

Repressive Agent Defections: How Power, Costs, and Uncertainty Influence Military Behavior and State Repression

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Abstract

Leaders are incentivized to repress in the face of mobilized dissent. However, leaders are unable to repress alone and rely on repressive agents, who can shirk the order and weaken the leader's control. I use a formal model to analyze when the leader can use repression strategically to avoid defection, based on leader type. Each type has incentives to repress to distort the leader's risk of removal and thus deter defection. Power, cost, and uncertainty are important in both the leader's and the agent's decision to repress. Testable hypotheses reveal how executive power and punishment influence the level of repression.

1 Introduction

In 2009, the Iranian military was ordered to repress those participating in the post-election demonstrations, coined the Green Movement. Military forces and the police took to the street and arrested many participants, ultimately defeating the opposition groups and keeping President Mahmoud Ahmadinejad in power. When opposition groups use violent tactics such as these, scholars have shown that the state's optimal strategy is to use repression ([Davenport, 2007](#); [Earl, Soule and McCarthy, 2003](#); [Moore, 2000](#)). By using these repressive tactics, governments raise the costs of dissent to deter mobilization and keep the government in power ([Escribà-Folch, 2013](#)).

There are situations, however, where mobilized dissent is not met with systematic repression. During the Color Revolutions in Serbia and Ukraine, the military ignored the orders to repress and allowed the protesters to express their grievances. There are two possible explanations for why the onset of repression might not occur in the face of mobilized dissent. First, the leader does not order further repression and risks further mobilization and the possibility of removal. Second, the leader orders repression, but the military agents shirk their duties and refuse to repress. The latter is an explanation for why Serbian and Ukrainian protesters were not met with systematic violence. When the leader ordered repression, the military took it as an opportunity to defect from the regime. These defections, or the potential for military defections, explains why the leader may not make the order to repress in the first place. If the leader knows the military will not follow the order, they may not give the order in the first place in case there are some consequences

associated with defection. In this paper, I explore how the risk of defection influences the leader's decision to repress. Leader's risk losing power and reputation if the military defects. Thus, they are incentivized to consider the situations where defections are likely and order repression strategically. Specifically, I consider the questions: when can leaders use repression as a signal to guarantee repressive agents will follow orders and under what conditions will the leader have to order less repression to avoid defection?

Early research on repression often ignored the possibility of military defection by relying on the unitary actor assumption. A growing literature relaxes this assumption and assumes that there is potential for a principal-agent problem to arise (e.g. [Conrad and Moore 2010](#); [DeMeritt 2015, 2009](#); [Dragu and Lupu 2017](#); [Hendrix and Salehyan 2017](#)). Leaders often have some preferred level of repression. The leader can not repress alone, however, and must rely on his repressive apparatus. The military may have a different preference and when that is the case they choose how much repression is actually utilized. For example, [Conrad and Moore \(2010\)](#) argue that state agents will use more torture when the probability of getting caught is low and there is belief that using torture will produce information. The leader must then find a way to reduce the principal-agent problem to reduce torture. State agents can also choose to not repress after given the order to do so. [Dragu and Lupu \(2017\)](#) argue that focal factors, such as institutions and norms, make military defections more likely. In these situations, less repression is realized. This implies that leaders must consider not just their preferred level of repression, but also what the military will do.

[Pion-Berlin and Trinkunas \(2010\)](#) contend that military defections are more likely during endgame scenarios. In these situations, the leader must use repression to remain in power. Research on military defections as largely focused on these endgame scenarios (e.g. [Pion-Berlin and Trinkunas 2010](#); [Dragu and Lupu 2017](#); [Albrecht and Ohl 2016](#)). However, military defections can also occur outside of these endgame scenarios. Leaders are often incentivized to use "preventative" repression to deter mobilized dissent before it starts ([Sullivan, 2016](#); [Ritter and Conrad, 2016](#)). The military has the power to resist using repression in these situations if they choose to do so, though it increases the risk of punishment. If the leader is able to use preventative repression, though, he takes the strategic advantage away from the military. If the leader waits for dissent to start to order repression, the military can interpret that the leader is at risk of removal. They then decide whether to keep him in power by repressing or ignore the order and risk the leader's removal from office.

