conserves enough power to oppose any punishment- or is able to exile -with a high probability of being hosted ($h$). This is the reason why punishment is so unlikely after a transition to democracy, as we will show below. Effective punishment and peaceful transition only occurs in the first equilibrium, which implies a very strong opposition ( $p > p_1 > p_2$ ) and a weak incumbent regime ( $w < w_1$ ).

Let us now turn to a simpler setting in order to develop concrete hypotheses about each of the possible post-exit outcomes. Assume now that the dictator, for whatever reason, has already given power up or been toppled. Figure 7.3 presents this new game. The order of preferences slightly changes because considerations about whether to keep power or not are now ruled out of the game: The dictator does not want to be punished -trial or killed-, and prefers to fight or to reintervene in politics rather than that but, at the same time, he prefers to be pardoned or to exile rather than a costly struggle for power, given that he has already abdicated. The opposition wants to punish the outgoing ruler, but prefers to pardon or let him leave the country rather than having to fight and face uncertainty and maybe lose power.

*Figure 7.3. The judicial accountability model*
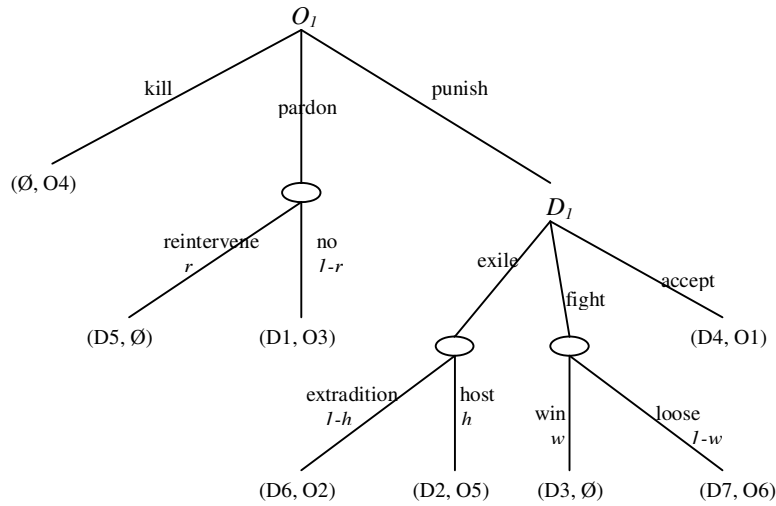


Table 7.3 shows the equilibria and the conditions under which they hold. The potential strength of the outgoing ruler can force the opposition to pardon him if reintervention is not very likely. That the dictator accepts the punishment is a more remote option, he has to be weak and with few chances to be hosted if he exiles. The ruler will be also tried if his chances to exile are not very high. If a successful escape is very likely, the opposition may prefer to kill the ruler.

Summing up, the resulting equilibria are basically determined by two factors: The strength of the outgoing dictator -or, inversely, the strength of the opposition-, measured by $w$ and $r$, and by the international context, indirectly captured by $h$. The dictator accepts the punishment if he is weak and has little chance of being hosted if he exiles; the ruler will also be tried if his chances of going into exile are not very high. If a successful escape is very likely, the opposition may prefer to apply punishment in haste. Therefore, the international context could have two types of

effects. On the one hand, it may increase the chances of punishment by offering very good prospects of a successful exile. On the other hand, if the probability of extradition is very high, the ruler's utility of resisting relative to that of fleeing the country increases, which would indeed induce the opposition to pardon him and let him stay in the country. The following subsections review how and under which institutional settings these two factors ($h$ and $p$) might operate and what variables can capture their effects.

*Table 7.3. Strategies and conditions of the equilibria of game 2*

| Equilibria | |
|---|---|
| $(D_1; O_1)$ | *Conditions* |
| 1) Exile; kill | $h > h_1 = \dfrac{D4 - D6 + wD3}{D2 - D6}$ ; $h > h_2 = \dfrac{(1-r)O3 + O2 - O4}{O2 - O5}$ |
| 2) Exile; pardon | $h > h_1$ ; $r < r_1 = \dfrac{O3 - O4 - hO5 - (1-h)O2}{O3}$ |
| 3) Exile; trial | $h > h_1$ ; $h < h_3 = \dfrac{O2 - O4 - (1-r)O3}{O2 - O5}$ |
| 4) Fight; kill | $w > w_1 = \dfrac{D4 - D7 + hD2 + (1-h)D6}{D3 - D7}$ ; |
| | $w > w_2 = \dfrac{(1-r)O3 - O4 + O6}{O6}$ |
| 5) Fight; pardon | $w > w_1$ ; $r < r_2 = \dfrac{O3 - O4 + (1-w)O6}{O3}$ |
| 6) Accept; punish | $h < h_4 = \dfrac{D4 - D6 - wD3 - (1-w)D7}{D2 - D6}$ or |
| | $w < w_3 = \dfrac{D4 - hD2 - (1-h)D6 - D7}{D3 - D7}$ |

## 7.5. The democratic obstacles to judicial accountability

Questions about justice commonly arise when a democratic regime succeeds an authoritarian one. The debate focuses then on whether holding perpetrators of massive human rights violations or corrupt rulers accountable or not, that is, whether prosecuting predecessor regime leaders. The data reported and the game-theoretic model developed in the previous sections show that post-transition justice is an unlikely result. This is the less likely outcome, even taking into account that jail and assassination have been coded together. Moreover, the data focuses on rulers not regimes, that is, we code what happens to a dictator once he has been replaced or overthrown either by another dictator or a democratic government, i.e., of these 88 cases, not all correspond to prosecutions carried out by the new democratic regimes. Actually, only 13 out of the 88 rulers imprisoned or killed were prosecuted by successor democratic regimes.

Once authoritarian rule is over, a democratic transitional government has three choices regarding past human rights violations: Truth commissions (unveil the facts about torture, assassination and other violations),[11] trials (prosecute and judge those implied in such violations), or nothing.[12] The final choice is not, obviously, a simple matter of taste. Many relevant issues are at stake: International pressures, notions of justice, and the stability of the new regime. The trial 'option' has been the least common of the possible choices. The obstacles to prosecution can

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[11] Some dictators have also established official commissions of investigations. For instance, after Touré's death in 1984, the armed forces seized power and created a sort of Committee for National Redressment to govern the country. An official commission of inquiry was established to investigate what happened to prisoners of the previous government. Nonetheless, no one was brought to trial and the results were never published (Bronkhorst, 1995).

[12] The first two options are not excludable. In fact, truth commissions may serve as the basis for prosecuting some members of the previous regime using the gathered evidence.

be divided into two groups: First, technical/practical problems which refer to the lack of resources and judicial capacity for its effective implementation; second, strategic considerations of the elite related to the strength of the different actors directly involved in the transitional process, as the model above reveals. Landsman (1996) and Lefranc (2004) enumerate various practical problems for an effective and satisfactory accomplishment of a broad prosecution and punishment action.

The first of these obstacles are the economic costs that many trials may entail. Transition governments usually have to deal with economic crisis and inherit precarious budgetary conditions that might lead them to look for a 'cheaper' alternative[13]. To this, besides, one has to add the reparations that the government will have to pay to hundreds or thousands of victims who were directly or indirectly affected by past repression and brutality. The second most pervasive problem has to do with the capacity of the judicial power of those countries. Existing judges, courts and other judicial institutions may not be sufficient to handle the huge amount of work that such trials would entail: Hundreds of witnesses, research, document revision, etc. The immediate result of this structural incapacity would be that most of the trials could end without an effective sentence. To this lack of capacity one has to add the problem of the scarce partiality and (potential) corruption of the judges in charge of the investigations (Landsman, 1996), most of whom, having been appointed by the previous regime, could be willing to express their loyalty by means of a biased judicial activity and sentence. The third obstacle is the most usual and has to do with the lack of adequacy of the existing laws. In this case, both the definition as well as the attribution of the charges might become highly problematic. Many of the crimes could simply not be regarded as such in the existing laws and would have to be "adapted" or interpreted, creating, at the same time, more problems and unsatisfactory results. Thus, the legal

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[13] For instance, the 'Malan trial' in South Africa costed about seven million rands (Lefranc, 2004: 84).

principle *nullum crimen, nulla poena sine lege* would have a level of applicability that would disappoint victim's organizations and create more instability and frustration. To finish, civil laws may contradict military ones. As a result, most of the committed crimes could be perfectly legal according to still valid military laws.

What are then the strategic considerations faced by the transitional democratic government when deciding which of the options to apply (trial, truth commission or nothing)? Here, most of the scholars on democratizations agree in viewing this choice as a result of the existing balance of power between the past elites, the new ones and the victims of human rights violations, although the topic has received little attention in the comparative literature (see, for instance, Przeworski, 1991; Agüero, 1992; Colomer, 1996). In Rosenberg's words, "the new democracies' strategies for confronting the past depend largely on the nature of the former authoritarian regime" (1995: 136). However, no systematic conclusion has been launched, only general recommendations based on the desire of a democratic outcome rather than on a profound and systematic study. Thus, for example, Huntington (1991), in his guidelines for democratizers, recommends them to avoid any trial if the outgoing elites are still powerful, and carry out only a few very selective ones when the past regime was overthrown or collapsed. Sutter (1995) presents different game-theoretic models on transition between the opposition and the dictator. His conclusions are that punishment of the ex-ruler(s) by the new government may have very negative consequences to the transitional process by rendering a pact ineffective and preventing a peaceful transition. As a consequence, "a means to protect ex-dictators is necessary to allow a negotiated regime transition. A foreign nation can provide this protection by offering political asylum to an ex-dictator" (Sutter, 1995: 119).

Indeed, the data show that 'staying in the country' (without any effective punishment) is the most likely outcome if the new

regime is a democratic one.[14] Table 7.4 shows the frequencies and the row percentages of the post-exit options for each type of successive effective head of government, that is, those who substitute the incumbent dictator. Accountability -of some sort- is more likely if the dictator is substituted by a military ruler.

*Table 7.4. Type of successive ruler and post-exit scenarios*

| Next ruler is… | | Post-exit options | | | |
| --- | --- | --- | --- | --- | --- |
| | | **Stay in country** | **Jail/death** | **Exile** | *Total* |
| *Civilian dictator* | Frequency | 74 | 22 | 36 | 132 |
| | Row % | 56.06 | 16.67 | 27.27 | 100 |
| *Monarch* | Frequency | 5 | 2 | 4 | 11 |
| | Row % | 45.45 | 18.18 | 36.36 | 100 |
| *Military* | Frequency | 59 | 38 | 37 | 134 |
| | Row % | 44.03 | 28.36 | 27.61 | 100 |
| *Democratic* | Frequency | 50 | 13 | 11 | 74 |
| | Row % | 67.57 | 17.57 | 14.86 | 100 |

Note: Likelihood ratio Chi2=14.736 significant at the 0.05 level.

To my knowledge, the best comparative study addressing the question of transitional justice from an analytical point of view is the piece by Skaar (1999). He departs from the assumption that the transitional democratic government's primary interest is staying in power and, second, it must try to achieve the consolidation of the

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[14] Remember that actually most of dictators are substituted by another dictator.

new regime (legitimacy, rule of law, etc.). His basic and intuitive hypothesis is the following:

> "The government's choice of policy depends on the relative strength of demands from the public and the outgoing regime, the choice tending towards trials as the outgoing regime becomes weaker and towards nothing as the outgoing regime becomes stronger, with truth commissions being the most likely outcome when the relative strength of the demands is roughly equal." (1999: 1110)

An interesting point is that Skaar gauges the strength of the outgoing regime by looking at the type of transition that took place in the country. Thus, the outgoing regime is 'weak' in transitions by collapse, and it is 'strong' when the transition was pacted or came as a result of a peace settlement promoted by an international actor. Therefore, we can deduce that different types of authoritarian regimes may lead to different post-exit outcomes because of their different strength at the moment of "exit." We discuss this possibility in the next section.

## 7.6. Dictators, regime strength and post-exit results

Different types of dictatorships break down in different ways and due to the intervention of diverse actors. Table 7.5 shows the relation between the way in which the dictators were ousted (from an actor-centered perspective) and the post-exit outcome they had to face. Rulers that died in office or are still in power are not considered here.

*Table 7.5. Ways of exiting power and post-exit scenarios (frequencies)*

| Overthrown by... | Post-exit scenario | | | | Total |
|---|---|---|---|---|---|
| | **Live as civilian** | **Public charge** | **Jail/killed** | **Exile** | |
| Elite (regulated) | 44 | 19 | 6 | 5 | 74 |
| Elite (putsch) | 11 | 2 | 5 | 6 | 24 |
| Military coup | 15 | 6 | 15 | 10 | 43 |
| Masses | 4 | 1 | 3 | 5 | 13 |
| Foreign force | 0 | 0 | 1 | 1 | 2 |
| Total | 71 | 30 | 27 | 28 | 156 |

Note: Pearson Chi2=35.235 significant at the 0.001 level.

The data reveal some interesting insights. When the elite is the actor leading the leadership change and this change took place in a somewhat regulated (non-violent) way, as in monarchies after abdications, or one-party dictatorships after resignation or term limits, most of the rulers (44 out of 74) were able to stay in the country as civilians or with another public office (19). Conversely, when changes led by elite members are carried out by some kind of putsch, outgoing rulers, although much of them are able to stay in the country, face a bit more uncertain future and many fly the country.

The most dangerous environment occurs when the ruler is overthrown by the military. Most of them, 15 out of 43, were simply killed or put in jail by the new leaders and ten exiled, perhaps to avoid a more tragic consequence. When the masses drive the changes, exile has been the most recurrent option for dictators (5 out of 13), while others seem to have been able to hand power and stay in the country as civilians (4). Three were killed or imprisoned by the new government. Hence, the patterns seem to diverge between types of "exit" and, at the same time, we know that different types of dictatorships are more prone to end in

different ways. In other words, modes of "exit" are endogenous to the type of the former authoritarian regime (Rosenberg, 1995).

The literature on regime change and revolutions asserts that weakly institutionalized and highly repressive regimes tend to be overthrown by some kind of popular uprising[15] (Bratton and Van de Walle, 1994; Geddes, 1999a; Goodwin, 2001). This is because, in patrimonial (weakly or) non-institutionalized regimes, insiders "face the prospect of losing all visible means of support in a political transition, they have little option but to cling to the regime, to sink or swim with it" (Bratton and Van de Walle, 1997: 86). So these rulers try to hold power for as long as possible until the regime collapse and, then, they run away and fly the country for exile. If caught before, they will be most probably executed or imprisoned.

Furthermore, there is general agreement in that "stronger" outgoing regimes are able, thanks to their higher bargaining power, to impulse a negotiated transition and impose more favorable outcomes to themselves in terms of judicial accountability or post-exit results. Some authors believe that higher bargaining power pertains mainly to military regimes. As cited above, for Sutter (1995), the military, during transitional processes or after power, retain, in general, the capacity to reintervene in politics by means of a coup or the threat of it. This would allow them to ensure compliance by other parties and avoid being punished. For Agüero (1992) the strength of the military is conditional: Military governments that lose wars or leave power in similar conditions have little control to impose any condition to the new government[16] (see also Goemans, 2000).

Geddes (1999a, 1999b) sees the type of transition as a result of the types of relations between factions within different authoritarian regimes. Using simple game theory she argues that,

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[15] Following the setting of the first game, these are rulers that have much to lose leaving power so they decide to keep it for as long as possible, and only a rebellion can definitively oust them.

[16] The Argentinian military Junta would represent a notable exception as they did lose the Falkland Islands war.

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 their cohesion is threatened. 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.

Analyzing African regimes, Bratton and Van de Walle (1994) had already noticed similar patterns. They note that in plebiscitary one-party regimes, when a crisis of legitimacy occurs, the regime is predisposed to holding a national conference and that personal rulers tend to be toppled from the 'bottom'. On the other hand, in competitive one-party systems, the opposition prefers to move directly to an election without establishing first a national conference.

As we argued and tested in the second chapter, institutions are endogenous and they respond, among other factors, to the organizational strength of the potential opposition. In this sense, electoral authoritarianism or multi-party systems would be the most weak (as shown in Chapter 6), so dictators under these regimes probably can not impose their most preferred post-exit solution. Alternatively, new evidence on both regime and rulers' stability shows that one-party systems are the most secure and, hence, persistent ones (Brownlee, 2004a; Smith, 2005). We can take thus the institutional configuration of the regime as a good proxy for $p$ in the model, that is, the strength of the outgoing regime and the power coalition. So we assume fully institutionalized regimes to have a lower $p$ and, concomitantly, a lower probability of avoiding criminal accountability. In fact, Goemans (2000) already noted that leaders of 'mixed regimes' are more prone to suffer punishment when they lose a war.

### 7.7. The international context: Laws and pressure

Since the end of the Second World War, the international community has made considerable effort towards the recognition that past violations of human rights and widespread corruption generate obligations for states, what has translated, as Méndez (1997) observes, into a trend towards expanding universally applicable norms mainly concerning investigation, prosecution and reparation[17]. For example, the Convention on the Prevention and Punishment of the Crime of Genocide was adopted by the UN General Assembly in December 1948.[18] For the first time, genocide was defined and outlawed.[19] Attempts by the international community to tackle corruption began much later. In 1996, the OAS signed the Interamerican Convention against Corruption. In 2003, the UN General Assembly finally adopted the UN Convention against Corruption, which requires countries to establish criminal offences to include acts of corruption.

There has also been an increase in the willingness of some states to make use of the universal jurisdiction principle by which

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[17] These instruments can be classified into two categories: declarations, such as the Universal Declaration of Human Rights (United Nations, 1948) and the American Declaration of the Rights and Duties of Man adopted by the OAS (Organization of American States, 1948), adopted by international organizations, which are not legally binding although they may be politically so; and conventions, legally binding instruments included under international law which commonly establish mechanisms to oversee their implementation.

