International Political Science Review
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International Political Science Review 2013 34: 543 originally published online 5 July 2013
DOI: 10.1177/0192512113488259

The online version of this article can be found at:
http://ips.sagepub.com/content/34/5/543

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International Political Science Association (IPSA)

Article

International Political Science Review
34(5) 543–560

DOI: 10.1177/0192512113488259
ips.sagepub.com

Repression, political threats, and survival under autocracy

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Abstract

Along with the mobilization of political support, repression is one of the two basic instruments dictators use to stay in power. Yet, there is no systematic investigation analyzing whether repression actually helps dictators retain power. This article fills this gap by addressing the simultaneous relationship between survival and repression. The results reveal that repression certainly increases the likelihood of dictators' survival. Furthermore, this article also analyzes different types of authoritarian leader exit and repression. The article distinguishes between, on the one hand, nonviolent and regular exits and, on the other hand, violent and irregular exits as well as between political terror and restrictions on civil liberties. It argues that terror is effective against threats from organized groups, while restrictions on civil liberties essentially serve to prevent collective action. The empirical evidence confirms that political terror only reduces the likelihood of nonviolent and regular exits. Instead, restrictions on civil liberties are effective in deterring both sorts of threats.

Keywords

repression, survival, dictators, threats, simultaneity

Introduction

Does repression work? Do more repressive dictators survive longer in power? The brutal repression by al-Assad's regime in Syria since 2011 has been unable to crush completely the wave of anti-regime protests initiated in the context of the Arab Spring. In Kenya, elections were scheduled for December 1992 after Moi's regime conceded to donors' pressure and allowed the legalization of opposition parties. During the months prior to the election, ethnic violence and political terror spread, instigated by the ruling party (Barkan, 1993). Attacks were concentrated in the Rift Valley, but soon reached other areas 'in an effort to disenfranchise pro-opposition ethnic blocs there, too' (Roessler, 2005: 214). Moi and the Kenya African National Union (KANU) won the presidential and legislative elections, respectively.

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Repression is often thought to be the main instrument autocrats use to retain power, and authoritarian regimes have been consistently found to exert repression more intensively than democracies (Davenport, 1999, 2004; Poe et al., 1999). However, there is little comparative study of whether repression actually works. The studies by Bueno de Mesquita and Smith (2010) and Albertus and Menaldo (2012) are the only ones that take account of repression in their leader- and regime-duration models. The former includes repression (measured by the Cingranelli-Richards Physical Integrity Rights Index (CIRI)) as a control in leader-survival models and finds that it has no effect. However, the authors include one type of repression only, do not address endogeneity, and lump together both democratic and autocratic rulers, who differ greatly in their use of coercion and its intensity. The latter study focuses on authoritarian regimes and finds that coercion significantly reduces the prospects for democratization. Yet, its authors do not separate repression types either and do not use a direct measure of repression, but measure the state's overall coercive capacity using military size as a proxy.

The present article uses direct measures of repression levels and distinguishes between repression types. Although intuition often associates repression with killings, torture, and other brutal practices, the violation of physical integrity is not the only repressive instrument at hand. Autocrats may also ban political parties, close legislatures, and suspend basic civil rights. Thus, repression has another dimension: restrictions on individuals' civil rights aimed at limiting the coordination and mobilization capacities of groups and individuals.

In addition, the two real-life examples illustrate that repression may not be useful against all types of threat. In both Syria and Kenya, autocrats resorted to increased political terror either to crush protesters or to dissuade opposition party members and voters.[1] In the case of Syria, the opposition is still challenging the regime and part of it has turned to armed activities. In Kenya, the incumbent president and his party managed to win the election and retain control of regime institutions. These contrasting illustrations point to the need to distinguish between the types of threats dictators may face, since repression may be effective in dealing with some of them, but not others.

This article analyzes whether repressiveness helps autocrats last longer in office and, most importantly, it examines which types of repression are more effective in preventing different types of threats to dictators. To do so, the research addresses the problems stemming from simultaneity between survival and repression. The empirical analysis employs data on authoritarian leaders and combines it with data on two types of repression: restrictions on civil rights and violations of physical integrity rights. The findings indicate not only that repression does work, but that repression types have dissimilar impacts. While political terror is effective in reducing the likelihood of nonviolent and regular exits and of coups, restrictions on civil rights reduce the likelihood of both types of ousters.

The rest of the article is organized as follows. The next section discusses the literature on the determinants of repression. Sections three and four present the theoretical framework and the main hypotheses. Following that, the variables are presented and the estimation method explained. The results are discussed in turn. The final section summarizes the main findings.

Repression and its determinants

Although the determinants of cross-country differences in repression are well studied, we still know little about its consequences on leader stability. We have a much better understanding about the effectiveness of mobilizing support through patronage and institutions than about the efficacy of repression (Conrad, 2011; Desai et al., 2009; Gandhi, 2008). Indeed, Davenport points out that 'one explanation for state repression is that authorities use it to stay in power, but the literature

contains not one systematic investigation of this proposition' (2007a: 17). This article seeks to fill this gap.

Repression is the 'behavior that is applied by governments in an effort to bring about political quiescence and facilitate the continuity of the regime through some form of restriction or violation of political and civil liberties' (Davenport, 2000: 6). Concretely, repression 'deals with applications of state power that violate First Amendment-type rights, due process in the enforcement and adjudication of law, and personal integrity or security' (Davenport, 2007a: 2). Through these actions governments impose or threaten individuals with sanctions aimed at controlling and suppressing dissent.

Using new existing datasets on human rights violations, the extensive literature explaining cross-national variation in political repression has generated relevant insights. First, repression is found to be positively correlated with variables gauging the existence of internal and external conflict and the feasibility of collective action. Thus, greater repression is found in countries with lower per capita incomes, larger populations, and undergoing violent civil or interstate conflicts (Davenport and Armstrong, 2004; Poe and Tate, 1994; Poe et al., 1999). Some recent research has turned its attention to international factors, namely, treaties and globalization. The former do not have a consistent positive impact on respect for human rights (Hafner-Burton and Tsutsui, 2007; Hathaway, 2002). In contrast, the latter, especially in the form of trade, has been found to decrease state repressiveness (Hafner-Burton, 2005).

