Political Strength and Economic Efficiency in a Multi-Agent State*

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Dictatorship has been the prevalent system of government for most of human history and is still entrenched in many countries today. For the rulers of such regimes, the question of political survival is particularly tricky. How does a dictator ensure that his delegates do not topple him? What are the economic implications of this power struggle among the elite? And how does a foreign power deal with such regimes, when it cares about the welfare of the population? These are some of the most important questions in economic history, comparative politics and international relations, and yet they have received little attention from game theorists.

We attempt to address such questions with the help of a formal model, and outline here the results of our study (Debs 2007a). As a starting point, we focus on one particular mechanism that dictators have used to discipline their delegates, the 'big shuffle', whereby delegates are rotated from one function to another, and promoted and demoted at will. It was used in a variety of cases throughout history.[1] In Mughal India, nobles were in charge of tax collection in a particular region, called *jagir,* for only a short amount of time. In the Ottoman empire, cavalrymen would

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[1] For a review of recent cases, see Migdal (1988).

receive a military fief, called *timar*, also for a short amount of time, and provincial governors would also be rotated.[2] More recently, in the Mobutu regime in Zaire, regional commissioners (i.e. provincial governors) were shuffled annually from 1967 to 1970, and every 3 years from then on (Young and Turner 1985, 225 and Callaghy 1984, 246).

Shuffling delegates is generally believed to prevent them from building their own support base, protecting the ruler against a break-up of his territory or a direct coup. In Mughal India, although the dynasty was eventually secure in the capital, the empire was vast and expanding, and the threat of secession was real. Ultimately, the empire disintegrated into a series of successor states, with provinces breaking away from the capital, led by regional nobles (in the case of the Deccan, Bengal and Awadh).[3] In the Ottoman empire, the rotation of officials prevented an alliance between nobles and peasants against the central state, explaining the absence of peasant rebellions in the 17th century (Barkey 1991, 1994). To meet growing fiscal needs, however, the empire auctioned off lifetime tax farming contracts, starting in 1695. Local notables rose in prominence. Ultimately, secessions became possible, with the striking case of Muhammad Ali, who established his own dynasty in Egypt.[4] In Zaire, shortly after independence, the central state was undermined by strong regional movements, in particular the secession of the province of Katanga, led by its president Moise Tshombe (see Willame 1972, chapter 3). Mobutu, having risen to power through a coup, needed to establish his legitimacy. He quickly reduced the number of the provinces and dealt with the threat of rebellions and coups (notably the wars in Shaba in 1977 and 1978, and the failed coup of 1975).

While shuffling delegates may have some political benefits, it can also hurt the economy. With a short and uncertain tenure, delegates have little incentive to invest in the future. In Mughal India, travelers and scholars alike described the negative effect of the jagirdari system on growth. In a famous account, the French traveler Francois Bernier described as follows the incentives of the jagirdar:

'Why should the neglected state of this land create uneasiness in our minds?

[2] More precisely, in Mughal India, tenure in a jagir could vary between less than a year and 2-3 years in the 16th and early 17th century (Habib 1999, 301). In the Ottoman empire, most governors would stay between 1 and 3 years in the same province in the late 16th and early 17th century (Goyunc 2000, 523).

[3] See Habib (2003).

[4] For a general review of the history of the Ottoman empire, see Quataert (2000). For more on the rise of local notables, or *ayans*, see McGowan (1994), Ozkaya (2000) and Mert (2000).

And why should we spend our money and time to render it fruitful? We may be deprived of it in a single moment, and our exertions would benefit neither ourselves nor our children. Let us draw from the soil all the money we can, though the peasant should starve or abscond, and we should leave it, when commanded to quit, a dreary wilderness.' (Bernier 1996, 227).

Commenting on the quote above, the historian Barrington Moore suggests that although the Frenchman may have exaggerated his case, 'there is abundant evidence to show that he put his finger on the main defect in the Mogul polity.' (Moore 1966, 328)[5] Likewise, in the Ottoman empire, the central state's effort to maintain political prominence is believed to have restricted economic activity (Pamuk 2004). The same argument is made about Zaire. Schatzberg (1980, 1988) argues that a short and uncertain tenure tempted regional officials to extract as much as they could from the territory they controlled. This prompted what he called a 'dialectic of oppression', where agents at any layer of the state apparatus exploited their subordinates, with dire consequences for the population. Even central authorities recognized the disastrous effect of the big shuffle on the economy, and yet this practice persisted.[6]

Therefore it is important to understand under what circumstances a ruler chooses to shuffle delegates. With such answers in hand, we can then analyze the welfare implications of particular policies, for example if a foreign country wants to improve the welfare of the population living under the dictator. To reach such a goal, we develop a simple formal model. It is a game of incomplete information with three sets of players: a ruler, a delegate and a population. There is a single economic decision, which is an investment in a public good, taken by the delegate. A delegate's success in the investment project depends on his type, which is initially unknown by all players in the game. The type of the ruler, however, is known, capturing the fact that he has had the opportunity to establish a reputation. The population, observing the investment decision and investment outcome, learns about the type of the delegate and decides whether to mount an insurrection, toppling the ruler and replacing him with the delegate.

In this case, we conclude that a ruler's incentive to promote economic growth

[5] For a classic case of the negative economic impact of the jagirdari system, see Habib (1999). This position has not reached consensus in the literature. See Marshall (2003).