[18] The first time that the 1948 law was actually enforced was in September 1998 when the International Criminal Tribunal for Rwanda found Jean-Paul Akayesu (the former mayor of a small town in Rwanda) guilty of nine counts of genocide. Former Yugoslavian dictator Milosevic was being tried by the International Criminal Tribunal for the Former Yugoslavia when he died.

[19] Much later, in December 1985 the OAS adopted the Inter-American Convention to Prevent and Punish Torture, which entered into force in 1987. A more recent step has been the creation of the International Criminal Court in 1998.

states claim criminal jurisdiction over persons whose alleged crimes were committed outside the boundaries of the prosecuting state.[20] At the same time, there has been an important quantitative and qualitative enhancement in the role that both the national and international civil society plays in the identification and furthering of investigations and sanctions for human rights violations and corruption[21] (see, for instance, Crocker, 1998).

Scholars in the field have proposed different theories to account for this process of increased support for international measures. Realist theories defend the idea that governments accept international obligations because they are forced to do so by other powerful countries.[22] Conversely, ideational theory attributes the emergence of the instruments to protect human rights to the persuasive power of established democracies. Moravcsik offers a more rationalistic view and proposes that this sort of delegation is a "tactic used by governments to 'lock in' and consolidate democratic institutions, thereby enhancing their credibility and stability vis-à-vis nondemocratic political threats" (2000: 220). So the main supporters of international regimes will be newly established democracies, while large stable ones will accept only

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[20] As Amnesty International reports, since the Second World War, more than a dozen states have conducted prosecutions; completed trials based on universal jurisdiction or arrested and extradited people. These states include: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Israel, Mexico, Netherlands, Senegal, Spain, Switzerland, the United Kingdom, and the United States.

[21] Clear examples are Amnesty International and Human Rights Watch. The International Center for Transitional Justice was created in 2001 with the aim of assisting countries pursuing accountability for past mass atrocity or human rights abuse. This is also the case of Transparency International, which through meetings, extensive reports and classifications, aims at raising awareness and international pressure to impede corruption.

[22] This could explain the adoption of a protocol against corruption by the Economic Community of West African States in 2001.

optional or rhetorical commitments, and dictatorships will oppose them.

In sum, the recent evolution of the international context is causing, in the context of our game-theory model, the probabilities of outgoing dictators being hosted, $h$, to shrink. As the number of democracies increases --especially, since the 70s-, so does the number of countries endorsing conventions against crimes and corruption, as the approaches depicted above contend. In contrast, a high proportion of authoritarian regimes within the same region can have the opposite effect by sharply increasing the likelihood of being hosted, as the examples of two of Africa's most terrible rulers, Mobutu Sese Seko (Zaire) and Idi Amin (Uganda), make evident. The former fled to Togo, while the latter was hosted by Gaddafi in Libya.[23] The consequences of both factors are contradictory according to our model. While the increase in the number of democratic countries in the world does surely make exile difficult, it may also hinder punishment because the utility of resisting relative to that of fleeing the country increases, which would actually induce the opposition to pardon the dictator and let him stay in the country. On the other hand, the presence of a high proportion of dictatorships within the same region may increase to such a degree the likelihood of exile that the opposition may choose to punish the ruler before he escapes and potentially tries to return to power.

## 7.8. On the predictability of post-exit scenarios

### 7.8.1. Variables

We are not interested in whether the probability of some form of judicial accountability for outgoing dictator can pave the way

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[23] The economic figures under their governments were disastrous. The average growth of per capita income was negative in both countries, -2.57 during Mobutu's rule and -1.45 during Amin's.

for democratic transition and consolidation. Our goal is actually to assess the extent to which these post-exit scenarios can be predicted by the socioeconomic or institutional characteristics of authoritarian regimes. The question is: Is there any structural and institutional element that helps to predict what will happen to a dictator once he leaves power?

The literature reviewed so far has provided us with some clues in order to intend to explain the occurrence of the different post-exit scenarios. Let us, then, present the variables that will be included in the multinomial logistic models below, which try to capture the different determining dimensions of the topic. One of the key determinants of the situation a dictator may have to face once he loses power is the strength of the regime he governs (see model). This strength can be measured by the respective levels of security associated to their institutional design and by their capacity to reintervene in politics after their substitution. The previous chapter has shown that regimes with a single institution are the ones that provide the rulers with the highest level of security, while multi-party regimes tend to be the most unstable. Thus, if we consider that 'staying in the country' and 'exile' are the best options for an outgoing ruler, we expect that dictators in multi-party regimes should have to face a higher probability of being imprisoned or killed as the degree of institutionalization reflects in some way the strength of the potential opposition.

On the other hand, as Sutter (1995) points out, military rulers retain certain capacity to threat the new government so they may have a greater capacity to avoid post-exit punishment. Nonetheless, we have also shown that when the military lead the ouster, jail or death are the most probable destinies of deposed rulers, and military regimes are especially vulnerable to coups carried out by other military factions. Therefore, we include the dummy variables that distinguish the type of effective head, 'civilian' and 'military', the reference category being 'monarch'.

The international context is captured as in previous chapters by two different variables. The first one is the yearly percentage of democracies in the world. This variable seeks to capture the trend

to expand international laws to human rights violations; it is, then, assumed that a bigger proportion of democracies in the world can exert a more effective pressure for the prosecution of former dictators decreasing thus *h*. The second variable is the regional proportion of dictatorships. It is commonly thought that geographical closeness of other dictatorial regimes may help rulers to find a friendly country where to take shelter once he is overthrown, so it increases *h*. Natural resources, as said, allow the accumulation of rents in the hands of authoritarian rulers. Concomitantly, dictators who granted foreign firms and their former colonial states privileged access to the mineral resources and other key sectors of their countries usually ask these governments for help when they perceive any threat to their tenure. Some are ignored, such as Bokassa and Mobutu who asked France and the United States for shelter. Others receive help even without asking for it, like Sékou Touré, who after a heart disease was hosted by the United States, following Reagan's instructions, to receive the appropriate treatment. We have, thus, included the variable 'resource-rich country', which is a dummy variable coded 1 if the average ratio of non-fuel primary products and fuel exports in 1990-1993 exceeded 50% of total exports, and 0 otherwise.

We have also included three more control variables. The first one measures the level of past instability, and is the sum of past transitions to authoritarianism. According to Gandhi and Przeworski (2004), this variable captures the propensity towards repression, so it might have a positive effect on the probability of killing or imprisoning the deposed dictator. The second control variable is the number of continuous years the ruler has been in power (i.e., the years he had been in power when he was toppled or substituted). This is included in order to control for the potential consolidation -or erosion- of leadership (Hite and Morlino, 2004). Finally we include the percentage of Moslems in the population in order to capture potential distinct cultural attitudes towards punishment.

### 7.8.2. Multivariate models and results

In this section I present the results of the multinomial models where the dependent variable is *AFTEREXIT*. This variable takes four values: 1 if the dictator stays in the country as "civilian", 2 if the dictator has been killed or imprisoned (including house arrest), 3 if the dictator was able to exile, and 4 if the ruler stays in the country and holds any other public office.[24] However, rudimentary Wald and LR tests show that the categories 1 and 4 can be combined,[25] so the final dependent variable consists of three values. The value 1, now generally named 'stay in the country' without distinguishing positions or occupations, is the base category. Given that the dependent variable is constant for each of the rulers we have taken, for the independent variables, the value they took in the last year those dictators were in power.[26] Table 7.6 shows the estimated coefficients.

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[24] The codification of the variable considers the scenario that took place immediately after the dictator left office and whether it lasted for a reasonable period of time. Thus, for example, Pinochet was coded 4, 'public charge in the country', because this was the first result and it was not until very recently that he had to face charges for corruption and human rights violations. Policy reversals in this respect have been infrequent (Skaar, 1999); although international pressure is currently becoming tougher (see Appendix).

[25] Outcomes *m* and *n* being indistinguishable corresponds to the hypothesis that

$$H_0 : \beta_{1,m|n} = ... \beta_{K,m|n} = 0$$

See Long and Freese (2003).

[26] Using the rulers' spells averages instead of the last observation yields almost identical results.

*Table 7.6. A multinomial logit for dictators' post-exit scenarios*

| Dep. var.: Rulers' post-exit fate | | |
|---|---|---|
| Independent variables | **Death/Jail** | **Exile** |
| Constant | -.977 | .882 |
| | (1.73) | (1.48) |
| Single institution | 1.14 | 2.25* |
| | (1.32) | (1.20) |
| Multiple institutions | 2.48* | 1.48 |
| | (1.47) | (1.28) |
| Dictatorships in the region | 1.51* | -.825 |
| | (.871) | (.700) |
| Democracy share in the world | -4.39* | -2.89 |
| | (2.62) | (2.31) |
| Past transitions to dictatorship | .425** | -.279 |
| | (.214) | (.252) |
| Resource-rich country | .063 | .648** |
| | (.332) | (.316) |
| Military ruler | -.742 | -1.05 |
| | (.992) | (.931) |
| Civilian ruler | -.971 | -2.01** |
| | (1.04) | (.971) |
| Years in power | .083*** | .074*** |
| | (.030) | (.029) |
| Moslem population (%) | 1.13*** | .370 |
| | (.400) | (.406) |
| No inst.*$\lambda_0$ | -.048 | -.109 |
| | (.161) | (.159) |
| Single inst.*$\lambda_1$ | .284 | .575* |
| | (.355) | (.350) |
| Multiple inst.*$\lambda_2$ | .833** | .141 |
| | (.344) | (.230) |
| Observations | 341 | |
| LR Chi2 | 72.73 | |
| Pseudo R-Square | 0.1060 | |

Standard errors in parentheses. ***$p<.01$ **$p<.05$ *$p<.10$.
Base category=1, 'Stay in the country'

The results obtained tend to confirm our basic propositions. Concerning the strength of the regime and ruler, we can conclude that fully institutionalized regimes, for which we claimed that the strength or bargaining power of the authoritarian elite is low, have higher probabilities of being killed or imprisoned once out of power. For instance, in Malawi, after growing pressure from the opposition, aggravated by the suspension of foreign aid, Banda was forced to accept a multi-party system. Once out of power, after losing an election, Banda was accused and tried for having misappropriated five million pounds (Sánchez Piñol, 2006). On the contrary, regimes with single institutions, which are the most secure, have a higher capacity to leave the country avoiding any kind of punishment. Similarly, rulers governing non-institutionalized regimes are more prone to stay in the country. Table 7.7 reports the predicted probabilities for each of the institutional arrangements (the rest of the variables are held constant at their means), or in formal terms, it shows the estimated $q$ and $(1-q)$ (see section 2).

*Table 7.7. Dictatorial institutions and the predicted probabilities of post-exit scenarios: q and (1-q)*

| *Pr(y=j\|institutions, rest=mean)* | Stay in country | Death/jail | Exile |
|---|---|---|---|
| No institutions | 0.8146 | 0.0831 | 0.1023 |
| Single institution | 0.4188 | 0.1274 | 0.4742 |
| Multiple institutions | 0.3602 | 0.4822 | 0.1996 |

Note that the patterns of judicial accountability are quite dissimilar. Authoritarian leaders with the highest probability (0.48) of being kept accountable after leaving power are those governing regimes with multiple institutions. Dictators of non-institutionalized regimes have little to fear; they will be able to

stay in the country almost for sure (having, thus, a high $U^{exit}$ or a low $q$). Remind that institutions somehow reflect the strength of the opposition.

As it was also predicted, the presence of natural resources increases the chances of flying abroad and enjoying the rents accumulated in a "Swiss Bank" (see Table 7.6). The number of past transitions to authoritarianism has a positive effect on the probability of being killed or imprisoned although it is not statistically significant. Military rulers have a higher probability of staying in the country than monarchs, and so do civilian rulers. The longer a ruler has remained in office, the lower his probabilities of staying in his country.

The variables referring to the international context show results that are coherent with the model above. Firstly, the proportion of dictatorships in the region, instead of allowing and fostering exile, has the opposite effect; it increases the likelihood of accountability (death/prison). As we outlined above, the story would be as follows: Foreseeing the option of an escape (high $h$), the opposition forces, willing to prevent a possible return of the exiting ruler -with the help of authoritarian neighbors-, prefer to kill him or retain him under house arrest. On the other hand, the percentage of democracies in the world has a negative effect on the chances of applying any accountability measure to outgoing dictators (in this case, the coefficient is significant), but it also diminishes the probabilities of the 'exile' option. These results are consistent with what we expected, that is, the increase in the number of democracies in the world, reduce the chances of finding an appropriate shelter after leaving the country so it may increase the relative utility of fighting against punishment. This is not by any means a guarantee since many dictators have been taken in by democratic systems with the alleged objective of facilitating the prospects of democratization. Alternatively, the capture and prosecution of former dictators is easier to be carried out once they are out of their own countries where the legal systems tend to protect them. For example, Pinochet, former Chile's military ruler, was arrested in October 1998 in London (England) under an

international arrest warrant issued by the Spanish judge Baltasar Garzón, and he was placed under house arrest. Chad's former president, Hissene Habré, was arrested in Senegal, where he had been living in exile ever since he was deposed in 1990, after an international arrest warrant was issued in Belgium under that country's universal jurisdiction law. Knowing these risks caused by the international context (a smaller $h$), dictators may become more reluctant to leave their countries and even power as the game-theoretic model shows. This is why the variable 'democracy share in the world' has a negative effect on both the probability of accountability and exile.

### 7.8.3. An actor-centered approach

The study of the mechanisms of accountability in Chapter 6 (see Table 6.2) has permitted us to get a general measure of the strength and importance of each actor -the elite, the military and the opposition- in toppling the incumbent head of government by getting the predicted odds of each mode of exit. These variables have been used alongside other controls to explain post-exit scenarios from an actor-centered approach, which explicitly gauges regime and opposition strength. What we expect to observe is the following: The execution in haste or assassination of the dictator is basically the result of two sorts of conditions. On the one hand, execution is more likely when the prospects of a successful escape and exile are very high (see the first equilibrium in Table 7.3), that is, when $h > h_1$ and $h > h_2$. On the other hand, killing the ruler becomes also an attractive alternative for the opposition when the dictator's capacity to fight against punishment is relatively high, that is, according to equilibrium 4, when $w > w_1, w_2$. So in this case, the opposition is not strong enough to impose punishment and force the acceptance of the outgoing ruler but, at the same time, the dictator does not retain enough power to strike back so as to induce the opposition to

pardon him like in the case of equilibrium 2. Regarding punishment in the form of a trial, house arrest or imprisonment, the conditions under which it is more likely to take place are the following: as shown in equilibrium 1, punishment is possible if when the capacity of the outgoing dictator to successfully fight is very low, that is, when $w < w_3$. Punishment is also likely when the prospects for a successful exile are low although the ruler prefers it rather than fighting. The results are detailed in Table 7.8.[27]

The importance of each group exerts an important effect on the alternative post-tenure results, some of which were already pointed out in section 7.6. Punishment is much more likely if those driving the change are either the military or the citizen opposition or, in other words, when, as claimed in our game-theoretic model, the outgoing ruler is relatively weak. The way they do so differs though. We have separated the two punishment options; one is trial (including house arrest and imprisonment) and the other assassination (without previous trial). As we can observe, military intervention translates into a more 'formal' way of punishment, and although the ousted ruler may end up being executed, it will usually occur as a result of a trial (often conducted by a military court) as, having lost the support of the armed forces, the weak dictator has no other option than to accept punishment (equilibrium 6). In contrast, if after general turmoil the some group take over power, dictators are more likely to pay a very high

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[27] We ran models incorporating the categorical variable *WAYOUT* instead of the predicted odds too. The results were very similar.

*Table 7.8. Group strength and punishment: Multinomial logit*

| Independent variables | (1) | | | (2) | | |
|---|---|---|---|---|---|---|
| | **Trial/ Prison** | **Exile** | **Assassination** | **Trial/ Prison** | **Exile** | **Assassination** |
| Constant | -.774 | 1.35 | -3.79* | -1.84 | 2.10 | -1.42 |
| | (1.27) | (1.11) | (2.25) | (1.87) | (1.55) | (2.98) |
| Past transitions to dict. | .856*** | -.792** | -.740 | .817*** | -.520 | -.413 |
| | (.257) | (.397) | (.646) | (.232) | (.324) | (.568) |
| Resource-rich country | -1.17** | .097 | .640 | -1.33*** | .297 | .482 |
| | (.492) | (.448) | (.672) | (.473) | (.422) | (.630) |
| Moslem pop. | 2.11*** | .162 | 1.35** | 2.00*** | .243 | 1.23* |
| | (.568) | (.495) | (.682) | (.519) | (.475) | (.654) |
| War in territory | -.370 | .796* | .281 | | | |
| | (.542) | (.435) | (.647) | | | |
| Dictatorships in the region | -.221 | -1.33 | 3.80* | .140 | -1.50 | 3.83* |
| | (1.33) | (1.06) | (2.26) | (1.24) | (.984) | (2.20) |
| Democracies in the world | | | | 1.19 | -3.02 | -5.69 |
| | | | | (2.93) | (2.42) | (4.10) |
| 70s | -1.31** | -.178 | 2.10** | | | |
| | (.558) | (.451) | (.899) | | | |
| 80s | -.140 | -.619 | .980 | | | |
| | (.484) | (.484) | (.940) | | | |
| 90s | -2.11* | -1.29** | -.802 | | | |
| | (1.13) | (.626) | (1.37) | | | |
| Elite power | -1.64*** | -1.03** | -.006 | -1.50*** | -.906** | -.178 |
| | (.562) | (.453) | (.628) | (.509) | (.418) | (.626) |
| Military threat | 1.40*** | .466 | -.436 | 1.35*** | .464 | -.089 |
| | (.453) | (.356) | (.443) | (.434) | (.333) | (.434) |
| Opposition strength | -.011 | .376* | .867*** | -.016 | .290 | .567** |
| | (.192) | (.211) | (.331) | (.182) | (.186) | (.282) |
| Observations | 260 | | | 274 | | |
| LR-Chi2 | 116.72*** | | | 87.85*** | | |
| Pseudo R-Squared | 0.1893 | | | 0.1352 | | |

Standard errors in parentheses. ***p<.01 **p<.05 *p<.10.
Base category=1, 'Stay in the country.'

price for years of oppression and extortion, i.e., execution[28]. Indeed, Iqbal and Zorn (2006) show that the risk of assassination of a head of state increases with repression. This result is consistent with equilibrium 4, as the strength of the opposition is not as high as that of the military, opposition forces may fear that the ruler decides to strike back with the help of the military (or the loyal part of it). Changes promoted from within the elite, as noted in Table 7.5, use to end up with the outgoing autocrat remaining in the country.[29] On the other hand, the effect of the regional proportion of dictatorships is, as hypothesized from equilibrium 1, strong and positive in explaining assassination as it may increase considerably the chances that the dictator decides to flee the country ($h$ in the model).