Another key explanatory factor is the regime type. Relying on smaller power coalitions than democracies, dictators exclude a large part of the population from decision-making, so force generally substitutes for legitimacy to obtain popular acquiescence to regime decisions. The mechanisms to channel citizens' demands are extremely limited, as is regime responsiveness to citizens' grievances. Regimes also determine the institutional constraints and legal limits to the use of force, both being low or nonexistent under dictatorship. Additionally, repression is more costly for elected governments. Accordingly, repression levels are found to be systematically lower under democratic systems (Davenport, 1999, 2004, 2007b; Davenport and Armstrong, 2004; Poe and Tate, 1994; Poe et al., 1999).[2] Disaggregation of the components of democratic regimes included in the Polity2 index has revealed that party competition (Bueno de Mesquita et al., 2005) and constraints on the executive (Davenport, 2004) are the most important dimensions. Other scholars argue that more human rights violations are actually observed among hybrid or mixed regimes (Fein, 1995; Regan and Henderson, 2002).

Quite surprisingly, the variation that may exist across authoritarian regimes has received much less attention. There is some evidence indicating a higher inclination toward the use of coercion by military regimes (Poe and Tate, 1994). The only study addressing this systematically is Davenport (2007c), which finds that single-party regimes violate personal integrity less than other autocracies, while military regimes put fewer restrictions on civil rights.

Distinguishing threat and repression types

The literature examining the dissent–repression relationship is far from being conclusive. The impact of repression on dissent has been found to be positive, negative, as well as having an inverted-U shape (Gupta et al., 1993; Gurr, 1970; Hibbs, 1973; Lichbach, 1987; Moore, 1998; Muller and Weede, 1990; Rasler, 1996).[3] Discrepancies stem from the use of different samples, cases, levels of analysis, different dependent variables, and alternative measures of repression. The scholarly debate is far from reaching agreement as it often fails to realize that there are different types of repression as well as different threats.

To address the disparity in the dependent variables used in studies such as those above, this research uses a direct measure of threat, namely, the risk of losing power. Crushing protests and facing plotters is only useful as long as it extends a ruler's tenure. Hence, repression effectiveness is directly evaluated in relation to this outcome – political survival. Yet dictators can exit power in a variety of ways which need to be distinguished from one another. Some are irregular, even violent, such as coups, assassinations, civil wars, or revolutions. Others are essentially regular, such as resignations, elections, 'step-downs,' and elite turnover from within the party or the military. According to Goemans et al. (2009), between 1946 and 2004 some 226 dictators (53 percent) left power through regular means, whereas 201 (47 percent) experienced an irregular exit.[4] According to Svolik (2012), during the period 1945–2002, 113 (33.3 percent) dictator changes were violent,[5] while 226 (66.6 percent) were nonviolent.[6] A question arises: Is repression effective in preventing both types of political risk?

Furthermore, repression is usually treated as a homogeneous type of state behavior. However, as Davenport (2004) claims, state coercion has two basic components: (1) violent repression in the form of violations of personal integrity and (2) less violent (or nonviolent) activities consisting of the restriction of individuals' civil liberties. Both forms of repression attempt to deal with political threats stemming from citizens, challengers, rivals, and opposition groups. Yet, there are important differences in the way they do so. Restrictions attempt to deter collective action by limiting the coordination and mobilization capacity of actors and individuals by explicitly prohibiting a given set of behaviors and activities and by constraining others. Alternatively, violations of personal integrity aim at eliminating those individuals or groups the regime suspects of having surpassed those limits or being likely to do so, by killing or imprisoning them. Hence, another question: Which type of coercion is more effective in preventing each type of threat?

Sticks and autocrats' tenure

Dictators want to stay in power; losing it may entail unpalatable consequences such as exile, being brought to trial, or being killed (Escribà-Folch, 2013; Goemans, 2008). Dictators use repression because they estimate that its expected benefits exceed the costs (Davenport, 2007a). The basic expected benefit of repression is to increase the likelihood of staying in power. This benefit is too often taken for granted and, as stressed above, has not been empirically established. This article tests whether this benefit exists and attempts to quantify it.

Violations of physical rights and restrictions on civil rights can reduce the risk of losing office, but through different mechanisms. Violent repression entails physical abuses, torture, imprisonment, killings, and disappearances. It is thus characterized by the targeted and intense nature of the sanctions inflicted, which may insulate autocrats in two ways. First, it may defuse challenging activities because it augments their associated costs and so prevent threats acting as a signal. Second, it can directly eliminate the specific source of threat by killing, imprisoning, or making political rivals and opposition leaders 'disappear.' Alternatively, through the use of restrictions on civil rights, citizens are molded, potentially challenging behaviors banned, and collective action prevented or hindered.

These two forms of repression operate at two distinct levels. Restrictions on civil rights aim at preventing coordination, thereby hampering collective action from within the population and other groups. The violation of physical integrity is specifically directed against those individuals or organized groups that already have collective action capacity and that have been identified as being opposition members or potential rivals from within the elite. Additionally, both sorts of coercion also differ in their associated costs, especially with regards to legitimacy. Violent repression may

further decrease the political legitimacy of the ruler and create resentment among citizens. The legitimacy costs of restricting civil rights are lower (Davenport, 2004). The following discussion elaborates on these premises in order to understand how these two repression types may differ in their impact on each type of threat to dictators: violent and irregular, on the one hand, and nonviolent and regular, on the other.

Regarding irregular (and violent) threats, such as coups and revolts, it is unclear how effective the violation of physical rights can be in deterring them. Violent repression may be used to crush dissent, making it too costly for potential participants, especially when comparing the associated uncertainty with the benefits of challenging the ruler. Targeted violent repression serves also to target specific groups or individuals who may pose a threat, and so eliminate or imprison them. Some authors argue that if repression is great enough, violent opposition may be deterred (Gupta et al., 1993; Lyall, 2009; Muller, 1985).