In this paper, I argue that the leader can use repression strategically to avoid military defections. Using a formal model, I consider the potential for military defections in two different worlds, one where the leader is at risk of removal and one where he is not. If military defections are more likely when the leader is at risk of removal, then the leader can decide to use repression outside of these situations. In doing so, the leader is able to distort his risk of removal. If the leader is successful then the probability of military defection is lower and the leader can use repression as he sees fit.

I draw several empirical implications from the formal model about when a leader will use repression. I find that military defections are primarily a function of the amount of power the leader has and the risk of punishment for defection. I find that when the leader is not constrained by his ruling elite, he can use repression as he needs to. Moreover, punishment will increase the agent’s willingness to follow the order and thus increase the repression level in a country. However, I also show that the influence of punishment is mediated by the amount of power the leader has, and when political institutions are present, the leader is unable to use punishment as a mechanism to ensure repression.

2 Repression as a Signal of Strength

In this section, I specify a formal model of the principal-agent problem of repression, building on previous work from DeMeritt (2009); Dragu and Lupu (2017), and Albrecht and Ohl (2016). Relying on incomplete information, the leader must use repression as a signal in an attempt to distort his true type.

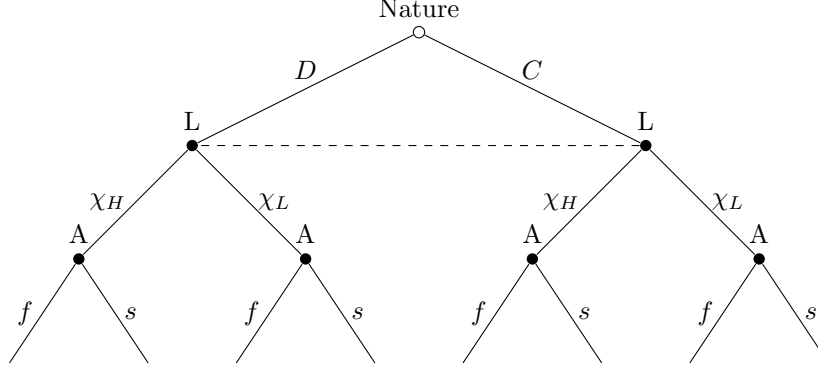
2.1 Model Specification

The model is a strategic interaction between an autocratic leader,¹ L and military agents, A . There are two types of autocrats: one that is consolidating and one that is desperate. The type of leader is based on the necessity of using repression to remain in power. Both types have a preference for survival and regime stability but their approach to remaining in power is different. The leader’s type is denoted $\omega \in \Omega = \{C, D\}$ where C denotes a consolidating type and D denotes a desperate type. A desperate type is a leader who fears losing power, and thus is incentivized to use widespread repression to maintain power (Ritter, 2014; Escribà-Folch, 2013). This type of leader is in an endgame scenario and if they choose to not repress, they risk losing power. A consolidating type is a leader who is not necessarily at risk of losing power. Alternatively, their main focus is gaining more power and influence, which does not require repression. For consolidation types, relying on coercion alone can spark opposition that otherwise may not have existed (Göbel, 2011; Moore, 1998). Instead, consolidating leaders rely on other strategies to deal with potential threats to the regime, be it power-sharing amongst elites (Svolik, 2009) or building semi-democratic institutions (e.g. Reuter and Robertson 2014; Gandhi 2008).