Figure 7.4 on the left portrays the sharp increases in the predicted probability of punishment as the power of both the military and the opposition augment (holding the rest of the variables constant at their means), using the estimations reported in Table 7.8. The Figure on the right shows how at very high probabilities of a successful exile (as measured by the proportion

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[28] It is worth noting that some of these assassinations were not carried out by members of the citizen opposition. In fact, general popular discontent and unrest is an important precondition for factional elite putsches and military coups to take place. As Galetovic and Sanhueza (2000) stress, popular discontent and mobilization represent a signal, for those wanting to seize power, of the people's willingness to passively follow the commands of a new ruler. As Iqbal and Zorn put it, "assassinations may also be fostered by the presence of more generalized unrest in a polity" (2006: 495). Under these conditions, a weak faction within the dictator's support coalition or within the armed forces may be willing to take the risk of taking over power taking advantage of the potential support of the citizen opposition. Nonetheless, given the uncertainty and their relative weakness, those toppling the ruler will probably choose to assassinate him in order to prevent any response from the loyal factions in order to restore the ousted leader.

[29] As we reported in Chapter 6, most of the changes promoted from within the elite are peaceful and follow an explicitly regulated or tacit procedure which makes punishment much less likely.

of dictatorships in the region), the probability of execution or assassination sharply augments instead of making exile easier (in fact, as shown, the probability of exile diminishes), as intuition would lead us to think.

Note also that in the two empirical models the strength of the military and that of the opposition increase the likelihood of the dictator deciding exile. This fact makes sense within our theoretical framework in two ways. First of all, we argued that dictators were in some way able to interpret some movements of the opposition (military or civilian) as a signal. Hence, if the dictator can observe the movements towards the seizure of power of these groups (which may possess the capacity and willingness to punish him), it is clear that he will try to escape if he has got the time and means.[30] Secondly, note that according to the model, the utility of exile is related to that of fighting against punishment since a lower resisting capacity ($w$) reduces the probability threshold that makes exile more "attractive."

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[30] This somehow could be the case of Ceausescu, who decided to flee the capital, Bucharest, in a helicopter when the army joined the rebellions. However, it was too late for him and he was captured and executed.

*Figure 7.4. Predicted probability of punishment as opposition strength (log odds) and international context vary*
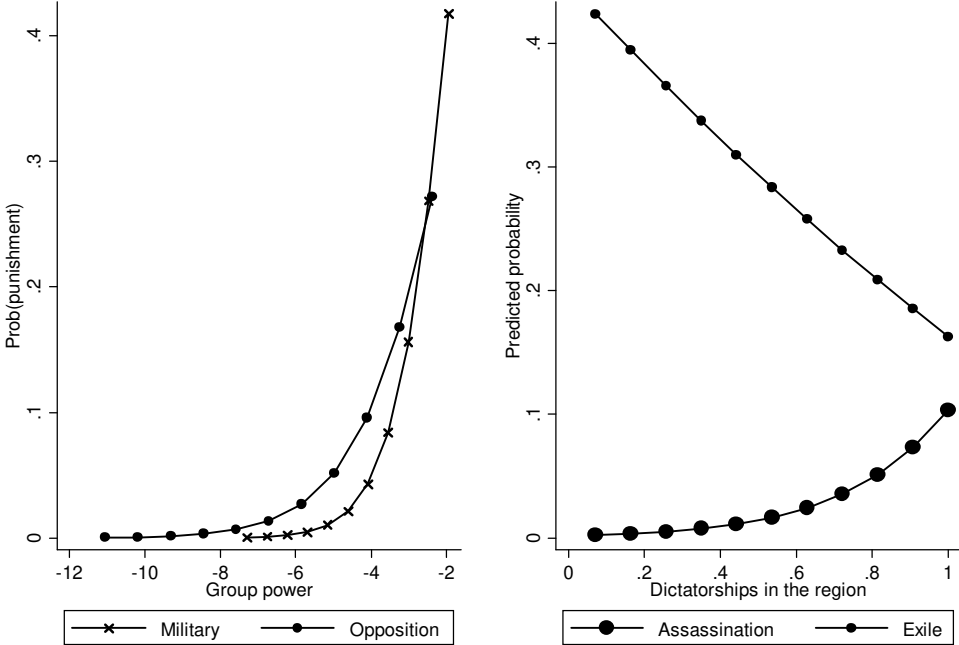
Note: The predictions have been calculated according to the results of the first model in Table 7.8.

### 7.9. Conclusions

The formal model we developed in Chapters 2 and 3 assigned a relevant role to the utility the dictator may get after leaving power in determining the level of graft. If the dictator foresees that his actions will not involve an important cost in case he is unseated, he will plunder at will. If dictators expect that after losing or handing over power they will be able to enjoy their booty in pleasant exile or in their own countries, their level of rent-extraction will be higher and this will lead growth rates to shrink. On the contrary, if the probability of being punished is high enough, dictators will constrain their greed and economic performance will improve. Formal modelling has been used to make this point clear.

Predicting the fate of dictators after leaving or being forced to leave power has proved to be quite difficult. Nonetheless, some very interesting patterns can be identified. With regard to the institutional arrangements, the results show that rulers with fully institutionalized regimes are those who will face with a higher probability some kind of punishment once deposed. Conversely, dictators governing single institution regimes have already been proved to be the most secure in office in previous chapters. This security translates in a better position to negotiate a favorable exit. A similar pattern occurs for non-institutionalized regimes. As we also predicted, military rulers are those with a lower probability of suffering any kind of accountability measure due to their power to use force to take over power again, while the highest probability of living in exile corresponds to monarchs.

The results show that international pressure in the form of a higher proportion of democracies in the world may have contradicting effects. Actually, a higher number of democracies is related with a lower probability of judicial accountability, in the short term at least. On the other hand, possible strategic considerations by the opposition forces may determine the fact that when more dictatorships exist in the region, the lower the probability of exile is and the higher that of imprisonment or

assassination/execution. The exports of natural resources (oil or primary commodities) increase the chances of exile of a given authoritarian ruler. Accumulated rents and international alliances or friendships may be the causes behind this fact. In sum, if the expected post-exit utility is to have any effect on the current level of graft, we would observe dictators in multi-party regimes to restrain their rapacious impulses. Conversely, for dictators in less institutionalized authoritarian systems, the judicial accountability possibility is much more remote, so their potential abuse of power is less likely to be punished in case of losing power.

Our models based on the actors' role in the leader substitution show that when leader changes are the result of military or citizen force -as they reflect the weakness of the regime- the likelihood of punishment substantially increases. The former tend to resort to imprisonment (which does not preclude posterior execution), while the latter to assassination in haste.

# CHAPTER 8. ECONOMIC GROWTH, DICTATORS AND INSTITUTIONS

## 8.1. Introduction

It is now time to study economic growth addressing the huge variability in economic performance of authoritarian governments. So far we have explored what conditions determine the levels of security, sensitivity and the probability of punishment at the leadership level and how dictatorial institutions relate to each of these parameters as well. The aim of this chapter is twofold.

First of all, we intend to test whether the constraints posed by the two sorts of accountability identified do really help to explain dictators' policy decisions affecting growth and the size of government. We do so at the leadership level, analyzing the effect of the constraints on authoritarian governments, given that if political and judicial accountability are to matter in determining predation and, hence, economic growth under dictatorship, they do so by influencing the actors making the decisions in a system characterized by power concentration: Rulers/governments. This implies taking dictators as the cross-sectional units in some of our regression models and introducing the variables which determine the levels of political and judicial accountability.

Secondly, we turn to institutions and their effects using econometric techniques aimed at controlling for selectivity. The classification of the alternatives degrees of institutionalization into the three dimensional space defined by the political and judicial accountability dimensions allows us to predict their overall

performance in terms of growth. While fully institutionalized regimes present the best conditions for growth according to these political-economic dimensions, regimes with a single institution and those non-institutionalized show mixed results. Regimes only partially institutionalized have been shown to be more sensitive and with a slightly higher likelihood of judicial accountability than non-institutionalized dictatorships; nevertheless, their levels of security are greater too. The question is, then, does this higher security outweigh the other two dimensions? If so, these regimes with a single institution would show lower growth rates than non-institutionalized ones. On the contrary, if sensitivity and judicial accountability play a more decisive role in determining growth, then, only partially institutionalized dictatorships are predicted to grow at higher rates than regimes without institutions. The comparative statics of the model already pointed that it is actually sensitivity the dimension which exerts a stronger influence on rent-extraction, but it requires complete empirical validation.

The Chapter is structured as follows: Section 8.2 analyses whether income differences between countries with authoritarian governments have increased or decreased and what the effect of initial income of averaged growth rates is. The third section deals with growth at the leadership level introducing the variables identified so far that empirically matter for accountability. The model is also applied to explain government consumption at the leadership level. Section 8.4 analyses the effect of institutions, on both growth and government consumption, at a finer grain using two-step methods to correct for selectivity. Section 8.5 offers some tentative evidence of the effect of the alternative mechanisms of accountability on income growth. Section 8.6 summarizes the main findings.

## 8.2. Any catching up?

Convergence, one of the main predictions of the neoclassical model of growth (e.g. Ramsey, 1928; Solow, 1956), states that the

lower the initial level of real per capita gross domestic product (capital in the models), the higher the predicted growth rate is going to be due to diminishing returns to capital. This prediction would only hold if all economies had the same economic and structural conditions, except for their starting capital stocks. On the other hand, the conditional convergence prediction assumes that economies differ in various respects, so cross-country differences are conditioned to the different steady state levels each economy may have. In this case, the growth rate is expected to be higher the further the initial income per capita is from its steady or long-run position. So it is required to control for those differences mentioned above. More concretely, Sala-i-Martin (1990) distinguishes between $\beta$-convergence and $\sigma$-convergence. The former refers to the -above defined- absolute convergence, that is, poor economies are expected to grow at higher rates than richer ones; while the latter refers to the progressive reduction of the variance in per capita incomes within groups of economies.

In opposition, our political-economic model clearly predicted a negative, although moderate, effect of initial income, $y_0$, on the rate of rent-extraction, so actually richer dictatorships are expected to grow at higher rates than poorer ones. According to this, differences between country income levels along years should be progressively increasing. What we should find is, then, absolute divergence instead of cross-country income convergence, as the rich would be getting richer and the poor would be unable to catch up (and some becoming even poorer).

Figures 8.1.a to 8.1.c show the growth of real GDP per capita for both countries,[1] regime spells and dictators spells against its initial level (log of initial GDP per capita) for the three alternative

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[1] Concretely, annual rate of growth of real GDP per capita, 1985 international prices, chain index. Compiled from Penn World Tables 5.6. All income figures are in 1985 PPP dollars.

cross-sectional units[2] as well as the fitted regression line. Figure 8.1.d displays the -lowess smoothed- trend from 1950 to 2000 of the annual standard deviation of the log of the GDP per capita of authoritarian regimes.[3]

*Figure 8.1. Growth, (log) initial income and divergence among dictatorships, 1950-2000*
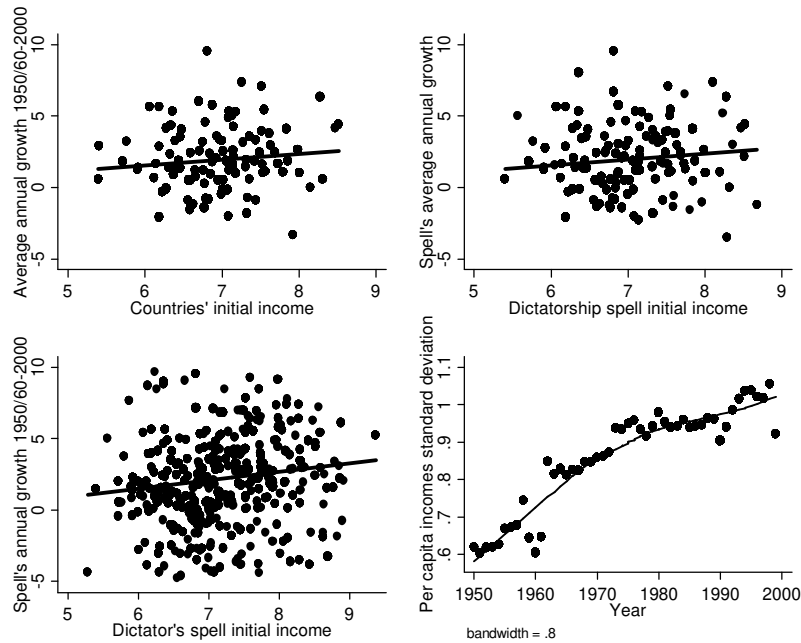


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[3] Six Gulf oil countries have been excluded from the sample given that their income levels do not stem from development. The pattern of the figure remains largely unaltered if we only consider those regimes that lasted for 20 years or more.

The portrait one gets from observing the Figures confirms our expectation that within authoritarian regimes there is a positive correlation between initial income and growth, especially if we take dictatorial effective heads as the cross-sectional unit. In this case, the correlation between the two variables is 0.157, while for the other two cases it is about 0.11. The emerging pattern is, as Figure 8.1.d shows, one of increasing income differences among countries with authoritarian governments in a yearly basis. The result is consistent with Quah's research (1993, 1996, 1997), which shows that the actual pattern described by the ergodic cross-sectional distribution of income is that of "emerging twin peaks", where there is actually a clustering together of the very rich, a clustering together of the very poor, and a vanishing of the middle income class. Besides, he proves that the cross-sectional distribution can diverge even when the initial conditions regression shows a negative correlation between time-averaged growth rates and initial levels.

The income dynamics under authoritarian leadership will help shed light on this alarming process. Table 8.1 reports the number of dictator spells entering and exiting the corresponding interval of income per capita detailed in the rows and columns. So, for example, the number in the first cell (upper left hand side corner) indicates that 25 dictators began their tenure with an income per capita between $0 and $500, and when they left office income per capita in the country was still between 0 and 500 dollars.[4]

The initial marginal distributions show again the high prevalence of authoritarian regimes in poor countries; 282 out of 403 dictator spells began with incomes below (or equal to) $2000; 75 with incomes between $2000 and $4000, and only 46 with incomes above $4000. The final distribution is quite similar though: There are 248 spells with incomes below $2000; 92 ended with incomes between $2000 and $4000, and 63 with incomes above 4000$. The variations are marginal although some relative improvement can be observed. Once more, then, persistence is the

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[4] Recall that all income figures are in 1985 PPP dollars.

*Table 8.1. Dictator spells: Per capita income at the beginning and end of their rule*

|  | | Exit | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | *Income bands* | 0-0.5 | 0.5-1 | 1-1.5 | 1.5-2 | 2-2.5 | 2.5-3 | 3-4 | 4-5 | 5-6 | 6-7 | 7- | Total |
|  | 0-0.5 | **25** | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
|  | 0.5-1 | 6 | **82** | 16 | 1 | 2 | 2 | 2 | 0 | 0 | 1 | 0 | 112 |
|  | 1-1.5 | 0 | 4 | **54** | 15 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 80 |
|  | 1.5-2 | 0 | 0 | 3 | **28** | 13 | 4 | 1 | 0 | 1 | 0 | 2 | 52 |
| Enter | 2-2.5 | 0 | 0 | 0 | 1 | **18** | 5 | 2 | 2 | 3 | 0 | 0 | 31 |
|  | 2.5-3 | 0 | 0 | 0 | 0 | 0 | **9** | 9 | 2 | 0 | 1 | 0 | 21 |
|  | 3-4 | 0 | 0 | 0 | 0 | 0 | 3 | **11** | 7 | 1 | 2 | 0 | 23 |
|  | 4-5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | **5** | 3 | 2 | 2 | 14 |
|  | 5-6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **7** | 3 | 1 | 13 |
|  | 6-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6** | 1 | 7 |
|  | 7- | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | **10** | 12 |
|  | Total | 31 | 98 | 74 | 45 | 37 | 26 | 29 | 17 | 15 | 15 | 16 | 403 |

Note: By bands of $500 until $3000, and $1000 until $7000 or more. "Enter" stands for the first year of the dictator's rule or the first year for which data are available. "Exit" stands for the last year of rule or the last year for which we have data.

most prominent feature in the income evolution; the cell entries of the main diagonal -in bold- are the ones with most cases for each category of initial income. 25 out of 38 rulers that began with incomes below $500, remained in that category at the end of the spell; 82 out of 112 for those that began with incomes between $500 and $1000; 54 out of 80 for those beginning with incomes between $1000 and $1500. The rate of persistence seems to decrease with income and so does the percentage of spells in which income increases so as to move to a superior income band.[5]

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[5] The same type of table -although not reported- was constructed for dictatorship spells. The results are quite similar. Most of the dictatorships

### 8.3. Dictatorial rulers, growth and accountability

The model developed in Chapters 2 and 3 revealed that the rate of ruler's rent-extraction under equilibrium, $\tau^*$, is a function of two sorts of political-economic parameters. On the one hand, those describing the economy, and, on the other hand, those depicting the political constraints that accountability imposes on rulers' decisions; formally

$$\tau^* = \tau^* (\underbrace{r, \gamma, \delta, \beta}_{\substack{1\ 4\ 2\ 43 \\ \text{Economic} \\ \text{conditions}}} ; \underbrace{A, B, U^{exit}}_{\substack{1\ 4\ 2\ 43 \\ \text{Accountability} \\ \text{function}}} )$$

where we have just added $q$, the probability of punishment, to the whole expression to capture the refinement to the model incorporated in Chapter 7. Consequently, and given that the rate of economic growth $\gamma$ is a negative function of $\tau^*$, $\gamma$ is itself a function of the determinants of $\tau^*$ under leadership $j$ but with the opposite sign of their respective effects, formally

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had very low initial income levels at the beginning of the post-war period: 105 out of the 138 dictatorships for which data are available had income levels below $2000 at the beginning of the spell (or the first year for which we have a data point). In fact, 58 out of those 105 had incomes below $1000 at the beginning of the period. The incomes they had when exiting the sample exhibit a high level of persistence in their relative positions: 74 (out of 138) had incomes below $2000, whereas 36 had incomes between $2000 and $4000.