Nevertheless, violent repression may have pernicious consequences, since it may bring about a violent escalation or a radicalization of positions, thereby unleashing a violent response from some groups and even potentially provoking a coup (Gurr, 1970; Ortiz, 2007; Pierskalla, 2010). Thus, Opp and Ruehl (1990) suggest that repression may lead to micro-mobilization processes leading to further protest activities and unrest. Likewise, Ginkel and Smith suggest that 'dissident activity is more likely to be effective in motivating rebellious action under highly repressive conditions' (1999: 292). Some argue that when nonviolent actions are violently repressed, protesters may turn to violent activities (Lichbach, 1987; Moore, 1998), as the Syrian case illustrates. Similarly, Goodwin (2001) argues that revolutions are more likely in patrimonial and very repressive states. For instance, in Iran on Black Friday in September 1978, the regime's security forces killed hundreds of anti-shah protesters in Tehran. After a brief decrease in activity, public dissent and strikes quickly resumed and escalated. The mobilizations that took place in December gathered hundreds of thousands of people calling for the shah's rule to end. In January 1979, the shah left the country.

Furthermore, popular unrest signals weakness and increases the likelihood of a coup in autocracies (Galetovic and Sanhueza, 2000). The use of violent repression can create tensions within the security forces and cause defections from the military. Officers in a more institutionalized military may be more likely to turn their backs on the regime as their interests are less invested in the regime's survival and may be better served in the event of a regime change if they refuse to use violence (Bellin, 2012). Engaging in repression may harm the military's legitimacy and their position in a subsequent regime. The recent cases of Tunisia and Egypt, where top military officers decided against using full-scale violence on protesters, illustrate the point (Bellin, 2012). Nicolae Ceauşescu was eventually overthrown and executed by the military in December 1989 after the revolt escalated from Timişoara to other major cities in Romania in the aftermath of Ceauşescu ordering the security forces to open fire against the masses. In sum, and in view of the arguments above, the effect of political terror on the likelihood of a violent or irregular exit remains indeterminate.

Conversely, restrictions may be effective in making irregular exits more unlikely by hindering the collective action necessary to carry them out. In this case, the negative effect on collective action of this repression type may exceed its negative effect on legitimacy and its impact on the likelihood of defections, as restrictions on civil rights constitute a form of nonviolent repression. The main causes of violent or irregular exits are protests,[7] revolts (including civil wars), and coups. Both require collective action problems to be overcome, especially the former, which require a higher number of participants. Civil rights, such as those of assembly and freedom of expression and association, among others, are essential for any organized movement or action to emerge. In

Table 1. The Expected Impact of Repression on Survival.

Repressive measures	Type of threat	
	Violent and irregular	Nonviolent and regular
Restrictions on civil rights	(1) Effective	(2) Effective
Violation of physical rights	(3) Indeterminate	(4) Effective

Bueno de Mesquita and Smith's terms (2009, 2010), civil rights constitute essential 'coordination goods' for collective action to take place, as they 'determine the ability of citizens to coordinate and organize' (2010: 938). Besides, as noted above, the presence of popular unrest is one of the major determinants of the occurrence of coups under autocracy (Galetovic and Sanhueza, 2000). By limiting or avoiding the initiation of such unrest, restrictions can also make coups less likely. Thus, one would expect an increase in civil liberties restrictions to be highly effective in reducing the likelihood of a violent or irregular ouster.

As for regular or nonviolent exits, restrictions on civil rights can thwart the ability of some actors (especially the opposition) to organize, coordinate, and mobilize in the short run. Dictators can ban opposition parties and disenfranchise likely opposition voters. Tight restrictions on rights such as the freedoms of expression and belief and associational and organizational rights largely preclude regime institutionalization and the occurrence of the regular replacement mechanisms also found in democracies. Yet, most commonly, the threat of a regular exit originates from within the regime elite, especially exits such as 'step-downs,' rotations within party elites, or resignations. Regime insiders have a higher capacity for collective action since they can use existing institutions, such as the ruling party or the army, to coordinate (Frantz, 2007; Haber, 2006). Restrictions on civil rights are of little use once the collective action problem is solved; so members of the support coalition are less affected by them. In that case, only one alternative is left: extend terror to eliminate challengers and their power base. Certainly, more organized threats tend to trigger a more violent response (Carey, 2010). Dictators can purge party ranks (if an official party exists), the public administration, or the military to eliminate challengers. Stalin did so when launching the Great Purge in the second half of the 1930s, which first affected the senior leaders of the Communist Party and then other ranks. Tombalbaye, Chad's dictator in the 1960s and early 1970s, arrested important members of the official party, the Chadian Progressive Party, fearing they were planning to replace him. In the first year after Amin's coup in Uganda, about two-thirds of the Langi and Acholi soldiers, the ethnic groups upon which opposition leader Obote relied, were killed (Melady and Melady, 1977). Other forms of regular exit involve opposition forces, such as during an election period. Political terror is used to intimidate (and even kill) candidates and potential opposition voters and to hamper campaigning (Hafner-Burton et al., 2010), as the Kenyan case outlined in the introduction illustrates. Accordingly, some scholars have found that dictators increase political terror and torture when they face organized party and legislative opposition (Conrad, 2011; Vreeland, 2008).

In sum, both restrictions and terror may be useful in neutralizing threats leading to nonviolent or regular ruler exits, but, following the arguments above, violent repression is expected to have a stronger impact. Table 1 summarizes the hypothesized effects of the two types of repression on the two types of threats to dictators. Violations of physical integrity rights are expected to be effective in preventing nonviolent and regular exits, but the impact on violent and irregular ones is indeterminate. Restrictions on civil rights are expected to be more effective in deterring

violent and irregular exits. Each quadrant in Table 1 is numbered to identify the corresponding hypotheses.