[6] "It is clear that frequent transfer of territorial agents and others have grave consequences both for the territorial service and for the agents themselves and their families." (quoted in Callaghy 1984, 249).

depends on his strength, as measured by the cost that a population must expend to replace him. When a ruler is strong, he is safely in power and encourages investment. When a ruler has intermediate strength, however, he would be replaced by an insurrection if his delegate succeeds in the investment. Therefore, the ruler shuffles any delegate who invests and poses a political threat. This gives very low incentives for investment, and output is low as a result. The model therefore offers a simple explanation of the fact that long-lived rulers may not have the best incentives to encourage economic growth: success can be appropriated by a ruler's underling and threaten the ruler. Moreover, we can show that, even if shuffling has negative economic consequences, it is also constrained optimal. Indeed, shuffling provides the ruler with the assurance that he can eliminate growing political threats. If the ruler could not shuffle, then he may simply reorganize his state, leaving no discretion to his delegates. This will hurt to the population, since the bad ruler is able to stay in power, and does so by restricting economic activity to a minimum.

With this simple model, we can draw a set of policy prescriptions, for a foreign country that cares about the welfare of the population. First, military support is useful if it drastically reduces the cost of insurrection. In this case, the bad ruler can easily be replaced, and a good politician may take over the reigns of the country. If this is not possible, however, marginal military support will weaken the ruler without leading to his replacement. In this case, the ruler will have greater incentives to restrict economic activity so that he can stay in power. Second, fostering an environment where politicians are more likely to be good (for example, by training them abroad) will hurt the population if it is done on a small-scale. Likewise, allowing good politicians to better distinguish themselves (for example, with a more decentralized system) may actually hurt the population. In both cases, the ruler will still be strong enough that he can stay in power and yet the increased threat will force him to restrict economic activity.

We can say a few words about how the paper relates to the literature. It is part of a growing literature on political struggles in weakly institutionalized polities (Bueno de Mesquita et al. 2003, Acemoglu, Robinson and Verdier 2004, Azam, Bates and Biais 2005, Egorov and Sonin 2005, 2006, Debs 2007b,c, Padro-i-Miquel 2006, Gandhi and Przeworski 2006, Myerson 2006, Svolik 2006). Egorov and Sonin (2006) highlight the important trade-off that a ruler faces between the competence and the loyalty of his agent. Bueno de Mesquita et al. (2003) solve a dynamic model where a dictator faces a challenger and chooses the optimal mix of public and private goods, depending on the size of the coalition and pool of potential supporters (selectorate). Svolik (2006) and Myerson (2006) focus on the moral hazard problem of the dictator, tempted to shirk in his payment to his supporters, in a static and dynamic game, respectively. Acemoglu, Robinson and Verdier (2004) show how a dictator can stay in power using a divide-and-rule strategy. Padro-i-Miquel (2006) adds that the dictator can exploit his own support base in doing so, and Debs (2007c) argues that manipulation of the media can be explained with such a logic. Parallel to these references is a literature in sociology and political science on patrimonial states (Weber 1968, Chehabi and Linz 1998). Weber (1968) coins the term of 'patrimonial state' to refer to political systems where the ruler governs the country as his personal domain. Chehabi and Linz (1998) discuss various forms of patrimonial state and offer a good survey of cases in the 20th century.

With its focus on economic outcomes, the paper contributes to a literature on inefficient policies (Coate and Morris 1995, McGuire and Olson 1996, Robinson 1998, Acemoglu 2005a,b, 2006, Eggertsson 2005, Robinson and Torvik 2005 and Paltseva 2006). McGuire and Olson (1996), for example, present the classic argument that long-lived rulers have the best incentives to encourage growth, since they can earn the benefits of any increase in future economic performance. While certainly intuitive, this results does not explain why many of the recent dictators stayed in power for long periods of time, even as their economy was floundering. On this note, the paper is also related to a literature on the economic impact of political institutions, and the economic conditions for political change and stability (see Londregan and Poole 1990, Przeworski et al. 2000, Acemoglu et al. 2006, Acemoglu and Robinson 2006, Jones and Olken 2005, Persson and Tabellini 2006). In particular, Jones and Olken (2005) show that leaders have a significant impact on the growth of their economy, but suggest there is no systematic relationship between the length of a ruler's tenure and the growth of the economy.

The following paper proposes a solution based on agency problems in dictatorship. In that regard, it is also related to the large organizational economics literature. Aghion and Tirole (1997) present a classic study of the optimal allocation of authority between a principal and an agent. In the model, however, the agent cannot replace the principal. As far as we know, there are few papers tackling directly the 'political economy' of the firm (see e.g. Milgrom and Roberts 1988, Friebel and Raith 2004, Argyres and Mui 2005). The closest paper may be Friebel and Raith (2004), which argues that hierarchical communication can help mitigate the incentives for bad manager to hire incompetent subordinates. If a subordinate could communicate with top executives, then he could reveal the incompetence of his manager and make a case that he would be a better replacement.

Summing up, the main contribution of the paper, along with Debs (2007b), is to develop a model of agency problems within the state, where the principal can be replaced by the agent, but can also manipulate the reputation of the agent, and focuses on the economic impact of this power struggle. The main difference with Debs (2007b) is that, in the latter, the delegate knows his own type, wants to signal it in a cheap talk game, and the dictator tries to make this signal uninformative.

There are many natural extensions to the current model. First, we could consider the cases where coups are mounted by a coalition of delegates. Second, we can ask what forces make it more likely that the regime remains a dictatorship after an insurrection, as opposed to becoming a democracy. Third, we can allow for political threats to come from outside the state. Fourth, we can enrich the hierarchical structure of the state. These are important questions for future research.

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