Persistence within the same income interval is again the most common pattern for each of the "enter" categories. 33 out of the 58 spells that began the period with incomes below $1000 remained in that poverty interval. For the $1000-$2000 "enter" interval, there are 22 out of 47 spells that did not succeed in increasing substantially their per capita incomes. 7 out of 15 remained in the same $2000-$3000 interval. 4 out of the 47 spells that began with incomes between $1000 and $2000, finished with incomes below $1000 (Benin, Madagascar, Nigeria and Sierra Leone).

$$\gamma^* = \gamma^*(r, y_0, \delta, \beta; \underset{-}{A}, \underset{+}{B}, \underset{+}{q}, \underset{-}{U^{exit}}) \qquad (8.1)$$

Chapters 4, 5 and 6 were devoted to identify the general factors determining the structural level of security and the conditions for sensitivity of dictators' rule at the empirical level, while in Chapter 7 we concentrated on exploring the determinants and on getting predictions of the odds ($q$) for alternative values of $U^{exit}$.

In sum, according to the comparative statics carried out in Chapter 3, security may exert two kinds of contradicting effects depending on the form of the accountability function that one assumes. When the probability is assumed to be linear, concave or convex (but not exponential), the variables capturing security levels are expected to show contradicting effects between survival in power and growth, in particular, those helping the ruler to stay in power in the next period are predicted to exert a negative effect on the growth rate of the economy. On the contrary, if the probability is exponential, more security implies not only a higher probability of retaining power but also higher rates of economic growth.

On the other hand, the variables measuring sensitivity will be proven to have been correctly identified as long as their effect is the same for both dependent variables, i.e., they are expected to decrease the likelihood of an ouster and to make economic growth rates shrink too (irrespective of the form of the political accountability function). Recall that this set of propositions follow the contention that growth and the probability of survival are jointly determined in equilibrium by the same political-economic factors.

*8.3.1. Averaged growth: Dictators, constraints and development*

When modeling policy choice, especially under authoritarian settings, conditional on some accountability function, governments or rulers are taken as the basis of analysis since they are the actors making the decisions under some constraints. This has been the approach of this dissertation as well. Nonetheless, the empirical literature has almost paid no attention to leadership and its potential effects. This results in a significant inconsistency between theory and empirical evidence.

Leaders and, particularly, dictators, may matter. As the recent evidence reported by Jones and Olken (2005) shows, leaders are decisive for economic growth and to a greater extent in autocratic settings where decision-making is highly concentrated.[6] Actually, when one takes either country, regime spells (years of continuous rule under the same regime type) or dictator's tenure as the cross-sectional unit, the overall standard deviation of real GDP growth and growth of income per capita is about 8. Similarly, the within deviation is, for all three cases, higher than 7. However, differences emerge when one looks at the between standard deviation, that is, the variability existing between the cross-sectional units. These are 2.9 (for $G$) and 2.83 (for $YG$) if we take countries as the cross-sections.[7] If one takes regime spells as the cross-section,[8] then the standard deviations are bigger: 3.03 and 3.15, respectively. Finally, taking heads' tenure (that is, the head's spell in office), the standard deviations turn out to be much higher: 4.8 for $G$ and 4.83 for $YG$. The means of these variables for the whole period are 1.85 and 4.36, respectively.

If the decisions regarding taxes, expropriation, etc. are taken by autonomous dictators facing different types of constraints, as

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[6] In fact, they also find that the leadership effect is especially important among autocrats ruling without a legislature.

[7] The figures refer to $G$ (growth of income per capita) and $YG$ (real GDP growth), respectively. Remember that $YG = G +$ Population growth.

[8] A spell is defined as years of continuous rule under the same type of regime.

shown in our model, it may seem logical to find greater differences between them than between other cross-sectional units and, therefore, to focus our attention first on them at the empirical level.

To analyze this variability between rulers, we will run regression models taking leader's spells as cross-sectional units and taking the determinants of the accountability functions as independent variables while controlling for other socioeconomic variables. Table 8.2 reports the results of the estimations using the averages for each ruler spell of all the variables of our interest which capture the constraints on dictators' decisions. Data include all dictators who ruled at any time between 1946 and 2000 in any of the 199 countries of the sample for whom information is available.[9] The dependent variable is the rate of growth of per capita income.[10] The independent variables are those capturing structural levels of security and sensitivity (identified in Chapter 6) as well as the rest in expression (8.1) above, such as initial income and the rate of capital return.[11] From the empirical models in Chapter 7 we have also estimated the predicted (log) odds of punishment,[12] which serves as a measure of $qU^{low}$, that is, the rulers' likelihood of judicial accountability.

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[9] See Appendix for further details about sources and definitions of the variables.

[10] Taken from Penn World Tables 5.6. See the codebook.

[11] The variable 'Democracy share in the world' was ruled out due to correlation problems with other covariates. Excluding it while keeping 'dictatorships in the region' improves the fit of the model.

[12] There is greater variation allowed in the log-odds ratio compared to the probability measure; besides, in contrast to the probability construct, it is also linear in the covariates.

*Table 8.2. Dictator spells average growth regressions and accountability determinants*

| | Independent variables | Dependent variable: Dictators' growth averages | | | |
|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) |
| | Constant | -13.21 (22.74) | 5.021 (32.15) | 16.92** (6.648) | 8.731 (22.55) |
| $y_0$, $r$, control variables | Log initial GDP per capita | 4.817 (6.366) | 1.535 (9.29) | -1.912*** (0.630) | 0.398 (6.465) |
| | Log GDP per capita squared | -0.458 (0.450) | -0.268 (0.675) | | -0.169 (0.458) |
| | Regional average growth | 0.277*** (0.068) | 0.232*** (0.069) | 0.303*** (0.102) | 0.195*** (0.069) |
| | Log agriculture (% GDP) | | -0.437 (0.480) | -0.814 (0.597) | -0.906 (0.621) |
| | Population over 65 (%) | | | -0.537** (0.247) | |
| | Surface (Sq. km.) | -1.42e-07 (1.86e-07) | -1.66e-07 (1.82e-07) | -1.25e-07 (1.79e-07) | -2.03e-07 (1.84e-07) |
| | Lagged investment | 0.210*** (0.035) | 0.190*** (0.035) | 0.212*** (0.035) | 0.206*** (0.035) |
| | Urban population (%) | 0.035 (0.024) | | | |
| Institutions | Single institution | | | | 0.485 (0.818) |
| | Multiple institutions | | | | 1.605** (0.812) |
| A (Security) | Military ruler | 3.140** (1.234) | 2.218* (1.34) | 3.979*** (1.361) | 2.167 (1.354) |
| | Civilian ruler | 3.623*** (1.313) | 3.719*** (1.31) | 4.419*** (1.416) | 3.277** (1.311) |
| | Democracy before | 2.113** (1.062) | 2.279** (1.024) | 2.607** (1.044) | 2.759*** (1.045) |
| | Colony before | | -1.501 (1.014) | | -1.786* (1.016) |
| | Dictatorships in the region | -3.484** (1.713) | -4.60** (1.857) | -4.163** (1.822) | -3.245* (1.829) |

*Table 8.2. (cont.) Dictator spells average growth regressions and accountability determinants*

| | Independent variables | Dependent variable: Dictators' growth averages | | | |
|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (4) |
| *A (Security)* | Past transitions to dictatorship | -0.879* (0.464) | -0.857* (0.461) | -0.829* (0.453) | -0.966** (0.468) |
| | Ethnic fractionalization | -0.880 (1.003) | -1.129 (1.012) | -.0026 (0.003) | -1.166 (1.010) |
| *B (Sensitivity)* | Resource-rich country | -1.838** (0.723) | -2.262*** (0.737) | -2.076*** (0.722) | -2.264*** (0.754) |
| | Log foreign aid per capita | -0.595*** (0.221) | -0.452** (0.216) | -0.848*** (0.218) | -0.613*** (0.229) |
| $qU^{low}$ | Pr (judicial accountability) | 0.899* (0.500) | 1.991*** (0.618) | 1.818*** (0.518) | 1.890*** (0.621) |
| | Observations (Groups) | 2074 (272) | 1953 (253) | 1878 (240) | 1952 (252) |
| | R-Squared | 0.24 | 0.27 | 0.32 | 0.29 |

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

The signs of the variables fully coincide with our theoretical expectations. The two variables determining the levels of sensitivity -the availability of resources or primary commodities and foreign aid- have negative, significant and strong effects on the rate of per capita income growth. Being a leader with resources at hand makes per capita income growth rates to be about 2.1 points lower on average, whereas a point increase in the log of aid per capita decreases the growth rate of per capita income in 0.8 points. The (log) odds of being punished as a result of losing power exert an important positive effect on performance, meaning that a negative expected result as a consequence of leaving power increases the incentives to retain it by altering policy decisions. The variables capturing structural security are diverse in their effects and measurements. Nonetheless, their

patterns are coherent with the theory: Those which reduced security in the survival models reported in Chapter 6, now increase growth, while, conversely, those increasing security, make growth rates shrink. In the case of ethnic fractionalization, its effect is negative but not statistically significant; its negative effect on popular interventions showed in Chapter 6, thus, seems to prevail and make it harmful for growth, but the fact that it increases insecurity at the elite level renders its coefficient small and insignificant. In sum, we can firmly conclude that the political accountability function is not exponential as using this type of function to define the probability of survival yielded the opposite prediction, namely, that more security would improve economic performance.

Table 8.3 reports a more simplified portray of the relation between accountability and economic growth. In this second case, the security dimension is captured by a rough measure consisting of the average estimated odds and the predicted probability of leader overthrown irrespective of the variables measuring sensitivity, using the covariates we have been considering so far. Other controls, such as those in Table 8.1 (share of agriculture, GDP per capita, etc.) have been included, although they are not reported.[13] The basic results and patterns remain unaltered. Both measures of security show a strong positive effect on growth;[14] so do the variables capturing sensitivity and the likelihood of judicial accountability. According the results in column 1 for example, an increase in the rulers' structural insecurity from 0.2 to 0.5 involves a 4.6 points increase in the predicted averaged growth rate.

In the last column of both tables (8.2 and 8.3) the variables for institutions have been introduced into the regression analyses too. Although institutions will receive a more careful examination in the next section, it is worth noting that they perform in a rather

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[13] Their effects are almost identical to those found in the models in Table 8.1.

[14] Recall that in this case, a higher value of the variable indicates greater insecurity, so its effect is expected to be positive on economic performance.

coherent way. Given that 'multiple institutions' have been found to be the institutional combination providing rulers with the lowest level of security, the highest level of sensitivity and the greater probability of judicial accountability, their effect could be predicted to be high and significant as it certainly is in both types of the model specification. The 'single institution' dummy, though, is not significant although positive in both cases. This shows that the effect of a higher sensitivity level and a bigger probability of punishment prevail over the negative effect of the higher security found under this concrete institutional setting but not sufficiently to make its effect significant.

*Table 8.3. Security, sensitivity, judicial accountability and growth*

| | | Dependent variable: Dictators' spells averaged per capita growth | | |
|---|---|---|---|---|
| *Independent variables* | | (1) | (2) | (3) |
| *A* (security) | Log odds | -- | 2.027*** (0.741) | 2.623*** (0.920) |
| | Probability | 15.22** (7.260) | -- | -- |
| *B* (sensitivity) | Resource-rich country | -2.066** (0.929) | -2.093** (0.922) | -2.162** (1.059) |
| | Log foreign aid per capita | -0.824*** (0.190) | -0.816*** (0.189) | -0.896*** (0.231) |
| $qU^{low}$ (judicial accountability) | Pr (Punishment) | 1.147*** (0.394) | 1.277*** (0.398) | 1.428*** (0.418) |
| *Institutions* | Single institution | -- | -- | 0.852 (0.797) |
| | Multiple institutions | -- | -- | 1.656** (0.775) |
| Observations (groups) | | 1864 (247) | 1864 (247) | 1839 (242) |
| R-Squared | | 0.27 | 0.28 | 0.28 |

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

So far we have tested how variables measuring the different dimensions contained in the accountability process affect growth. Nevertheless, Figure 3.2 in Chapter 3 yielded another interesting insight, in particular, that the effect of security (*A*) is stronger when sensitivity (*B*) to performance/extraction is low. As they feel more secure in power, dictators decide to extract a higher portion of rents. If, besides, these increases have little effect on their probability of keeping power (given that sensitivity is low), the economic tragedy brought about by unleashed greed may become unavoidable. We put this point under scrutiny by dividing our sample into two subgroups (see Table 8.4), those leaders ruling a resource-rich country versus those with resource-poor economies and, moreover, those with foreign aid under average versus those receiving aid over the sample average. We use again the general security measure introduced in Table 8.3.

Therefore, we are basically interested in the changes in the coefficient of the variable gauging security across the various sub-samples. Although significant in both samples, the coefficient of security more than doubles when the ruler is insensitive thanks to resource and primary commodity abundance. With regards to the division based on the amount of aid received, the results are similar again; the coefficient on security more than doubles when sensitivity is assumed to be low and it is highly significant. Therefore, it is proven that, as shown earlier in the model, when sensitivity is low, security matters to a greater extent in determining the level of rent-extraction.

*Table 8.4. The effect of security when sensitivity varies*

| Independent variables | | Dependent variable: Dictators' spells averaged per capita growth | | | |
|---|---|---|---|---|---|
| | | No resources (sensitive) | Resource-rich (insensitive) | Aid under average (sensitive) | Aid over average (insensitive) |
| **A (security)** | **Log odds** | **1.666**\*\* (0.799) | **3.550**\*\*\* (1.095) | **1.286** (0.916) | **2.823**\*\*\* (0.902) |
| *B* (sensitivity) | Resource-rich country | -- | -- | -2.451\*\* (1.02) | -1.079 (1.59) |
| | Log foreign aid per capita | -0.968\*\*\* (0.202) | -0.590\* (0.310) | -- | -- |
| $qU^{low}$ (judicial accountability) | Pr (Punishment) | 1.159\*\*\* (0.416) | 1.188\* (0.626) | 1.529\*\*\* (0.522) | 1.513\*\*\* (0.499) |
| Observations (groups) | | 1710 (225) | 939 (116) | 977 (179) | 1014 (151) |
| R-Squared | | 0.30 | 0.33 | 0.31 | 0.33 |

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

*8.3.2. Government consumption*

Government consumption is often related to the scope of rulers' mismanagement of public resources as it does not include public productive expenditure (capital expenditure), social security benefits and other transfers. Furthermore, this consumption has been generally proved to exert a negative effect on economic growth in several cross-country studies (see, for instance, Landau, 1986; Barro, 1995; Gomanee *et al.*, 2005; Bates, 2006). In this sense, government consumption can be thought to be the part of public spending which can be potentially diverted and subject to state capture and, consequently, redirected to activities such as patronage, cooptation and self-enrichment.

As Przeworski puts it, it can be generally assumed that "patrimonial state will undersupply the public inputs into production" (2003: 91). This has been a general proposition in the literature on state capture. For instance, in Overland *et al.*'s (2000) model, they allow the dictator to choose the split of output between consumption and investment. Robinson (2000) models the increase of domestic capital (infrastructure) as raising the risks for dictators, so, generally, it is in their interest to retard development. As a result, predatory rulers are characterized by a small provision of public investment.[15] The logic in many formal models (Barro, 1990; Robinson, 2000) is to consider government overall capture, $R_t$, as

$$R_t = \tau Y_t - g_t$$

where $g_t$ stands for public investment, $Y_t$ for total output at time *t* and, obviously, $\tau$ represents the tax rate . The expression above is better approximated by using government consumption, for which, besides, a more complete series of data is available (see below). Furthermore, it is worth noting that public investment may be

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[15] See also Robinson (1995).

subject to corruption and to the logic of 'white elephants', that is, the engagement in huge investment projects aimed at making redistribution credible but actually involving a negative social surplus (Tanzi and Davoodi, 1997; Robinson and Torvik, 2005).