Methodology

Dictators use repression to increase the odds of retaining office. At the same time, leaders' perception of political risk plays a crucial role in deciding how much repression to use. As the 'Law of Coercive Responsiveness' suggests, when a challenge is perceived, governments respond with repression (Davenport, 2007a; Regan and Henderson, 2002). Causality thus goes both ways. To address this endogeneity problem, I estimate a simultaneous equations model: in one equation, the likelihood of *Autocrat Exit* is the dependent variable,[8] while in the other, the dependent variable is *Repression*. In the first equation, repression enters as one of the independent variables, since it is used to secure the dictator's position. In the second equation, the likelihood of losing power is an explanatory factor. The structural equations are the following:

$$\Pr(AutocratExit) = \delta_1 \text{Repression} + \beta_1 X + \varepsilon_1 \quad (1)$$

$$\text{Repression} = \delta_2 \Pr(AutocratExit) + \beta_2 Z + \varepsilon_2 \quad (2)$$

This article focuses on the first side of this simultaneous relationship, namely, that in equation 1 the coefficient of interest is, hence, δ_1. X and Z in equations 1 and 2, respectively, are the set of control variables that may affect each of the two dependent variables. This system of equations is estimated using a two-stage model. In the first stage, the equations below are estimated using all the covariates, X and Z, in equations 1 and 2 (that is, those specific to that variable and those in the outcome equation) to get appropriate instruments for Pr(*AutocratExit*) and *Repression*.

$$\Pr(\hat{AutocratExit}) = \alpha_1 X + \alpha_2 Z + u_1 \quad (3)$$

$$\hat{\text{Repression}} = \alpha_3 X + \alpha_4 Z + u_2 \quad (4)$$

The fitted values obtained from equations 3 and 4 are used as instruments on the right-hand side of the second-stage equations 1 and 2 to get unbiased estimates of δ_1 and δ_2.

These systems of equations are estimated using two different methods. First, we use the CDSIMEQ method (2SPLS) outlined by Keshk (2003) to estimate two-stage models for simultaneous equations in which one of the endogenous variables is continuous (repression) and the other endogenous variable is dichotomous (ruler's exit). So, in the second stage, the repression equation is estimated using OLS and the nonlinear survival model using probit, which allows us to estimate a survival model. Since there may be some concern as to whether repression variables can be treated as continuous and OLS be used, I also estimate a set of two-stage models in which equation 4 is estimated using ordered probit, and equation 1 using probit.[9] The instruments generated by these two estimation methods, OLS and ordered probit, correlate almost perfectly (0.99), so both estimation methods can be expected to yield similar results.

Data

To test the hypotheses, data on authoritarian leaders in 94 countries are used. To identify authoritarian regimes, the dataset of Geddes et al. (2012) was employed, and excluded from the sample were

those country-years coded as democratic. Data on leader exit and modes of exit are from the Archigos dataset developed by Goemans et al. (2009) and from Svolik (2012). The first dependent variable used, *Autocrat Exit*, is coded 1 if the incumbent ruler is replaced that year and 0 if the dictator remains in power in a given year. Leaders who died in power from natural causes, who left office due to ill health, who were deposed by foreign forces, or who left due to term limits are right-censored and coded as 0.[10] The variable *Autocrat Exit* is disaggregated by establishing whether the ruler was replaced through violent or nonviolent means, according to Svolik's classification (2012), or through regular or irregular means as coded in Archigos. A binary variable for each of these exit types was constructed, coded 1 if a leader lost power in that particular way in a given year or 0 otherwise. The resulting variables are *Violent Exit*, *Nonviolent Exit*, *Regular Exit*, and *Irregular Exit*.[11]

Data on repression come from different sources. To measure violations of physical integrity rights, the Political Terror Scale (PTS) is used (Gibney and Dalton, 1996; Wood and Gibney, 2010), which covers the period 1976–2011. The PTS gauges state terror on a scale ranging from 1 to 5, where 5 indicates the highest level of terror.[12] State terror is defined as 'Violations of physical or personal integrity rights carried out by a state (or its agents). This category of human rights violations … includes abuses such as extrajudicial killing, torture or similar physical abuse, disappearances, and political imprisonment' (Wood and Gibney, 2010: 369).

To quantify restrictions on civil rights, Freedom House's civil liberties index is used, which measures freedom of expression and belief, associational and organizational rights, the rule of law, and personal autonomy and individual rights.[13] Data are available from 1972 to 2011. The rating ranges from 1 to 7, where a score of 7 indicates the highest level of restrictions.

The ruler-survival models include the following controls (that is, the *X*s in equation 1 above). First, there are a series of dummy variables distinguishing the type of authoritarian regime: military, party based, and personalist, with monarchies as the excluded category (Geddes, 1999; Geddes et al., 2012). Second, the availability of rents is also controlled for. Oil rents in t–1 are calculated 'by taking the total value of each country's annual oil and natural gas production, and subtracting the country-specific extraction costs, including the cost of capital' (Ross, 2008: 111). Foreign aid is considered by including a two-year moving average of the log of foreign aid per capita.[14]

Other controls typically considered in authoritarian-survival models are the ethnic fractionalization index, the percentage of the population that is urban, the country's total population (logged), GDP per capita (logged), and a two-year moving average of the rate of growth of per capita income.[15] Also considered is the impact of past instability, creating a variable indicating the number of past coups (both attempted and successful).[16] As for contextual variables, a cold war dummy is included, which is coded as 1 for all years between 1946 and 1990. To capture diffusion effects and foreign pressure, the averaged Polity2 score of countries with capital cities within 4000 km of the target country is included. The presence of ongoing armed conflict is captured by the inclusion of two binary variables indicating whether a civil war or an interstate war was taking place at t–1 in the country.[17] Finally, to control for time dependence, cubic polynomial transformations of the duration of a leader's spell in power up to time t are included (Carter and Signorino, 2010).