According to our own specification, then, it might well be that the variables so far identified and used to explain growth under dictators' rule might have also an effect on government consumption but with the opposite sign. Thus, security should have a positive effect on public consumption, while sensitivity as well as the likelihood of judicial accountability should reduce it if it is true that state capture can be approximated using government consumption figures.

The dependent variable is government consumption as a percentage of the GDP and covers the 1960-2000 period. Once considering only authoritarian regimes, the total amount of observations is 2690 and the sample mean is 15.23 (s.d.=7.34).[16]

Table 8.5 shows the results of the regressions and, indeed, the patterns appear to be coherent with the results of the growth models above, namely, the effect is just the opposite for all the dimensions of accountability under study. In addition, in the model detailed in the third column, in which we have again included the institutional dummies in the analysis, the results obtained are consistent with those found in the growth regressions. The coefficient for 'multiple institutions' is negative and significant, indicating that dictators allowing such a degree of inclusiveness consume, on average, 2.30 percentage points less than rulers who banned or closed all kind of institutions. The effect of a single institution is quite strong and negative as well, $\beta$= -1.11, but it is not statistically significant. Neither was it in the growth models.

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[16] The number of observations of the variable capital expenditure (as a percentage of the GDP), usually taken to gauge the level of public investment, in the *World Development Indicators* database is less than half than those available for government consumption.

*Table 8.5. Government consumption and accountability determinants under authoritarian leadership*

| | Dependent var.: Government consumption (% GDP) | | |
|---|---|---|---|
| Independent variables | (1) | (2) | (3) |
| **Control variables** | | | |
| Constant | -62.86*** (23.05) | -52.39** (23.05) | -53.48* (32.12) |
| Log GDP per capita | 15.57*** (5.99) | 15.42*** (5.91) | 13.75 (8.90) |
| Log GDP per capita squared | -1.03** (0.405) | -1.06*** (0.400) | -0.903 (0.626) |
| Age dependency ratio | 1.32 (3.50) | -1.490 (3.60) | -0.159 (3.67) |
| Surface (Sq. km.) | 5.27e-07** (2.59e-07) | 5.19e-07** (2.56e-07) | 5.06e-07* (2.65e-07) |
| Urban population (%) | 0.071** (0.034) | 0.088** (0.034) | 0.071* (0.038) |
| **Institutions** | | | |
| Single institution | | | -1.11 (1.18) |
| Multiple institutions | | | -2.29** (1.10) |
| **A (Security)** | | | |
| Military ruler | -0.876 (1.86) | -1.72 (1.86) | -1.19 (2.01) |
| Civilian ruler | -2.91* (1.74) | -4.88*** (1.86) | -2.63 (1.95) |
| Democracy before | -0.383 (1.48) | -0.956 (1.47) | -0.397 (1.48) |
| Colony before | 4.72*** (1.38) | 5.83*** (1.42) | 4.68*** (1.42) |
| Dictatorships in the region | 10.10*** (2.42) | 10.28*** (2.39) | 9.26*** (2.46) |
| Democracies in the world | | -17.89*** (6.35) | |
| Past transitions to dictatorship | 0.011 (0.678) | 0.068 (0.670) | -0.236 (0.688) |
| Ethnic fractionalization | 3.18** (1.35) | 3.08** (1.34) | 3.36** (1.39) |
| **B (Sensitivity)** | | | |
| Resource-rich country | 2.99** (1.27) | 3.72*** (1.28) | 3.08** (1.40) |
| Log foreign aid per capita | 1.92*** (0.289) | 2.10*** (0.921) | 2.003*** (0.305) |

*Table 8.5. (cont.) Government consumption and accountability determinants under authoritarian leadership*

| | | (1) | (2) | (3) |
|---|---|---|---|---|
| | *Dependent var.*: Government consumption (% GDP) | | | |
| | *Independent variables* | (1) | (2) | (3) |
| $qU^{low}$ | Pr (judicial accountability) | -1.71** | -3.58*** | -1.52* |
| | | (0.869) | (1.08) | (0.909) |
| | Observations (Groups) | 2084 (274) | 2084 (274) | 1969 (265) |
| | R-Squared | 0.33 | 0.35 | 0.32 |

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

Column 1 in Table 8.6 confirms the type of effect identified in Table 8.3 for growth.[17] Our alternative measure of security performs as expected, exerting a strong negative effect on consumption, while the rest of the variables perform consistently to the results in Table 8.5. In column 2 we introduced the dummies for institutions getting again coherent results with those in the previous table, that is, the greater the degree of institutionalization, the lower the level of consumption by the authoritarian government.

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[17] Again, to keep the table small we have suppressed the coefficients of the control variables, which basically follow the same specification that appears in Table 8.5.

*Table 8.6. Security, sensitivity, judicial accountability and government consumption (% of GDP)*

| Independent variables | | Dependent variable: Dictators' spells averaged government consumption | |
|---|---|---|---|
| | | (1) | (2) |
| | Constant | 9.76 (5.94) | 7.18* (3.99) |
| A (security) | Log odds | -3.41*** (1.22) | -3.24*** (1.25) |
| B (sensitivity) | Resource-rich country | 4.24*** (1.30) | 3.69*** (1.32) |
| | Log foreign aid per capita | 2.03*** (0.324) | 2.02*** (0.325) |
| $qU^{low}$ (judicial accountability) | Pr (Punishment) | -1.41* (0.763) | -1.68** (0.739) |
| Institutions | Single institution | -- | -1.80 (1.10) |
| | Multiple institutions | -- | -2.74** (1.12) |
| Observations (groups) | | 2038 (266) | 2020 (259) |
| R-Squared | | 0.36 | 0.39 |

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

## 8.4. The effect of institutions under authoritarianism

### 8.4.1. Effects on economic growth

Do institutions effectively constrain rulers under authoritarian regimes? The previous section has clearly shown that most of the variables explaining the existence of institutions have some kind of effect on economic growth at the leadership level and that institutions seem to play a role as well. The bias of including institutions in the right hand side of the regression equation may

stem from observable factors then. Nonetheless, unobservable factors should not be neglected. Suppose that leaders who have the will of allowing a greater level of inclusiveness and representation within regime structures are also more prone to self-restrain their voracity and engage in growth promoting policies.[18] In that case, an unobservable variable would be affecting both our independent variable and the dependent one, so, again, the estimates of the effect of institutions would be biased. This is the reason why institutions and their effect need a more careful examination. Hence, we rely again on the methodology employed in Chapter 5 to estimate the revenue models. We start with a simple barebones model assuming a production function of the following form[19]

$$Y = r(K^{\alpha} L^{\beta})$$

where $r$ denotes the level of technology, $K$ stands for capital stock, and $L$ represents the size of the labor force. Accordingly, $\alpha$ and $\beta$ gauge the efficiency of capital and labor, respectively. The model is estimated in its growth form and augmented by the Mill's ratios, $\lambda$, for each degree of institutionalization $j$, where $j \in \{0,1,2\}$, to get the corresponding unbiased coefficients with which the counterfactuals can be estimated for the whole sample

$$E\left(\frac{\dot{Y}}{Y}\right)_j = \left(\frac{\dot{r}}{r}\right)_j + \alpha_j\left(\frac{\dot{K}}{K}\right) + \beta_j\left(\frac{\dot{L}}{L}\right) + \sigma_j \lambda_j$$

where $\alpha$ and $\beta$ are now the estimated coefficients which capture the effect of the growth of capital stock, $\left(\dot{K}/K\right)$, and the labor

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force, $\left(\dot{E}/L\right)$, $\sigma$ is the coefficient of the lambdas for each group $j$, while the increases in technology become now the regression constant.[20]

The empirical evidence provided in Chapters 4 and 7 has allowed us to classify dictatorial institutions into a three dimensional space, according to which we can predict which ones will present higher growth rates (following the predictions of Table 3.4 in Chapter 3). Figure 8.2 graphically shows the expected patterns. If the relative importance of the sensitivity and judicial accountability dimensions is, as assumed, greater than security, then regimes with a single institution would present higher growth rates than non-institutionalized regimes. Furthermore, given that fully institutionalized dictatorships present better conditions for growth than the rest of the regime subtypes, it can be argued than, potentially, $a > b$ -as shown in Figure 8.2-, that is, the differences between fully institutionalized regimes and the rest can be anticipated to be bigger than those probably existing between regimes with a single institution and those with none.[21]

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[20] See Przeworski *et al.* (2000) and Vreeland and Przeworski (2000) for similar specifications.

[21] The results detailed in the previous section (Tables 8.2 and 8.3) did already adjust to this hypothesis.

*Figure 8.2. Political and judicial accountability, predicted growth and the degree of institutionalization*
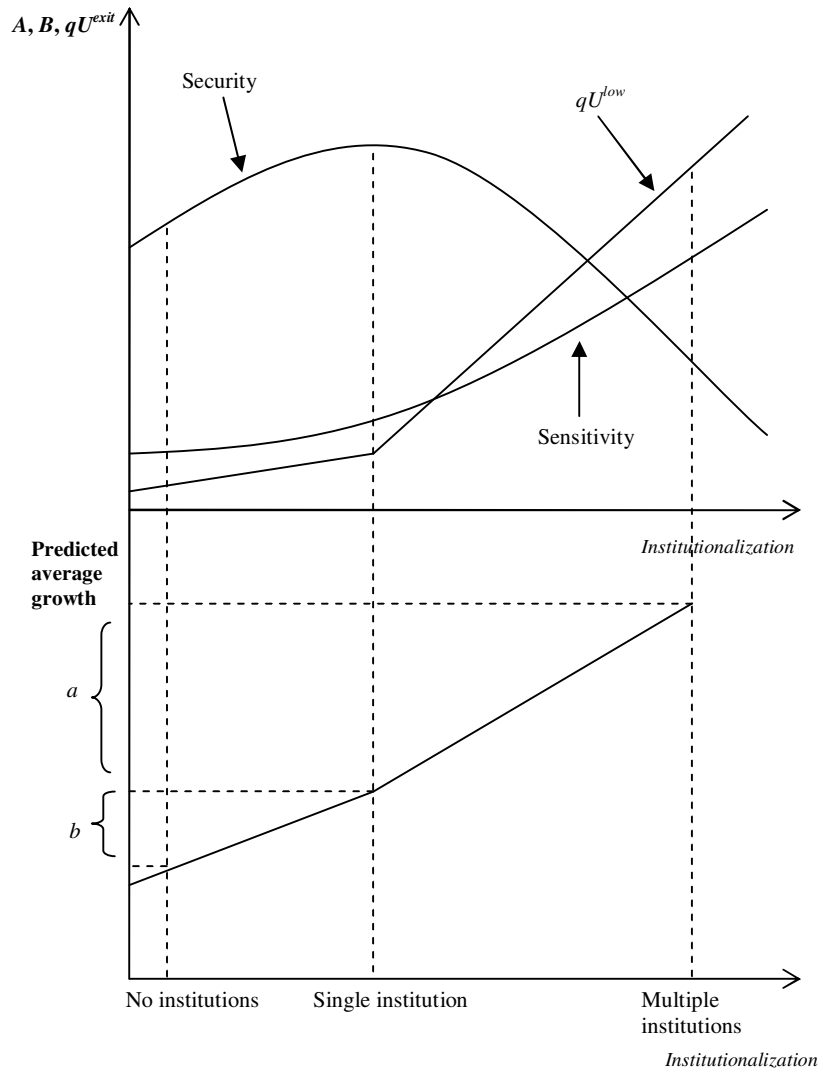
In Table 8.7 we can appreciate both the observed and the selection corrected averages -and their respective standard deviations- using alternative estimation methods and specifications. The dependent variable is real GDP growth. The general pattern observed in both kinds of averages is the same and follows the trend depicted in Figure 2, that is, the higher the degree of institutionalization, the higher the growth rate of the economy. Nevertheless, it is when we control for selection that the specific differences between averages that we expected to observe emerge.

*Table 8.7. Observed and selection-corrected growth averages under differently institutionalized dictatorships*

| | | Dictatorial subsamples | | |
|---|---|---|---|---|
| *Extra variables* | *Estimation method* | No institutions | Single institution | Multiple institutions |
| "Barebones" | Observed | 4.280 s.d.= 10.80 | 4.302 s.d.= 6.833 | 4.499 s.d.= 7.508 |
| | Pooled | 3.991 s.d.= 7.183 | 4.194 s.d.= 7.735 | 5.356 s.d.= 5.560 |
| | Fixed-effects | 3.833 s.d.= 7.238 | 4.224 s.d.= 7.838 | 5.618 s.d.= 5.094 |
| | Panel corrected s.e. | 3.991 s.d.= 7.183 | 4.194 s.d.= 7.735 | 5.356 s.d.= 5.560 |
| Lagged log income per capita | Fixed-effects | 3.021 s.d.= 9.019 | 3.818 s.d.= 8.054 | 6.190 s.d.= 5.269 |
| Log initial income per capita | Pooled | 3.992 s.d.= 7.182 | 4.269 s.d.= 7.759 | 5.350 s.d.= 5.567 |
| | Panel corrected s.e. | 3.992 s.d.= 7.182 | 4.269 s.d.= 7.759 | 5.350 s.d.= 5.567 |

Note: s.d. stands for standard deviation and s.e. for standard errors. Cell entries are the observed and selection corrected averages and their standard deviations.

The differences between the observed averages are almost marginal, although we certainly can observe that the predicted distances between averages follow the pattern described above. None of the differences between these means is statistically significant though. The distances get broader after controlling for selection, as said. It is in these cases were one can fully appreciate that, as expected, $a > b$, that is, fully institutionalized regimes perform much better, in economic terms, than the other two kind of dictatorial subtypes. Concretely, in Table 8.8, where the differences between means are reported, it can be easily checked that, irrespective of the estimation method and the variables included in the model, numbers in column 3 are bigger than those in column 1, given that column 3 gauges *a* and column 1 measures *b*.[22]

Furthermore, Table 8.8 reports the results of the *t*-tests on the equality of means.[23] As can be observed, the *t*-statictics for the differences between fully-institutionalized regimes and the other two sub-samples are significant at the maximum level (0.01) in all cases, even after augmenting the model by including the (log) initial income per capita or the lag of the log of income per capita. The net effect of institutions is quite big in this case. Having a legislature and multiple parties entails growing more than one percentage point per year than the other forms of regime organization do.

On the other hand, the mean comparisons between non-institutionalized regimes and those with a single institution are only significant in two of the results reported, specifically, the two obtained by using a fixed-effects estimator and one of them after including the lagged log of income per capita on the right-hand side of the equation. In the rest of the figures, the differences

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[22] Obviously, given that $a > b$, it follows that $a > c$, where *c* stands for the differences between the non-institutionalized and fully institutionalized regimes' averages, as $c = a + b$.

[23] The data have been treated as unpaired and with unequal variances.

remain relatively low and not significant, at about -0.238 on average.

The results we got from the regressions in Tables 8.1 and 8.2, therefore, were not misleading at all. There the dummy capturing 'fully institutionalized regimes' was significant and exerted a considerable positive effect on economic performance. The coefficient was about 1.6, very close to the estimates in column 2 of Table 8.7. Regarding the 'single institution' dummy, the selection-corrected estimates yield smaller effects than those in Tables 8.1 and 8.2, however, the general pattern remains: the effect is positive, less than one and, in general, not statistically significant.

*Table 8.8. Results of the t-tests and differences between averages for differently institutionalized dictatorships*

| | | Comparisons | | |
|---|---|---|---|---|
| *Model* | *Estimation method* | No inst. vs. Single inst. (1) | No inst. vs. multiple inst. (2) | Single inst. vs. multiple inst. (3) |
| Observed | | -0.022 t=0.048 | -0.219 t=0.446 | -0.196 t=0.656 |
| "Barebones" | Pooled | -0.202 t=0.850 | -1.364 t=6.66*** | -1.161 t=5.41*** |
| | Fixed-effects | -0.391 t=1.62* | -1.785 t=8.94*** | -1.394 t=6.61*** |
| | Panel corrected standard errors | -0.202 t=0.850 | -1.364 t=6.66*** | -1.161 t=5.41*** |
| Lagged log income per capita | Fixed-effects | -0.797 t=3.06** | -3.16 t=14.08*** | -2.37 t=11.44*** |
| Log initial income per capita | Pooled | -0.276 t=1.16 | -1.357 t= 6.63*** | -1.080 t= 5.02*** |
| | Panel corrected standard errors | -0.276 t=1.16 | -1.357 t= 6.63*** | -1.080 t= 5.02*** |

Note: ***$p<.01$  **$p<.05$  *$p<.10$. In each cell the first value is the difference between averages, and the second, the *t*-statistic and its level of significance from one-sided tests.

*8.4.2. Effects on government consumption*

Previously in this chapter we proved that the alternative accountability dimensions are strong determinants not only of growth but also of the level of government consumption. We now proceed to study the effect of institutions using the same kind of Heckman's two-step methodology to correct for non random selection, as we did for economic performance.

Table 8.9 reports both the observed as well as the selection-corrected averages for each type of institutional combination. The second stage regressions include control variables usually considered in studies of the size of the public sector such as the surface of the country, age dependency ratio, GDP per capita, share of agricultural sector in GDP, urban population, trade openness, presence of natural resources, and ethnic fractionalization.[24] The dependent variable is government consumption as a percentage of the GDP, which covers the 1960-2000 period. The models, given the yearly nature of the data, use lagged dependent variable and AR1 corrections to deal with likely autocorrelation problems of the dependent variable.

As one can appreciate, the differences, once corrected for selection, are relatively small, but, as detailed in Table 8.10, generally significant and follow the order we hypothesized. Having existed under the very same conditions, authoritarian regimes with a bigger share of resources devoted to government consumption are those without any institutional constraint, about 14.60 of the GDP, while fully institutionalized regimes consume the least, just about 13.5 of the GDP.

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[24] See, among many others, Alesina and Wacziarg (1998), Boix (2001) and Annett (2001).

*Table 8.9. Average government consumption and dictatorial institutions*

| Estimation method | Subsamples | | |
| --- | --- | --- | --- |
| | No institutions | Single institution | Multiple institutions |
| Observed | 15.73 s.d.= 8.15 | 15.77 s.d.= 7.53 | 14.38 s.d.= 6.65 |
| Pooled with lagged dep. var. | 14.60 s.d.=5.56 | 13.93 s.d.= 5.20 | 13.78 s.d.=4.95 |
| Panel (AR1) | 14.14 s.d.= 3.40 | 13.68 s.d.= 3.12 | 13.12 s.d.= 3.23 |
| PCSE (AR1) | 14.67 s.d.= 4.31 | 14.18 s.d.= 2.77 | 13.45 s.d.= 3.49 |

Note: s.d. stands for standard deviation. Cell entries show the observed (first row) and selection corrected averages and their standard deviations.

*Table 8.10. Differences between averages and t-tests results: Government consumption and dictatorial institutions*

| Estimation method | Comparisons | | |
| --- | --- | --- | --- |
| | No inst. vs. Single inst. (1) | No inst. vs. multiple inst. (2) | Single inst. vs. multiple inst. (3) |
| Observed | -0.038 t= 0.091 | 1.34 t= 3.31*** | 1.38 t= 4.47*** |
| Pooled with lagged dep. var. | 0.670 t= 3.06*** | 0.820 t= 3.83*** | 0.150 t= 0.72 |
| Panel (AR1) | 0.458 t= 3.67*** | 1.019 t= 8.04*** | 0.561 t= 4.62*** |
| PCSE (AR1) | 0.487 t= 3.52*** | 1.22 t= 8.14*** | 0.734 t= 6.09*** |

Note: ***$p<.01$  **$p<.05$  *$p<.10$. In each cell, the first value is the difference between averages, and the second, the t-statistic and its level of significance from one-sided tests.

Therefore, the results previously presented in the models in Tables 8.5 and 8.6 that included the dummies for institutions were not misleading at all, although the estimated coefficients were somewhat higher. Correcting for selection informs us that the actual effect is consistent -and significant- but lower than those found in those multivariate regressions.

## 8.5. Mechanisms of accountability and development

How do the distinct mechanisms of accountability relate to growth? In other words, how does the capacity of each of the actors to threat and punish the dictator affect his policy and the economic results? The question requires hypothesizing about the preferences of each of these actors with respect to development policy.

Group strength might determine to which of these social sectors' demands and interests the dictator should pay more attention. Consequently, as the power of the middle and working classes becomes politically relevant, and so does their capacity to impose a more credible threat on the dictator's position, the better the rulers' policy choices can be expected to be with respect to the welfare of the general population. This is the logic underlying the models in which public goods are necessary to all citizens and there exists the threat of a revolution (Grossman, 1991; Grossman and Noh, 1994; Robinson, 2000; Bueno de Mesquita *et al.* 2003). Under authoritarianism, the principal must rely on the only instrument at her disposal (the power to remove the autocrat from office by means of revolutions, protests or guerrilla warfare) to provide the incumbent with incentives to exert a costly effort on her behalf.

With regard to the elites, the assignation of preferences is not so evident. Elites may be interested in both retarding and fostering development depending on the economic context. As Acemoglu and Robinson (2000) claim, landed elites attempt to block industrialization because it may entail a threat to their political

power, what particularly occurs when political rents are higher and when monopoly profits from blocking are greater as well. In contrast, in industrialized societies, elite power will translate in higher pressure for investment and the adoption of better technologies. Thus, under these alternative settings, a higher power of the elite could lead to diverging results in terms of economic performance.

As for the military, do they act as a constraining force for rulers? There are two opposed views concerning the role of the military on development.[25] Some decades ago, many social scientists considered the military a modernizing force. Levy's (1966) proposal was that the military provide societies with enormous levels of stability and control and, hence, modernization through the following mechanisms: Providing channels for social mobility, being a rationally based organization and technology improvements. Likewise, Pye (1962) suggested that the modernization of military organizations should produce spillover effects through their technology improvements.

Posterior studies have largely criticized this naive view by raising two basic arguments. First, it is argued that, although possibly concerned about development, officer corps are unlikely to have the adequate political and economical skills to pursue the "correct" economic policies (see, for instance, McAlister, 1966). And secondly, once in office military governments are more likely to be concerned about improving and securing their own status and conditions, increasing, as a result, the size of military expenditures and reducing the amount of productive investment.

Under authoritarianism, the armed forces may act as a compensating force which could induce the ruler to curb his greed. Regarding its monitoring function, Kimenyi and Mbaku point out that "military leaders assure that competitive interest groups do not develop modes of behavior that are detrimental to 'state' security. Activities of such groups are carefully monitored by military elites to ensure that none develops enough violence

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[25] See Kaldor (1976) for a review.

potential to capture the government" (1995: 701). Likewise, 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), consequently they generally seize power with the purpose of re-establishing order once it is clear that the incumbent government is incapable of doing so (Finer, 1976; Nordlinger, 1977). Indeed, Galetovic and Sanhueza (2000) show that coup attempts are more likely when there is widespread discontent against the incumbent ruler. Thus, excessive rent-seeking may trigger military intervention with the aim of preventing social conflict.

Our data permit us to offer preliminary empirical evidence using the models on the mechanisms of accountability reported in Chapter 6 (see Table 6.2). Taking the predicted odds of each of the mechanisms of accountability and averaging them for a given dictator's tenure we can get a general rudimentary measure of the relative strength of each of the political actors. We introduce those averages into simple regression models with the aim of testing the theoretical intuitions detailed above.

The change in the elite preferences has been controlled by introducing an interactive term which is the result of multiplying the measure of elite strength with the level of development *proxied* by the GDP per capita and the value added of agriculture as a percentage of the GDP. The intention is to test whether, from a certain level of development and industrialization, a higher elite power turns to exert a positive effect on the growth rate of the economy.

The results (see Table 8.11) show some interesting trends that could guide future research. Keeping in mind that we have used predicted variables, the results are strong and their explanatory power, albeit relatively modest, is relevant. We can appreciate that the organizational capacity of the potential popular opposition always leads to higher growth rates as a consequence of increased efficacy in the control of the ruler's decisions. In order to defuse such tension, the ruler must resort to the delivery of public goods

*Table 8.11. Mechanisms of accountability and economic growth (1946-2000)*

| | Dependent variable: Dictators' spells averaged per capita growth | | | | | |
|---|---|---|---|---|---|---|
| *Independent variables* | (1) | (2) | (3) | (4) | (5) | (6) |
| Constant | -9.12* | -13.08*** | -21.29*** | -5.23 | -43.59*** | -37.79*** |
| | (5.06) | (4.55) | (8.06) | (7.40) | (9.66) | (9.85) |
| Log GDP per capita | 1.34** | 1.74** | 2.62** | 1.69** | 5.43*** | 4.77*** |
| | (0.599) | (0.756) | (1.09) | (0.669) | (1.23) | (1.24) |
| Log agriculture (% GDP) | | | | -2.62* | | |
| | | | | (1.36) | | |
| Regional growth | 0.287*** | 0.298*** | 0.338*** | 0.293*** | 0.299*** | 0.287*** |
| | (0.075) | (0.102) | (0.070) | (0.074) | (0.075) | (0.074) |
| Surface | 2.67e-07 | 7.54e-08 | 2.07e-07 | 2.10e-07 | 3.41e-07* | 2.71e-07 |
| | (1.80e-07) | (2.58e-07) | (1.80e-07) | (1.78e-07) | (1.78e-07) | (1.78e-07) |
| Urban population % | -0.429 | -0.332 | 0.321 | -0.023 | -0.017 | -0.005 |
| | (0.681) | (0.935) | (0.618) | (0.026) | (0.028) | (0.028) |
| MECHANISMS OF ACCOUNTABILITY: | | | | | | |
| **Elite power** | -1.63*** | -3.01*** | -7.29*** | 1.35 | -1.72*** | -2.19*** |
| | (0.439) | (0.842) | (2.59) | (1.19) | (0.591) | (0.605) |
| **Elite power * log (GDP per capita)** | | | 0.805** | | | |
| | | | (0.336) | | | |
| **Elite power * log agriculture** | | | | -1.02*** | | |
| | | | | (0.366) | | |
| **Military threat** | | 1.26** | | | -6.21*** | -5.42*** |
| | | (0.638) | | | (2.07) | (0.206) |
| **Military threat* log(GDP per capita)** | | | | | 0.887*** | 0.764*** |
| | | | | | (0.251) | (0.251) |
| **Popular sector strength** | 0.991*** | 1.28*** | 0.732*** | 0.849*** | | 0.784*** |
| | (0.263) | (0.384) | (0.256) | (0.266) | | (0.267) |
| Observations (Groups) | 2197 (278) | 2260 (294) | 2521 (309) | 2198 (278) | 2198 (278) | 2198 (278) |
| R-squared | 0.1657 | 0.1108 | 0.1414 | 0.1932 | 0.1746 | 0.2004 |

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

as private ones can not reach broad social sectors (Bueno de Mesquita *et al.*, 2002, 2003). Nonetheless, the collective action and coordination problems associated to popular movements explain the low frequency of events such as revolution and massive protests (see the frequencies in Table 6.1), which, at the same time, makes the effect of opposition strength smaller than that of other actors, although it is highly significant.

Regarding the other two groups, there are similarities but also differences that merit comment. When no interactive term is included in the models, the overall effect of the elite power on development is clearly negative (see columns 1, 2, 5 and 6). Regardless of dictators' own preferences, rulers' accountability to political and economic elites worsens the prospects for development. The logic of the process was perfectly explained by Brough and Kimenyi:

> "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. Through such activities the dictator is able to maintain a stable government" (1986: 41)

The discretionary power and lack of skills lead to inefficiency and the extraction of public rents. The greater the power of the elite is, the higher the rewards. At the same time, landed elites' power is higher when the agricultural sector represents a large proportion of the economy's whole production. However, this situation can be reversed as models in columns 3 and 4 make clear. As a result of including the interaction between development and elite power (model 3) the coefficient for elite power is

$$-\beta_1(\text{Elite power}) + \beta_2(\text{Log GDP per capita*Elite power}) =$$
$$(-\beta_1 + \beta_2 * (\text{Log GDP per capita}))\text{Elite power} =$$
$$(-7.29 + 0.805 * (\text{Log GDP per capita}))\text{Elite power}$$

which is positive when the log of GDP per capita is higher than (7.29/0.805) ≈ 9, that is, when GDP per capita is higher than $8500. The logic is the same when considering the interaction with the share of the agricultural sector. As this sector increases its weight within the economy, so does the power of the elite to block development.

The nature and preferences of the elite members change with development and even though cronyism may be still extensive its consequences over growth policy can be diametrically opposed. Take the well-known case of South Korea. There, as Kang (2002) defends, the organizational strength of the industrial business elite (*chaebol*) combined with the state control over finance created a situation of 'mutual hostages'. In exchange of credit, the government received a constant flow of funds. In addition, previous regime change was led by social protest so citizen strength was high by that time (Kim, 1996).

The overall effect of military power on growth is positive and significant (see model 2). The interactive terms shows that, at very low levels of development, military power is as predatory as elite leverage. Nevertheless, the reversal occurs quite soon in development (after applying the same procedure as above), and the two models (columns 5 and 6) yield almost the same turning point, 7, that is, about $1100. This is why the positive sign on the general specification prevails.

Note too that these general results are fully consistent with the relation we found between group strength and the dictators' post-exit scenarios. In Table 7.8 we showed that the strength and, hence, the leading role of each group in the process of leader substitution has an important impact in determining the fate of the outgoing ruler. Concretely, it was proved that dictators' punishment is much more likely if the power of the military or the citizen opposition is high, while if the elite leads the process the most likely result is that the deposed ruler remains in the country unpunished. If the autocrat, as we have repeatedly detailed and empirically demonstrated, wants to prevent such post-tenure

sanctions and avoid being toppled, growth policy must improve. Consequently, military and opposition power should lead to higher growth rates, as they certainly do according to our results.


## 8.6. Conclusions

Accountability constraints on dictators or authoritarian governments are definitively effective. As made clear by the formal model at the beginning of this dissertation, accountability, be it political or judicial, "is held to be one of the political foundations for economic development" (Bates, 2006: 31). This main contention has received empirical support throughout this chapter for the concrete case of authoritarian regimes. The variables determining rulers' levels of security and sensitivity have, in general, strong effects on income per capita growth; similarly, the likelihood of judicial accountability makes growth rates increase. Furthermore, the signs of the variables are consistent with the predictions derived from the formal model. Thus, those factors that increase (decrease) the structural level of security of any dictator make the rate of growth of the economy shrink (increase). For example, we found that regime history matters, as well as the type of ruler and the number of dictatorial neighbors.

Regarding sensitivity, the two variables that make dictators less dependent on cooperative taxation, resources and aid, both have strong negative effects on economic performance. Both variables significantly reduce the level of rulers' sensitivity to extraction -as shown in previous chapters- and, accordingly, they are proved to be extremely harmful for growth.

Finally, the parameter gauging the likelihood of punishment as a result of losing power has been found to have a strong positive effect on growth as it makes the utility of remaining in office relative to that of losing it augment (as detailed in Chapter 7).

These patterns are also relevant in determining the level of government consumption at the leadership level but with the

opposite sign, that is, in this case, the less the accountability, the bigger de share of GDP consumed by the government.

The second part of the chapter was fully devoted to explore the effect of dictatorial institutions using Heckman's two-step methodology to control for the conditions under which these institutions exist or are created. The averages of the counterfactuals generated showed that institutions effectively constrain rulers in terms of accountability and do effect growth and government consumption. Concretely, the higher the degree of institutionalization of an authoritarian regime, the higher the growth rate is and the lower the percentage of government consumption.

In the last section we have taken an alternative approach based on social conflict and group strength as reflected in the overall probability of a given mechanism of accountability taking place. The relative power of political groups has important effects on growth. Opposition strength translates into better economic performance as those without chances of receiving any private good are better endowed to effectively hold rulers' accountable to general welfare. Elite power has an overall negative and very relevant impact on income growth, however, once this effect is conditioned by the level of development, it turns out that, from a certain level of modernization, elite power exerts a positive effect on economic performance. This result could help us to understand the occurrence of some developmental miracles.

# CHAPTER 9. CONCLUSIONS.
# HOLDING DICTATORS ACCOUNTABLE

## 9.1. A summary of the theoretical questions and propositions

There have been almost as many authoritarian governments that did well in terms of economic performance as governments that did tremendously badly. Although corruption is a common feature under dictatorship, in some cases it was so widespread and exercised at such a high level that made growth rates dramatically shrink. However, the political science literature on authoritarian regimes has tended to respond to that fact by either classifying dictatorial regimes according to their results (in terms of repression or economic success) or by assuming that different rulers have distinct goals they want to pursue while being in power. On the other hand, the economic literature dealing with the predatory state do not provide us with the comparative statics necessary to derive hypotheses or, in some cases, it neglects the fact that time-preferences should be made endogenous.

This dissertation was aimed at offering a general answer to that variability in economic results. We have focused in a common set of political-economic constraints to dictators who seek to maximize self-enrichment. As long as these constraints are binding, rent extraction will remain low and the economy will grow. Specifically, our approach has situated accountability at the core of development by developing a general theory of accountability under dictatorship and studying the effects of

dictatorial institutions in accordance to their associated levels of accountability.

To do so, we have first developed a new and broad theoretical framework and a set of models whose main theoretical propositions and hypotheses are reviewed in the following subsections. The next sections summarize the empirical evidence reported in order to support these hypotheses.

### 9.1.1. Modeling accountability: Types and dimensions

Dictatorial regimes are essentially characterized by power concentration and the centralization of the decision-making process. From this assumption, hence, many could arguably assert that their leaders remain largely unaccountable. However, if one thinks of accountability in broad terms and pays closer attention to how authoritarian regimes work, the need to study the conditions that may increase the levels of control or autonomy under such regimes becomes not only unavoidable but central to properly comprehend policy choices and economic performance.

In fact, the study of accountability and its determinants is a growing field both in political science as well as in economics. The task, though, is far from being complete. As Hoffman and Gibson correctly put it, "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" (2006: 2).

A basic definition of accountability is offered by Manin, Przeworski and Stokes:

> "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" (1999: 10).

Note that within this concrete definition there is no assumption about whether governments must be democratic or not, or whether those aforementioned sanctions must stem from the holding of competitive elections and the application of a retrospective voting rule. In fact, Maravall (2005) has properly noted that even under democracy, accountability may take place at two alternative levels. One, that of voters and elections, and two, that of party or coalition members. And as he claims, "voters do not always share the criteria of politicians for rewarding or punishing incumbents" (Maravall, 2005: 29).

Dictators might be sanctioned as well and lose power. They can be overthrown through different ways too although, generally, they are more costly than just casting a vote into a ballot box every four or five years. Coups, revolutions, plots, *palace putsches* are just some of the ways by which authoritarian rulers may be deposed. Autocrats face a probability of being overthrown in the next period which depends on their own policy choices. Time horizons are thus made endogenous. This is the way in which we have modeled political accountability in a general two-period model of growth in which the ruler maximizes rents by choosing the rate of rent-extraction applied onto households' income. We adopted a general simple form for this accountability function

$$\Pr(survival) = A - B\tau$$

where, obviously, $0 \leq (A - B\tau) \leq 0$. The function consists of two parameters and one variable, $\tau$, that is, the rate of extraction (generally called the tax rate) chosen by the autocrat. The two parameters capture two different dimensions of political accountability, namely, *security* ($A$) and *sensitivity* ($B$). The former gauges the structural level of security that a given dictator enjoys in power independently of the performance of the economy or his level of plunder. On the other hand, the extent to which the tax rate, $\tau$, affects the dictators' probability of remaining in power is determined by the sensitivity parameter, $B$, which is, hence, the coefficient for the variable $\tau$. Sensitivity relates to what has been

termed the 'fiscal theories of governance', which contend that when citizen cooperation is not needed for revenue to be raised, governments have fewer incentives to defer to their interests. The characterization of these two dimensions permits to specify the causal mechanisms through which accountability affects economic performance under authoritarianism.