As equation 4 indicates, in the first-stage models aimed at obtaining the predicted repression levels to be included in the second-stage predicting leaders' duration, the *X*s just detailed above are included. Some of them are found to have an important impact on repression, such as regime type, per capita income, population size, and ongoing (civil and interstate) violent conflicts (Davenport, 2007c; Davenport and Armstrong, 2004; Poe and Tate, 1994; Poe et al., 1999). Further, to control for autocorrelation, a series of binary indicators of a country's level of repression in the previous year is included. Yet, as equation 4 shows, getting the fitted values requires specific instruments in the repression equation, that is, the *Z*s. In particular, trade openness is used (measured as the sum

of imports and exports as a percentage of GDP), as is the number of civil wars ongoing in the past two years in neighboring countries (that is, countries with capital cities within 4000 km of the target country).[18] Both have been found to be good predictors of repression levels. Trade has been traditionally found to have a strong and negative impact on state repression (Apodaca, 2001; Hafner-Burton, 2005). Concerning neighbors' instability, recent evidence shows that it may lead regimes to resort to preventive repression (Danneman and Ritter, 2011).[19]

Results: Sticks and survival

The general contention that repression lengthens leaders' duration in power is tested first. Table 2 reports the second-stage results.[20] In these baseline models, the dependent variable is *Autocrat Exit*, which does not distinguish the mode of exit, but just indicates if in a given year a dictator exits power. Recall that term limits, natural deaths (or ill health), and foreign interventions are right-censored.

In light of the results, we can assert that repression does work. The coefficients of the two repression variables are negative and statistically significant. To facilitate the interpretation of the results, Figure 1 portrays the impact of each repression measure on the predicted likelihood of dictators' exit, according to the results in columns 3 and 4 of Table 2.[21] The average marginal effect of the PTS is −0.019, and its total impact, when it goes from its minimum to its maximum sample value, is −0.1378.[22] When the civil liberties instrument goes from its minimum value to its maximum, according to model 4, the probability of being ousted experiences a total decrease of 0.1134. Its average marginal effect is −0.011.

The rest of the variables perform generally as expected. Rulers of military regimes are more likely to lose power than rulers of other regime types. Past instability in the form of coups and more democratic neighbors are related to a higher likelihood of losing office. Civil wars are also a significant destabilizing factor. The availability of oil rents significantly reduces the risk of being removed, but it is not significant in the models with civil rights restrictions as a measure of repression. Aid, income per capita, and growth are not significant.

In order to test our hypotheses concerning the potential distinct impact of repression types, Table 3 reports the second-stage results using probit in which the dependent variables now distinguish between violent and nonviolent exits and between regular and irregular exits. The relationship between the variables of interest is presented in Figure 2. The results are very consistent across estimation methods and the different dependent variables used.[23] Two clear and important insights can be identified.

First, the use of increased political terror is not significantly effective in preventing violent or irregular exits (models 1 and 3). The effect is negative, but negligible and not significant for violent exits and negative and considerable, but not significant for irregular exits (see Figure 2a and Figure 2c). Therefore, no clear escalation effect of violent repression is found, but a clear deterrence effect is not observed either (hypothesis 3). In contrast, confirming hypothesis 1, restrictions on civil liberties are effective in making violent and irregular exits much less likely, as Figures 2a and 2c illustrate.

Second, both types of repression (terror and restrictions) significantly decrease the risks of a dictator being replaced through nonviolent or regular means, which confirms hypotheses 2 and 4. Yet, using political terror is more effective than using restrictions on civil liberties. Maximum levels of political terror reduce the likelihood of a regular or nonviolent exit almost to zero (see Figures 2b and 2d). For nonviolent exits, the average marginal effect of the fitted terror variable is −0.025 and its change from minimum to maximum decreases the exit probability by 0.198. The average marginal effect of restrictions is −0.0088 and its total impact is −0.039. As for regular

Table 2. The Effect of Repression on the Likelihood of Dictators' Exit, 1972/76–2004.

	1	2	3	4
	CDSIMEQ	CDSIMEQ	2S-probit	2S-probit
Repression PTS	−0.290*		−0.155*	
	(0.114)		(0.061)	
Repression FH		−0.171**		−0.088**
		(0.053)		(0.025)
Personalist	0.213	−0.043	0.221	−0.037
	(0.262)	(0.228)	(0.304)	(0.244)
Single party	0.241	0.072	0.243	0.081
	(0.239)	(0.202)	(0.280)	(0.224)
Military	0.893**	0.524*	0.896**	0.525*
	(0.269)	(0.228)	(0.308)	(0.251)
Civil war $_{t-1}$	0.326*	0.071	0.319+	0.075
	(0.163)	(0.126)	(0.178)	(0.132)
Interstate war $_{t-1}$	0.427+	0.127	0.424+	0.130
	(0.230)	(0.209)	(0.254)	(0.229)
Log foreign aid $_{t-1, t-2}$	0.087	0.029	0.086	0.025
	(0.065)	(0.057)	(0.059)	(0.055)
Oil rents $_{t-1}$	−0.069*	−0.007	−0.070*	−0.006
	(0.030)	(0.026)	(0.028)	(0.028)
Neighbors' polity	0.062*	0.041+	0.064*	0.041+
	(0.025)	(0.023)	(0.024)	(0.023)
Economic growth $_{t-1, t-2}$	−0.931	−0.953	−0.917	−0.949
	(1.043)	(0.959)	(0.927)	(0.933)
Population (log)	0.089	0.035	0.094+	0.033
	(0.055)	(0.046)	(0.053)	(0.044)
Urban population (%)	0.003	−0.001	0.003	−0.001
	(0.005)	(0.004)	(0.005)	(0.004)
Log GDP per capita	−0.089	−0.164	−0.094	−0.166
	(0.142)	(0.127)	(0.143)	(0.130)
Ethnic diversity	0.006	−0.059	0.004	−0.070
	(0.228)	(0.207)	(0.215)	(0.192)
Past coups	0.028*	0.016	0.028*	0.016
	(0.011)	(0.011)	(0.012)	(0.011)
Cold war	−0.038	0.108	−0.035	0.108
	(0.143)	(0.133)	(0.149)	(0.140)
Constant	−1.203	0.241	−1.764	−0.307
	(1.327)	(1.212)	(1.226)	(1.129)
Leader duration polynomials	Y	Y	Y	Y
Observations	1571	1757	1571	1757
Log-likelihood	−362.3	−415.4	−362.2	−415.0