Furthermore, there exists another type of accountability, which we have generally named *judicial accountability*. Whereas political accountability serves to determine whether rulers are going to lose power or not, judicial accountability measures or classifies what the consequences of losing power are for the outgoing dictator or head of government. We have done so by introducing the parameter $U^{exit}$ -the exit value- into the model, which measures the utility that the autocrat obtains as a consequence of -or after- being unseated or handing over power. In some cases losing power does not entail a bad result *per se* for a dictator. For instance, in case he is able to flee the country and exile, a ruler may be able to enjoy the rents accumulated during his tenure without facing any responsibility for his past misdeeds. We study the consequences for economic performance of the variability in the rulers' post-exit fate.

### 9.1.2. Hypotheses and predictions

The development of the formal model, as done in Chapter 3, had a very specific goal, namely, getting concrete hypotheses through the development of comparative statics exercises with regard to the different elements contained in the political accountability function and to the judicial accountability parameter. We have been able to prove that, under all types of functions (excepting the exponential one), the expected effects of the political accountability parameters on growth are as follows:

- As *A* increases, so does the overall level of dictator's security, that is, he faces lower probabilities of being toppled by

whatever actor and, as a result, the security parameter only influences positively the likelihood of staying in power in *t*+1 and getting rents. So, more structural security allows the autocrat to extract at higher rates and, consequently, it harms economic performance.

- Through the sensitivity parameter, *B*, the extraction rate affects the probability of staying in office and, therefore, the time preference of the autocrat. This effect forces him to trade off self-enrichment at present time with survival and more rents in the future. The lower the sensitivity, the weaker the trade-off the dictator has to face and, as a result, the higher the level of graft and the lower the growth.

- In contrast, if the accountability function takes an exponential form, the prediction for security changes. Under this alternative setting, more security involves a lower tax rate and, thereby, a higher growth rate. The effect of sensitivity remains unaltered, though.

- Regarding the post-exit value, $U^{exit}$, the results obtained from the simulations are clear. The better-off the dictator gets to be after leaving power, the fewer reasons he has to restrain his propensity to self-enrich while in office. Nonetheless, in Chapter 7 we relaxed the assumption that these post-exit scenarios are fixed; instead, we assumed that there are only two scenarios, one bad, such as punishment -implying $U^{low}$- and one good, such as to remain unpunished in the country, which happen with probability *q* and 1-*q*, respectively. Knowing that the lower the post-exit utility a dictator gets after losing power is, the lower his level of plunder will be, it logically follows that the greater the probability *q* that the outgoing dictator gets this low utility, the lower the level of rent-extraction will be, as the simulations effectively show.

After developing the general model, we moved to explore more in depth the mechanisms of accountability to which dictators are subject with the aim of developing concrete hypotheses about the determinants of the two dimensions of political accountability,

security and sensitivity, which were taken as exogenous in the previous general growth model (see Chapter 4). The simple bargaining model developed there has yielded three main insights to be put under empirical scrutiny. First of all, the exogenous determinants of security are to be found in the variables affecting the relative strength of both the elite and the citizen opposition groups. On the other hand, sensitivity levels are driven by the availability of non-cooperative rents such as non-tax revenues, taxes on international trade and foreign aid.

The rest of the chapter was devoted to find clues among the existing literature about what the determinants of the relative strength of the elite, the military and the opposition groups might be. Specifically, we proposed that to keep the elites' loyalty when no cooperative rents are obtained, the rulers must resort to distribute perks and privileges through a single institution system. We also predicted that elite strength may be lower in monarchies where power legitimacy hinges on tradition and dynastic descent. Furthermore, rulers may find themselves more secure in power as the legitimacy gained though their anti-colonial activism might well prevent other elite members from plotting against him. Moreover, external dependence and past instability are pointed by the literature to be major determinants of military interventions into politics, whereas recent independence from colonial domination may inhibit it. Finally, regarding citizen opposition, its organizational capacity is expected to be influenced by the following factors: Their initial organizational strength, which will be greater if the previous regime was a democracy; the difficulties posed by a big proportion of authoritarian regimes in the region; the support offered by foreign democratic governments; the degree of ethnic fractionalization, which may hinder group coordination, and the creation of a multi-party system.

*9.1.3. Dictatorial institutions*

The model in Chapter 4 allowed us to advance the determinants and expected effects on revenues and accountability of authoritarian institutions, that is, legislatures, single-parties and multi-party systems. So far the main contributions to the theory of authoritarian regimes have paid little or none attention to institutions,[1] assuming that they were simply a democratic façade with no practical function or real effect on any policy outcome. However, we have hypothesized the opposite idea: Institutions may play a role, even under dictatorial regimes, since they affect the underlying levels of accountability of dictators.

As already noted by Gandhi and Przeworski (2006), institutions under dictatorship serve to co-opt potential opposition and to mobilize economic support in the form of tax compliance. Consequently, they are predicted to exist under some specific conditions: The increasing benefits of mobilizing cooperation when aid or primary commodities are scarce lead the elite as well as the ruler to accept a more open institutional system, while the organizational capacity allows each of the actors that represent a credible threat to dictator's stability in office to push for a more favorable policy outcome.

At the same time, institutions are associated to certain levels of both security and sensitivity given that they are partly the result of the variables determining both dimensions of political accountability. The hypotheses regarding this connection are the following: The relation between institutionalization and sensitivity is straightforward and predicted to be monotonic, that is, the greater the inclusiveness of regime's institutions the higher the level of control and influence over policy offered by the ruling elite. Security shows a different pattern, though. It increases with a certain degree of institutionalization but it then decreases sharply, therefore, showing a parabolic shape.

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[1] See Brooker (2000) for an excellent and exhaustive review of this literature.

*9.1.4. The potential punishment of outgoing dictators: Judicial accountability*

*The Economist* (December 16th-22nd, 2006) recently published an interesting article entitled "ending impunity" which emphasized the growing international concern for prosecuting former rulers with large records of human rights violations and outrageous corruption. The author points out the turning point that Pinochet's case represented for international law as well, explicitly recognizing that 2until the Pinochet ruling, most [dictators] had managed to avoid being brought to account."

In Chapter 7 we studied the parameter $U^{exit}$ of the model, to which we referred as the judicial accountability of dictators because punishment may take place for actions committed during their rule, namely, it describes the consequences of losing power or the exercise of it in terms of welfare. Actually, in that chapter we assumed that punishment occurs with probability $q$ as a result of losing power and, consequently, $q$ is found to exert a positive effect on the expected rate of economic growth, as noted earlier.

We basically proposed there, with the help of simple game theory, that the resulting post-exit scenarios are basically determined by two factors: The strength of the outgoing dictator - or, inversely, the strength of the opposition-, and by the international context. The potential strength of the outgoing ruler can force the opposition to pardon him under certain conditions. The dictator will accept the punishment if he is weak and has little chance of being hosted if he chooses to exile; the ruler will also be tried if his chances of going into exile are not very high. In contrast, if a successful escape is very likely, the opposition may prefer to kill the ruler before he flees. Therefore, the international context has two types of effects. On the one hand, it may increase the chances of punishment by offering very good prospects for a successful exile. On the other hand, if the probability of extradition is very high, the ruler's utility of resisting relative to that of fleeing the country increases, which would indeed induce the opposition to pardon him and let him stay in the country.

A new constructed variable has permitted us to test the hypotheses described thereof. For all dictators who ruled between 1946 and 2000 and for whom information has been found, we have coded whether, as a result of leaving power, they were either punished (arrested or assassinated), were able to exile, or were able to stay in their respective countries without facing any trial or being charged during a certain period of time. The description of the data showed a quite discouraging portrait as already remarked by the article in *The Economist*, namely, most of the dictators (54.18 percent) have been able to stay in the country without being punished once they are out of office, whereas 23.5 percent have been able to avoid punishment by leaving their countries and exiling. Only in 22.27 percent of the cases the outgoing ruler has been -more or less severely- punished by means of a trial or execution. Moreover, we have found that, contrary to what intuition may lead us to think, punishment is less likely if the outgoing dictator is substituted by a democratic regime. Indeed, only 13 out of the 88 rulers imprisoned or killed were prosecuted by successor democratic regimes.

## 9.2. The empirics of accountability and institutions

### 9.2.1. Institutions and public revenue

This dissertation contains several empirical parts covering the whole political economy of accountability, institutions, revenue and growth under autocracy. Chapter 5 deals with the endogeneity of institutions and the political economy of revenue of authoritarian systems according to the theoretical contends developed in Chapter 4. Thus, Chapter 5 contains two empirical parts, the first one briefly analyzes the determinants of institutions, and the second one studies the effect of institutions on revenue policy. Regarding dictatorial institutions, the results confirm that when natural resources do not abound and/or aid is scarce, authoritarian regimes must seek the economic cooperation of some

social sectors due to the fact that these other tax bases at their disposal involve higher administrative costs and more extended free-riding possibilities for taxpayers. In exchange, these regimes offer limited political organization and representation within authoritarian institutions. At the same time, a stronger opposition is able to press for more openness, holding everything else constant. Hence, the potential organizational capacity of the citizen opposition increases the likelihood of the creation or the allowance of broader institutions within the regime structure. On the other hand, the preferences of the incumbent dictator may matter as well. These preferences can be only partly approximated by considering the type of leader, that is, if the dictator is a civilian, a monarch or a member of the armed forces, but the rest remains unobservable.

The endogeneity of institutions has profound consequences on the methodological approach needed, as remarked in both the Chapters 1 and 5 of this dissertation, when trying to study their effect on any political or economic outcome. The core of the empirical problem is the following: If either the observable or unobservable determinants of institutions have any effect on the dependent variable (such as revenues), then estimating the effect of institutions by ordinary least squares would yield biased coefficients. This problem has been solved by using the Heckman's two-step model, whose basics are detailed in Chapter 5.

Concerning revenue, we had predicted, according to our model in Chapter 4, that the opening of institutions would entail a benefit in the form of economic cooperation which would translate in higher taxes raised from incomes, profits and gains, goods and services and other taxes requiring compliance (such as taxes on property). The selection-corrected averages effectively show that non-institutionalized regimes basically rely on two sources of revenue: Taxes on international trade and non-tax revenue. On the other hand, in more institutionalized dictatorships the reliance on the alternative revenue streams is much more balanced, collecting more or less the same percentage (on average) from taxes on

income, profits and capital gain, taxes on goods and services, taxes on international trade and even non-tax revenues. The higher the degree of institutionalization of the regime, the higher the percentage of taxes it is able to collect from income, profits and gains, from goods and services, and from property and payroll taxes.

### 9.2.2. Political accountability

As insistently repeated throughout this research, political accountability, once made endogenous, has two dimensions, security and sensitivity. Nonetheless, these two concepts have their own determinants explaining their respective variability across rulers which must be studied in order to understand the primary political-economic causes of the variability in economic performance across such units.

After having proposed some theoretical hypotheses in Chapter 4, we dealt with both the determinants of security and sensitivity at the empirical level and how institutions are related to both dimensions by applying alternative models of event history analysis (Chapter 6). The first step consisted in analyzing the determinants of the different mechanisms of accountability to which autocrats may be subject: Substitutions or *putsches* triggered by the elite members, military coups and popular protests. Secondly, we have examined the economic conditions of sensitivity.

The distinction between alternative actors and, hence, "technologies for replacing rulers" permitted us to acknowledge the factors affecting security at a finer grain thanks to the estimation of models for each type of accountability mechanism. To do so, we have constructed a new variable which, for each dictator or authoritarian government that ruled between 1946 and 2000, identifies and codes which actor was the leading one involved in the leadership change: The power elite, the military, the opposition or some foreign country. With regard to the

independent variables, they intend to capture the factors specified at the theoretical level in Chapter 4, that is, those potentially affecting and explaining group's organizational capacity and dictators' strength.

The results of the econometric models showed how variables like the type of head of government (civilian, military or monarch), the nature of the previous regime (either democratic or a colony), ethnic fractionalization, and the international context (namely, the number of dictatorships in the region and the proportion of democracies in the world) help to understand the structural levels of security that dictators may enjoy during their tenure.

Secondly, we have studied the economic conditions of sensitivity. The evidence shows that the existence of exportable resources, primary commodities and foreign aid makes rulers insensitive to economic results and extraction since cooperative rents become unnecessary for revenues to be raised, as detailed in Chapter 5. Actually, the models analyzing the mechanisms of accountability had already made clear that the presence of this sort of rents helps autocrats to deactivate potential conflicts arising from the popular sectors of society as well as to keep elites loyal to the incumbent leadership. We have also run general models of dictators' survival to explore whether the overall effect of the alternative variables had the predicted signs and size.

The third and final step has consisted in classifying regimes (according to their level of institutionalization) according to their levels of political accountability in the two dimensional space defined by the dimensions of security and sensitivity. Using alternative measures, dictators ruling regimes with multiple institutions are found to be characterized by the highest levels of sensitivity and the lowest levels of security of all institutional combinations. Regimes with a single institution are the most secure of all, and less sensitive than regimes with multiple institutions. Finally, non-institutionalized dictatorships are the most insensitive of all and relatively secure (slightly less than regimes with a single institution).

*9.2.3. Judicial accountability*

Using a new variable specifically constructed for this research which codes whether, as a result of leaving power, outgoing dictators were either punished (arrested or assassinated), were able to exile, or were able to stay in their respective countries without being prosecuted, we have estimated multinomial models in order to get the predicted odds of punishment for our sample of dictators. Predicting the fate of dictators after leaving or being forced to leave power has proved to be quite difficult. Nonetheless, some very interesting insights can be identified.

Our results show that international pressure in the form of a higher proportion of democracies in the world does have contradicting effects. Actually, a higher number of democracies is related to a lower probability of judicial accountability, in the short term at least. On the other hand, strategic considerations by the opposition forces may determine the fact that when more dictatorships exist in the region, the lower the probabilities of exile are and the higher those of imprisonment or assassination. Exports of natural resources (oil or commodities) increase the chances of exile of a given authoritarian ruler. Accumulated rents and international alliances or 'interested' friendships may be the causes behind this fact. As we also predicted, military rulers are those with a lower probability of suffering any kind of accountability measure due to their power to use force to take over power again, while the highest probability of exiling corresponds to monarchs.

With regard to the institutional arrangements, the empirical evidence demonstrates that rulers with fully institutionalized regimes are those who will face a higher probability of some kind of punishment once deposed. These regimes, thus, are shown to be the most weak in transitional terms, that is, in their capability to impose some sort of conditions to maintain or protect the outgoing elite. On the contrary, dictators governing single institution regimes have been proved to be the most secure in office in previous chapters; this security translates in a better position to

negotiate a favorable exit. A similar pattern is observed for non-institutionalized regimes, whose rulers are the most likely to stay in their countries.

Our multinomial logistic models based on the actors' role in the leader substitution -which capture the strength of the opposition and the regime- indicate that when leader changes are the result of military or citizen force, the likelihood of punishment significantly increases. The former tend to resort to imprisonment (which does not preclude posterior execution), while the latter to assassination in haste. We have also confirmed, through probability simulations, the positive effect of the regional proportion of dictatorships on the likelihood of assassination.

## 9.3. The political economy of economic growth under autocracy

In the final step of this research we dealt with economic growth and put together all the elements developed so far (see Chapter 8). Our main findings could be summarized as follows: Accountability constraints posed on dictators or authoritarian governments are definitively effective, and they are effective because help to improve the economic results of autocratic governments.

The empirical evidence has been divided into two parts, as done throughout the whole empirical parts of this dissertation. The first part, as usual, deals with the effects of the exogenous determinants of accountability on performance at the leadership level; whereas the second one analyzes the specific effects of institutions.

### 9.3.1. Accountability, autocratic leaders and growth

The variables determining rulers' levels of security and sensitivity have, in general, strong effects on income per capita

growth; similarly, the likelihood of judicial accountability makes growth rates increase. Furthermore, the signs of the variables are consistent with the predictions derived from the formal model. Thus, those factors that increase (decrease) the structural level of security of any dictator make the rate of growth of the economy shrink (augment). For example, we found that regime history matters, as well as the type of ruler and the number of dictatorial neighbors.

Concerning sensitivity, the two variables that make dictators less dependent on cooperative taxation, resources and aid, have strong negative effects on economic performance. Both variables significantly reduce the level of rulers' sensitivity to extraction -as shown in previous chapters- and, accordingly, they are proved to be extremely harmful for growth. Likewise, the parameter gauging the likelihood of punishment as a result of losing power has been found to have a strong positive effect on growth as it makes the utility of remaining in office relative to that of losing it augment, thereby to retain power, extraction must be reduced (as detailed in Chapter 7).

These very same political-economic variables have also been found to matter in determining the level of government consumption -the unproductive share of the government- at the leadership level but with the opposite sign, that is, in this case, the lower the accountability, the bigger the share of GDP consumed by the government. Concretely, more security translates into a bigger share of GDP consumed; more insensitivity has the same result, while a higher probability of punishment reduces it.