Notes: Second-stage results. For regime types, 'monarchy' is the base category. In the 2S-probit models, errors are clustered on leader. Standard errors are shown in parentheses. + $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

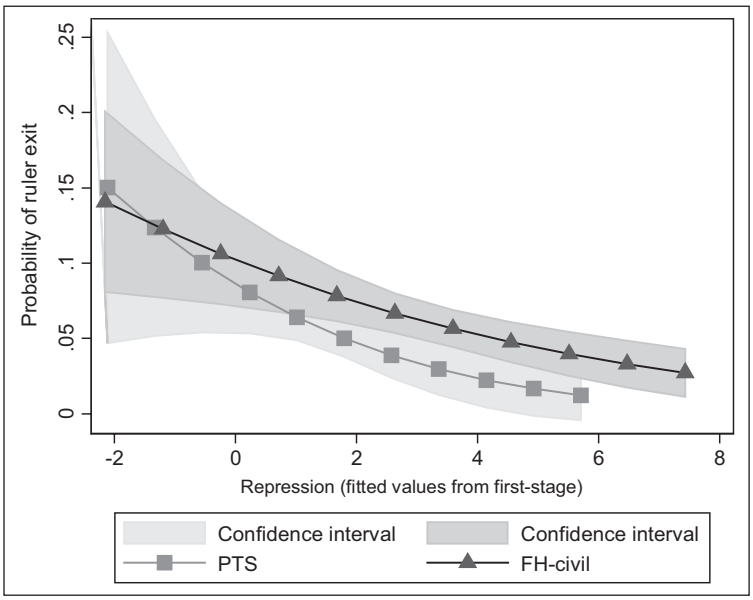

Figure 1. Predicted Probability of Ruler Exit and Repression Types.

exits, the average marginal effect of terror is −0.009 and the total effect is −0.055, while the average marginal effect of restrictions is just −0.0057 and its total impact is −0.045.[24]

In sum, these results indicate that although both types of repression can reduce autocrats' likelihood of losing power (as shown in Table 3), they do so differently. The negative impact of the PTS on the likelihood of an exit is principally driven by its effectiveness in deterring nonviolent or regular threats. Terror does not significantly prevent violent or irregular ousters. Conversely, restrictions on civil liberties are effective as an instrument preventing both types of threat.

A final caveat needs to be addressed. The distinction between rulers' modes of exit may be slightly problematic because some coups may be nonviolent.[25] The finding that terror does not prevent irregular or violent exits may be based on the fact that it only works against coups, but not against other forms of irregular exit. Following our argument, coming from an organized group, coup threats may be better countered by targeted violent repression which is used to eliminate potential plotters and challengers from within the military or the elite. If that is so, the negative impact of state terror on nonviolent exits could be partly driven by its impact on coups which were not violent (that is, did not cause any deaths). Note that the effect of the PTS instrument is bigger for the nonviolent than for the regular exit model. Further, this may also explain the considerable negative (albeit not significant) impact of political terror on the likelihood of irregular exits.

To shed some light on this, one more binary variable is constructed using Svolik's data (2012) to indicate if a dictator was ousted by a coup in a given year. Once the two-stage models are rerun, the results reveal that violent repression has a significant negative impact on the likelihood of an autocrat being removed by a coup. This impact gets stronger when we also include assassinations in the coup variable. Restrictions on civil rights also reduce coup occurrence, but not significantly. Furthermore, for irregular exits other than coups, the impact of the PTS is positive and significant, pointing to escalation effects, while that of restrictions is still negative and significant.[26]

Table 3. The Effect of Repression on the Likelihood of Different Types of Ruler Exit, 1972/76–2002/04.

	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(7)
	Violent	Nonviolent	Violent	Nonviolent	Irregular	Regular	Irregular	Regular
Repression PTS	−0.031	−0.309**			−0.120	−0.136+		
	(0.090)	(0.079)			(0.074)	(0.080)		
Repression FH			−0.076*	−0.108**			−0.089**	−0.090*
			(0.037)	(0.035)			(0.027)	(0.039)
Personalist	0.827	0.328	−0.116		0.811+	−0.372	0.243	−0.486
	(0.592)	(0.438)	(0.326)		(0.476)	(0.372)	(0.318)	(0.335)
Single party	0.157	0.765+	−0.377	0.509**	0.609	−0.047	0.144	−0.068
	(0.571)	(0.402)	(0.300)	(0.158)	(0.450)	(0.328)	(0.295)	(0.289)
Military	0.983	1.344**	−0.018	0.888**	1.142*	0.680+	0.598+	0.349
	(0.617)	(0.445)	(0.345)	(0.174)	(0.487)	(0.374)	(0.333)	(0.322)
Civil war $_{t-1}$	0.161	0.498*	0.088	0.054	0.402+	0.189	0.158	0.024
	(0.234)	(0.210)	(0.184)	(0.166)	(0.224)	(0.221)	(0.171)	(0.162)
Interstate war $_{t-1}$	0.593*	0.456	0.424	0.023	0.652*	−0.185	0.377	−0.541
	(0.281)	(0.304)	(0.281)	(0.300)	(0.273)	(0.395)	(0.236)	(0.486)
Log foreign aid $_{t-1, t-2}$	0.291+	0.112	0.069	0.016	0.111	0.088	0.053	0.005
	(0.158)	(0.074)	(0.098)	(0.077)	(0.088)	(0.067)	(0.071)	(0.068)
Oil rents $_{t-1}$	−0.049	−0.020	0.073	0.022	−0.027	−0.098**	0.047	−0.058
	(0.084)	(0.030)	(0.055)	(0.033)	(0.041)	(0.031)	(0.037)	(0.037)
Neighbors' polity	0.153**	0.070*	0.070	0.040+	0.062+	0.042	0.047	0.028
	(0.053)	(0.028)	(0.050)	(0.024)	(0.034)	(0.029)	(0.031)	(0.028)
Economic growth $_{t-1, t-2}$	−1.001	−0.758	−1.716	−0.385	−0.198	−1.882+	−0.940	−0.984
	(1.588)	(1.012)	(1.686)	(0.980)	(1.143)	(1.061)	(1.148)	(1.172)
Population (log)	0.300**	0.052	0.161+	−0.097+	−0.021	0.188**	−0.045	0.119+
	(0.110)	(0.070)	(0.083)	(0.057)	(0.073)	(0.064)	(0.052)	(0.061)
Urban population (%)	−0.011	0.013*	−0.012	0.004	0.0007	0.006	−0.005	0.004
	(0.013)	(0.006)	(0.009)	(0.005)	(0.0071)	(0.006)	(0.006)	(0.006)
Log GDP per capita	−0.208	−0.502**	−0.319	−0.506**	−0.259	0.086	−0.340*	−0.020
	(0.250)	(0.167)	(0.205)	(0.147)	(0.196)	(0.174)	(0.167)	(0.172)
Ethnic diversity	0.217	−0.423	−0.063	−0.328	−0.111	0.244	−0.161	0.139
	(0.375)	(0.276)	(0.316)	(0.252)	(0.295)	(0.295)	(0.245)	(0.281)

Table 3. (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(7)
	Violent	Nonviolent	Violent	Nonviolent	Irregular	Regular	Irregular	Regular
Past coups	−0.027	0.055**	−0.010	0.034**	0.021	0.032*	0.002	0.031*
	(0.025)	(0.014)	(0.020)	(0.012)	(0.015)	(0.014)	(0.013)	(0.013)
Cold war	0.528+	−0.130	0.441+	0.052	0.446*	−0.546**	0.622**	−0.493**
	(0.284)	(0.166)	(0.261)	(0.163)	(0.206)	(0.186)	(0.198)	(0.189)
Constant	−4.736+	0.802	−1.317	2.626*	−0.616	−4.160**	0.824	−2.262
	(2.417)	(1.485)	(1.860)	(1.319)	(1.806)	(1.474)	(1.430)	(1.559)
Leader duration polynomials	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1440	1440	1629	1629	1571	1571	1757	1757
Log-likelihood	−114.6	−222.8	−145.5	−254.8	−207.8	−210.2	−259.8	−213.5

Notes: Standard errors clustered on leader are shown in parentheses. + $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

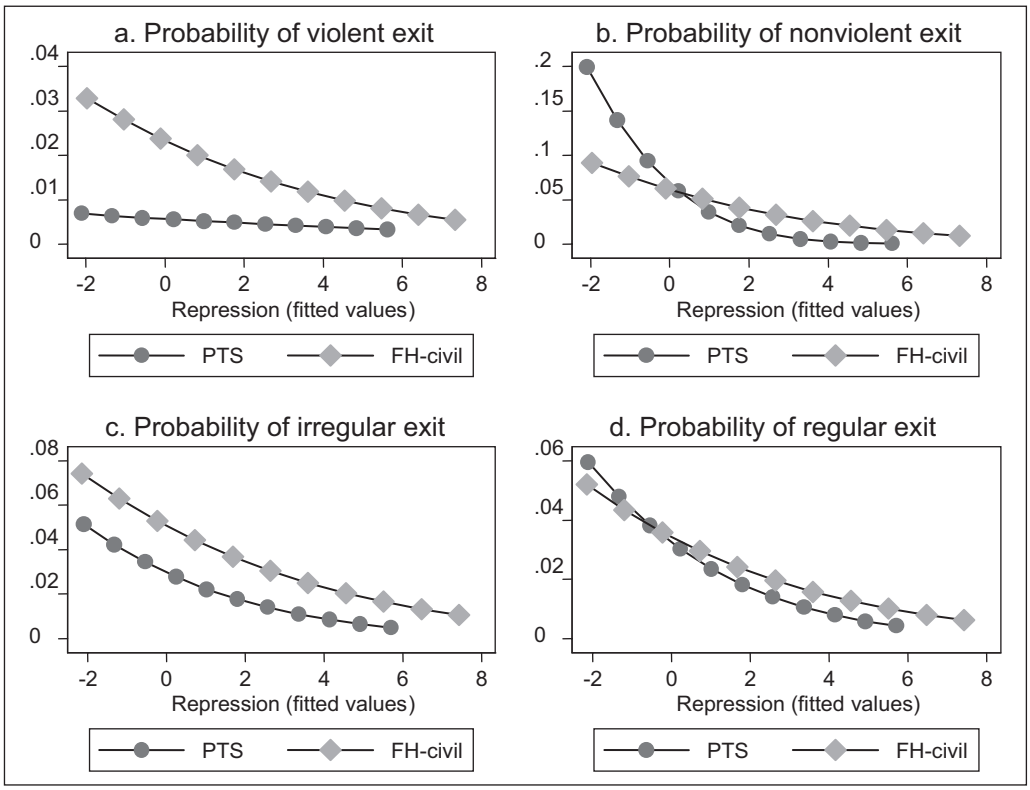

Figure 2. Repression and Types of Exit: Predicted Probabilities.

Conclusion

State coercion is, jointly with the creation and maintenance of a certain level of support, a basic instrument of power for autocrats. Repression may benefit a dictator by neutralizing challenges and thus decreasing the likelihood of losing power. To date, there has been no systematic evidence that this is true across a broad range of authoritarian regimes. This article not only examined the link between repression and survival, but also differentiated between repression and ruler-exit types to analyze which repression strategy has an impact on each type of threat.