### 9.3.2. Institutionalization and economic performance

The effect of institutions needed a careful examination, so the second part of Chapter 8 was devoted to explore the effect of dictatorial institutions on growth using Heckman's two-step methodology to control for the conditions under which these institutions exist or are created. The evidence reported in Chapters

6 and 7 offered us a three dimensional classification of the institutional variations according to both political and judicial accountability. Briefly, non-institutionalized systems are found to be the less sensitive of all, while presenting relatively high levels of security and granting the lowest probability of post-exit punishment. Regimes with a single institution are the most secure ones, and present intermediate levels of both sensitivity and judicial accountability likelihood. Finally, fully institutionalized dictatorships, that is, those with a multi-party legislature, have the best preconditions for sustained growth; specifically, they have the highest levels of sensitivity (as they offer more leverage to opposition groups in exchange for economic cooperation), the highest odds of punishment and the lowest structural levels of security. As a result, fully institutionalized regimes are clearly expected to present higher growth rates than the other two subtypes of authoritarian regimes.

Regarding the other two -non-institutionalized systems and regimes with a single institution-, the remaining question is: Does the higher security found in single institution systems outweigh the impact of sensitivity and judicial accountability? If so, regimes with a single institution would show lower growth rates than non-institutionalized ones. On the contrary, if sensitivity and judicial accountability play a more decisive role in determining growth, then, dictatorships only partially institutionalized are predicted to grow at higher rates than regimes without any institution. The comparative statics of the model already hinted that it is actually sensitivity which exerts a stronger influence, but it needed to be proven. The selection-corrected averages reported in Chapter 8 showed that, effectively, multi-party systems exhibit higher growth rates than any other, and that those differences are statistically significant. However, the mean comparisons between non-institutionalized regimes and those with a single institution are only significant in two of the results reported, specifically, those obtained by using a fixed-effects estimator and one of them after including the lagged log of income per capita on the right-hand side of the equation. In the rest of the figures, the differences

remain relatively low and not significant. The selection-corrected estimates of government consumption yield consistent results as well. Hence, non-institutionalized systems are found to be those for which the average level of public consumption is significantly higher, whereas fully institutionalized ones consume the least. Consequently, we can conclude that formal institutions do matter, even under authoritarian regimes.

### 9.3.3. Mechanisms of accountability and development

In the last part of this dissertation we adopted a new tentative approach to development, namely, the impact of structural group strength in shaping policy. We predicted that a higher strength of the opposition forces would be beneficial for growth as it increases the level of accountability of dictators. In contrast, elite power was expected to exert a negative effect on economic performance due to increased rent-seeking. However, we have also taken into account the possibility that a high level of modernization and industrialization may induce a change in the preferences of elite members so their greater power could translate into higher growth rates. Finally, military threat, acting as a monitoring force willing to avoid social unrest, is predicted to lead the autocrat to adopt better development policies. Besides, in Chapter 7 we had already shown that ousters lead by the military or the opposition are more probable to end up with some kind of punishment for the deposed ruler.

Through the construction of a new variable which codes the dictators' modes of exit, we have been able to estimate the average odds that a given political group (the elite, the military or the civil opposition) will oust the incumbent dictatorial government, which provide us with a general measure of the organizational strength and political power of each of them. This relative power has been proven to have an important effect on economic growth under authoritarian government.

The results of simple growth regressions using alternative interactive terms show that a stronger opposition as well as a higher military threat compel the ruler to improve growth rates. In contrast, elite power is negative for growth, although it turns positive when the country reaches a certain level of industrialization.

### 9.4. About Mobutus, Somozas, Amins and Duvaliers

There have been examples of all kind of dictators in the last fifty years. Paranoid, selfish, stubborn, egocentric, cruel and even relatively benevolent ones. A ruler from Uganda proclaimed himself King of Scotland. And one who, looking himself as the reincarnation of Napoleon, spent almost the whole annual budget of his African Republic in his luxurious coronation ceremony as emperor.

However, these attitudes and personalities do not enter into our regressions and, at best, are captured by the error term, so the starting point must be to assume that all dictators make their decisions in concrete political-economic environments which might pose some -more or less binding- constraints on their will to self-enrich. These constraints mark the basic differences between economic success and disaster. All in all, it seems that the time of outrageous kleptocracy has come to an end. The most representative rulers embodying this type of government style principally concentrated on the first decades after the Second World War and the period of numerous decolonizations in the context of the Cold War, although many were able to extend their tenure well up to the 90s. It is within this concrete period that autocrats characterized by their rapacity and widespread corrupt regimes became a terribly common phenomenon. During the 50s or even earlier Anastasio Somoza (Nicaragua), François Duvalier (Haiti), Mohammed Reza Pahlevi (Iran), Rafael Trujillo (Dominican Republic) or Sukarno (Indonesia) took over power. In the 60s and the 70s we witnessed the turn of Africa and the rise of

its new postcolonial predatory rulers such as Idi Amin (Uganda), Kamuzu Banda (Malawi), Tombalbaye (Chad), Ratsiraka (Madagascar), Kenneth Kaunda (Zambia), Mobutu Sese Seko (Zaire), Bokassa (Central African Republic), and so on. The rest of the continents or regions did not escape the emergence of such leaders and Asia saw, for instance, Suharto (Indonesia) or Ferdinand Marcos (Philippines) become presidents; and in the Middle East Saddam Hussein took control of Iraq. Some of them have become well-known paradigms of bad governance and theft and even inspired novels.

The conditions were favorable for the emergence of such, using Chehabi and Linz's (1998) terminology, *sultanistic* leaders for different reasons if we attend to the causal mechanisms and arguments we have provided along this research. The proportion of democracies in the world was small at the time, under 0.5, and the wave of decolonizations made it actually sharply diminish; and at the regional level, the presence of authoritarian regimes was, in some places, crushing.[2] Consolidating a new regime was considerably easy under those circumstances where international pressure for democratization was practically inexistent. To this we have to add that it was not until 1998 that, for the first time, the Convention on the Prevention and Punishment of the Crime of Genocide, approved in 1948, was actually enforced. The cases of dictators being hold accountable, or simply punished, for their deeds during their tenure were scarce, unless it was done by domestic forces. International law was not only underdeveloped and lacked effective enforceability mechanisms, but also few countries were willing to apply them in the context of forming alliances and supports due to Cold War increasing polarization.

Little or none previous democratic experience rendered the civil opposition to a weak position and easily subject to harsh

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[2] In some regions, the proportion of dictatorial regimes before 1960 or 1970 was almost 1, such as in some parts of Asia and Sub-Saharan Africa. In others it was much higher than 0.5, such as in Latin America, Middle East and North Africa.

repression by regime official or private forces. A poor and barely educated population without any external support was relatively easy to control. Actually, some of these countries had recently gained their independence after years of colonial administration from European metropolises. Within generally artificially designed borders, new leaders were also able to manipulate ethnic diversity to divide their potential enemies.

Revenue was not a problem either. Natural resource and/or primary commodity abundance assured a constant flow of rents that allowed the government to rule out citizen cooperation for the raising of income and other taxes and, as a result, the need to open more representative institutions. When resources were scarce, strategic alliances or former colonial links assured for some autocracies tremendous amounts of foreign aid, which in some cases could represent more than half of the annual government budget.

Strategic economic resources or sectors (such as coffee or sugar) were rapidly confiscated by rulers and his cronies or nationalized by the state. An alternative strategy, specially in Latin America, consisted in allowing big foreign companies to exploit and export such commodities in exchange of rents and monetary and military aid from their respective governments. It was also common that such cooperative autocrats were hosted by foreign allies or former colonial states when there was no other way out for dictators than exiling and enjoy their loot. A weak potential opposition and no need for economic cooperation rendered institutionalization nearly useless and highly underdeveloped, reducing their role to a pure distributive and controlling function rather than one of mobilization and inclusion.

The emergence of multi-party authoritarian systems is a much recent phenomenon; although some of them appeared in the post-decolonization period as a previous step to democratization, their existence was ephemeral and they rapidly gave way to personalisms and one-party systems once regimes progressively consolidated. This lack of institutionalization left the opposition with little room and resources, although limited anyway, for

organizing. Under these conditions holding rulers accountable became a nearly impossible task. If, besides, one adds greed to the mixture, the monster is ready to be unleashed.

The latest news from Zimbabwe seem to indicate that Robert Mugabe is certainly willing to rediscover old political *sultanistic* styles as he tries to subvert the post-colonial multi-party system. Some of the conditions are favorable for such an attempt. Zimbabwe economic situation is rapidly deteriorating with acute food shortages and inflation of 1,700 per cent. Zimbabwe is endowed with rich mineral resources and a primary-commodity exporter. Mugabe has been Zimbabwe's only ruler since the country was granted independence from Britain in 1980 and after having had a leading role in the struggle for independence. Some years ago Mugabe encouraged black people to take over white people's property as a way of thwart this group opposition against his regime. The "willing buyer, willing seller" land reform program collapsed in 1997 after the British government unilaterally decided to stop funding it on the basis that the money allocated under the Thatcher administration had been used to purchase land for members of the ruling elite and not landless peasants. As of September 2006, Mugabe's family owns three farms (Highfield Estate in Norton, Iron Mask Estate in Mazowe, and Foyle Farm in Mazowe renamed to Gushungo Farm after Mugabe's own clan name). These farms were expropriated forcibly from their previous owners. The opposition is being harshly repressed, specially the leaders of the Movement for Democratic Change. The international community has rapidly responded by condemning the attacks and economic sanctions were approved in 2003. Elections are supposed to be held in 2008, but it has already been proposed that Mugabe's tenure should be extended for two years...

## 9.5. Further research

The objective of comprehending to a large extent the functioning and policies of authoritarian regimes is still far from complete, despite the fact that the amount of literature devoted and the attention paid to such form of rule has vastly increased in recent years. The first obstacle is the availability of data. Although large datasets covering almost all countries in the world for long periods of time are increasingly at hand for researchers, the series about crucial political aspects of policies such as public and private ownership, corruption, military and unofficial aid and spending are still incomplete or missing. We also lack general and specific measures of repressiveness, which may be impossible to construct due to the secrecy of such sensible information and its lack of reliability.

Patterns of accumulation and decisions on self-enrichment may vary according to capital ownership. If assets come to be owned privately by rulers (for example, as a result of expropriation), their decisions regarding rent maximization may differ, resembling to a higher extent to those of private firms rather than those just affecting revenue maximization by the state. The extension of the series about state-owned enterprises should be of much help at this respect.

Concerning institutions, our knowledge, albeit increasing, may be still incomplete. Although the classification of formal institutions, such as legislatures, has extremely improved our understanding of such regimes, little is known about their internal functioning and the configuration of other kind of institutions such as the judiciary, the structure of the territorial administration and the bureaucracy.

Further research should then, apart from improving the quality of the data, deepen our understanding of the determinants of the different mechanisms of accountability present under different political systems and regimes as well as to pay attention to their interaction in order to better comprehend the determinants of political decisions and policy.

# APPENDIX. DEFINITION OF THE VARIABLES AND SOURCES

## A.1. The codebook

- Age dependency ratio: Age dependency ratio (dependents to working-age population). Source: *World Development Indicators* (*WDI* henceforth).
- Agriculture: Agricultural sector value added as a percentage of the GDP. Source: *WDI*.
- Aid: Foreign aid per capita. Source: *WDI*.
- British colony: Dummy variable coded 1 for every year in countries that had been a British colony any time after 1919, 0 otherwise.
- Civilian: Dummy variable coded 1 if the effective head of government is civilian and 0 if the head is of either the military or of monarchy. Compiled from Bank's Political Handbook and other historical sources.
- Colony before: Dummy variable coded 1 if the previous regime was a colony, 0 otherwise.
- Democracy before: Dummy variable coded 1 if the previous regime was a democratic one, 0 otherwise.
- Democracy share in the world: Other democracies in the world, percentage. Percentage of democratic regimes (as defined by 'regime') in the current year (other than the regime under consideration) in the world. Compiled from Przeworski *et al.* (2000).

- Demonstrations: Any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti foreign nature. Source: Banks (1996).

- Ethnic fractionalization: Index of ethnic fractionalization. The index is defined as: 1-*ETHFRAC*= $1 - \sum p_i^2$ , $i$ =1,...,*I*, where $p_i$ is the proportion of the population belonging to ethno-linguistic group $i$ and *I* is the number of ethno-linguistic groups in the country. This index measures the probability that two randomly selected persons from a given country will not belong to the same ethno-linguistic group. So note that to form the standard fractionalization index, it is necessary to subtract the index from 1. This is a time invariant variable combining information from both the Soviet ELF index and Fearon (2003).

- Goods and services tax: Taxes on goods and services as a percentage of GDP, which comprises all taxes and duties levied by central governments on the production, extraction, sale, transfer, leasing, or delivery of goods and rendering of services, or on the use of goods or permission to use goods or perform activities. Source: *WDI*.

- Government consumption: Government consumption as a percentage of GDP. Final current expenditure of the central government excluding capital expenditure, social security benefits or other transfers and interest payments. Source: *WDI*.

- Income tax: Taxes on income, profits and capital gains as a percentage of GDP, which includes taxes on the actual or presumptive net income of individuals, on the profits of enterprises, and on capital gains, whether realized on land, securities, or other assets. Source: *WDI*.

- International tax: Taxes on international trade as a percentage of GDP. It includes import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes. Source: *WDI*.

- Log of GDP per capita: Logarithm of real GDP per capita, 1985 international prices. Source: Penn World Tables 5.6.
- Military: Dummy variable coded 1 if the effective head is or ever was a member of the military by profession, 0 if civilian or monarchy. Note that we code retired members of the military as 'military'=1 since the shedding of a uniform is not necessarily enough to indicate the civilian character of a leader. Also note that we do not consider rulers who come to power as head of guerilla movements as military. They are coded as civilian or 'military'=0. Compiled from Bank's Political Handbook and other historical sources.
- Moslem population: Percentage of Moslems in the population. This variable lumps together the different strands of Islam, such as Sunni and Shi'ite. Compiled from Przeworski *et al.* (2000).
- Multiple institutions: Dummy variable, coded 1 if more than one political party exists, 0 otherwise. Compiled from Przeworski *et al.* (2000) and Gandhi (2004).
- Non-tax: Non-tax revenue as a percentage of GDP, it includes requited non-repayable receipts for public purposes, such as fines, administrative fees, or entrepreneurial income from government ownership of property and voluntary, unrequited non-repayable receipts other than from governmental sources. Source: *WDI.*
- Oil-producing country: 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. Source: IMF (1999) and Przeworski *et al.* (2000).
- Other taxes: Other taxes as a percentage of GDP, including employer payroll or labor taxes, taxes on property, and taxes not allocable to other categories. Source: *WDI.*
- Output Growth: Annual rate of growth of real GDP. Source: Penn World Tables 5.6.
- Past transitions to dictatorship: Sum of past transitions to authoritarianism in a country. If a country experienced a transition to authoritarianism before 1946, this variable was coded 1 in 1946. Compiled from Przeworski *et al.* (2000).

- Per capita Income Growth: Rate of growth of real GDP per capita, 1985 international prices. Source: Penn World Tables 5.6.
- Population density: Population density. Source: *WDI.*
- Primary commodity exporting country: Time invariant dummy variable coded 1 if the average ratio of non-fuel primary products exports in 1990-1993 exceeded 50% of total exports, 0 otherwise. Source: IMF (1999). Updated.
- Regime: Political Regime. Coded 1 if the current regime is a dictatorship and 0 if it is a democracy. Compiled from Przeworski *et al.* (2000). Updated by Cheibub and Gandhi (2004).
- Regional share of dictatorships: Regional proportion of dictatorships (as defined by 'regime') in the current year.
- Riots: Any violent demonstration or clash of more than 100 citizens involving the use of physical force. Source: Banks (1996).
- Single institution: Dummy variable, coded 1 if either only one political party, a legislature or both exist, 0 otherwise (Fronts are considered as a single party). Compiled from Przeworski *et al.* (2000) and Gandhi (2004).
- Social security tax: Social security taxes as percentage of GDP, which are employer and employee social security contributions and those of self-employed and unemployed people. Source: *WDI.*
- Surface: Country's surface area, squared kilometers. Source: *WDI.*
- Tax revenue: Tax revenue as a percentage of the GDP. Source: *WDI.*
- Trade openness: Exports and imports as a share of GDP (both in 1985 international dollars). Source: OPEN in Penn World Tales 5.6.
- Urban population: Percentage of the total population living in urban areas. Source: *WDI.*

**A.2. Notes on the codification of the variables *AFTEREXIT* and *WAYOUT***

We consider to be dictators those rulers who are the effective heads of government under dictatorship as classified by 'regime': 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). The definition and data on dictatorship are taken from Przeworski *et al.* (2000).

- *AFTEREXIT*: Newly constructed variable that takes four values:
    1 if the dictator stays in the country as 'civilian'
    2 if the dictator has been killed or imprisoned (including house arrest)
    3 if the dictator was able to go into exile
    4 if the ruler stays in the country and has any other public position.

This variable has been compiled from *Keesing's Contemporary Archives* and various historical sources. House arrest is considered imprisonment. The codification considers the last level of punishment in a period up to one year after the dictator abdicated or was overthrown. So, if, for instance, imprisonment is followed by exile, we have coded "exile." Politically motivated murder is considered to be punishment if the sources indicate so. The codification has been contrasted and corrected by comparing my data with the variable 'post tenure fate', which also indicates the fate of a ruler after leaving power, contained in the *Archigos Data set* collected by Hein Goemans, Kristian Skrede Gleditsch, Giacomo Chiozza, and Jinhee L. Choung.

- *WAYOUT*: 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 *Keesing's Contemporary Archives*), yearbooks, etc. The following rules have been applied for the codification:

    - 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 guerrilla 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).

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