After addressing the simultaneous relationship between repression and the risk of being ousted, this article comes to a clear, albeit sad, conclusion: repression does work. In other words, it significantly reduces the likelihood that a dictator will be replaced in a given year. This statement must be qualified though. While repression is not homogeneous and includes at least two main instruments of control (terror and civil rights restrictions), it is also true that dictators can leave power in a variety of ways (for example, regular and irregular). The results of this article reveal that not all forms of repression work in all circumstances. Political terror is a targeted strategy specifically directed against individuals or organized groups capable of acting collectively and so reduces the likelihood of regular and nonviolent exits and coups. Restrictions on civil liberties hinder collective action thereby helping to prevent both regular and irregular exits.

According to these results, autocrats become especially vulnerable when their capacity to limit civil rights is constrained. International pressure can provide such constraints by pushing for

liberalization through instruments such as sanctions, shaming campaigns, and aid conditionality. Most democratization cases occur in regimes that have already partially liberalized. Civil rights guarantee that some level of political opposition will be able to organize and so demand further political openings, as the recent cases of Tunisia and Egypt highlight. Political terror is basically used to respond to organized threats. Yet, as found here and as recent events illustrate, violent repression is likely to lead to escalation effects and defections. Terror could not stop the uprising once it had started in Libya and has not been able to do so in Syria either. On the contrary, it spurred violence and caused a change in the tactics used by protesters, which led to open armed civil conflict. In contrast, in Egypt and Tunisia, the military turned their backs on regimes seeking to use violent repression to stop growing popular unrest, thereby forcing leaders to step down.

Notes

The author thanks Marc Guinjoan, Alexander Schmotz, Joseph Wright, and the anonymous reviewers for helpful comments and suggestions on previous versions of this article. This research is supported by the following project: Dictatorial Repression and Judicial Systems: The Determinants of Authoritarian Stability and Transitional Justice, CSO2012-35664 (Spanish Ministry of Economy and Competitiveness).

1. Political terror refers to violations of physical integrity rights. I use the terms interchangeably.
2. Some scholars have identified the presence of a threshold effect (see Bueno de Mesquita et al., 2005; Davenport and Armstrong, 2004).
3. See Earl (2011) for an excellent review.
4. Regular exits are those that occur 'according to the prevailing rules, provisions, conventions, and norms of the country,' while 'a loss of office is considered irregular when the leader was removed in contravention of explicit rules and established conventions. Most irregular removals from office are the result of the threat or use of force as exemplified in coups, (popular) revolts, and assassinations … and occur at the hands of domestic opponents' (Goemans et al., 2009: 273).
5. Data available at http://publish.illinois.edu/msvolik/the-politics-of-authoritarian-rule/.
6. Exits due to term limits, a natural death or ill health, and foreign interventions are excluded from these figures.
7. According to Ulfelder (2005), strikes and anti-regime demonstrations are the most effective form of contentious collective action in accelerating authoritarian regime breakdown.
8. In the second set of models, two exit modes are distinguished.
9. In these 2S-probit models, errors are clustered on leader.
10. The right-censoring of term limits is a relevant innovation. For example, Mexican presidents were substituted routinely every six years as their constitutional terms expired. Coding each of these exits as a 1 would be misleading and overinflate instability levels under the Mexican single-party system.
11. Recall that both distinctions capture a similar dimension, but are not equal, since a ruler's exit may be irregular, but not necessarily violent. Using both distinctions allows checking of the robustness of the results. But, most importantly, using a dependent variable specifically coding violent ousters allows us to test whether violent repression may lead to a violent leader ouster, as some scholars suggest.
12. See Wood and Gibney (2010: 373) for further details and see also http://www.politicalterrorscale.org/.
13. Freedom House's civil liberties index is available at http://www.freedomhouse.org/template.cfm?page=351andana_page=363andyear=2010. See Stohl et al. (1986) and Bollen (1986) for a discussion.
14. Data on aid are from the World Bank's World Development Indicators.
15. Data on ethnic diversity are from Fearon (2003); data on the urban population are from the World Bank's World Development Indicators; data on total population, income per capita, and growth are from Maddison (2010).
16. Data on coups are from Powell and Thyne (2011).
17. Data on intrastate and interstate conflict are compiled from the PRIO Armed Conflict Dataset. See Gleditsch et al. (2002).
18. Hence, the latter variable is a lagged two-year moving average. Trade data are from the World Bank's World Development Indicators, while civil war data are from Gleditsch et al. (2002).

19. The instruments pass standard tests to check their validity. For our violent repression measure, PTS, the *F*-test on the instruments in the first-state regression is 20.19, well above the recommended threshold value. The *F*-statistic for FH's restrictions measure is 40.79. Further, for both variables, the tests of under-identification are rejected. The Sargan-Hansen test of overidentifying restrictions (with the null hypothesis indicating that the instruments are valid) is not rejected.
20. The period under study is limited by data availability. The Freedom House series starts in 1972, while the PTS series starts in 1976. The last year of the period under study is 2002 when Svolik's data are used and 2004 when the Archigos data are used.
21. The rest of the variables are held constant at their sample means.
22. As a robustness test, I have run the same model using the Cingranelli-Richards Physical Integrity Rights Index (CIRI) (Cingranelli and Richards, 1999). After inverting it, the coefficient of the CIRI index in the two-stage models is negative and statistically significant. A plot of predicted leader-exit likelihood reveals that the impact of the CIRI measure is nearly identical to that of the PTS. I use the PTS in the rest of the analyses as it covers a longer time period. See Wood and Gibney (2010) for a comparison of the PTS and the CIRI.
23. Due to reasons of space, models using 2SPLS are not reported.
24. As claimed in the theoretical section, terror is more effective against organized threats. In the case of regular exits, this involves a certain correlation with the restrictions variable. Regimes that allow for the legal existence of opposition parties have consequently lower civil rights restrictions. Hence, I have rerun model 6 in Table 3 so as to include only those regimes with legal opposition parties. I find that, as expected, the impact of the PTS variable is stronger under such regimes, and it is even stronger if the opposition parties have legislative representation.
25. According to the data, more than 74 percent of the coups that successfully ousted leaders were not violent.
26. These results are not reported due to reasons of space, but are available from the author.

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