The game proceeds in the following order: At the onset of the game, nature determines the type of leader. A leader is a desperate, L^D with probability π and consolidating, L^C with probability $1 - \pi$. I assume only the leader knows his true type and there is no credible way for the leader to

¹I rely on a single leader for simplicity, however I believe the model is easily applied to regimes outside of personalist dictatorships. All autocratic regimes face risk of transition due to mobilized dissent or elite defection (Geddes, Wright and Frantz, 2014). Single-party regimes must still consider the extent to which the military will support them if these endgame scenarios exists.

Figure 1: Strategic Interaction Between the Leader and the Military



provide that information to the agents. Upon realizing his type, the leader orders either a high, H , or low, L , level of repression $\chi = \{\chi_H, \chi_L\}$.² After receiving the order, the military agent, A , makes a decision to follow or shirk, $\beta_A = \{f, s\}$. Regardless of the agent's decision, the game ends and the payoffs are realized. Figure 1 illustrates the extended-form game.

Once the game is complete, the players enter lotteries over whether the leader remains in power and whether the agent is punished for deviating. First, I assume the probability an agent is punished is a function of the amount of power the leader has, $0 < p \leq 1$. When the leader's power is limited, his monitoring abilities and punishments are subject to scrutiny by elites. A dictator with no limitations would have $p = 1$. As an autocrat cedes power to quasi-democratic institutions, his ability to punish defectors decreases given the constraints placed on him by others. This can also be conceptualized through regime type and autocratic audience costs (Weeks, 2008). Personalist regimes have fewer audience costs and thus can get away with punishing military agents to the extent they see fit. Conversely, military and single party regimes are likely to be farther from $p = 1$ than personalist regimes. In these regimes, if elites are willing to impose audience costs, it will lower the value of p . Second, the leader remains in power with a probability of $q \in (0, 1]$. Unlike previous models of military defection, I assume that q is not only decreasing in the threat of mobilization but q is also increasing in the ruling elites' approval of the leader.

2.2 Payoffs

There are two possible outcomes in this game. First, the military agent shirks the order to repress. In the desperate world, the leader remains in power with probability q_χ and is removed from power with probability $1 - q_\chi$. The leader is more likely to stay in power if he orders more repression. When the agent follows the order, the probability of remaining in power increases by ϵ .

²I rely on a binary decision here for simplicity. In reality, the leader will have a range of options.

When the leader maintains power, the agent receives a benefit, $B^{rem} \geq 0$. Benefits for the agent include income and prestige for being in the military. If the leader is removed from power, then the agent receives a benefit for the removal of the leader, $B^{imp} \geq 0$.³ If the agent follows the order, she pays the cost of repression, $c_A \geq 0$. If the agent defects, she also risks a punishment of k^{rem} . Her punishment occurs with a probability of p , which also represents how much power the leader has. I assume punishment is higher than the cost of repressing ($k^{rem} > c_A\chi$). If the leader is removed from power, the agent risks punishment for following the order, for example getting tried for repressing.

In the consolidating world, there is no risk of the leader being removed from power. Thus, the agent receives the benefit of the leader remain in power regardless. When the agent defects, she risks some punishment, pk^{rem} . When the agent follows the order, she pays the cost of repression, $c_A\chi$. Therefore, the agent's utilities are represented as:

$$U_A = \begin{cases} U_A(D, \chi, s) = q_\chi(B^{rem} - pk^{rem}) + (1 - q_\chi)B^{imp} \\ U_A(D, \chi, f) = (q_\chi + \epsilon)(B^{rem}) + (1 - (q_\chi + \epsilon))(B^{imp} - k^{imp}) - c_A\chi \\ U_A(C, \chi, s) = B^{rem} - pk^{rem} \\ U_A(C, \chi, f) = B^{rem} - c_A\chi \end{cases} \quad (1)$$

The leader's utility is based on the benefit of power, $B^{pow} \geq 0$, and the cost of repression, $c_L \geq 0$. Unlike the agent, I assume the leader pays the cost of the repression, $c_L\chi$, regardless of outcome. Monitoring is not perfect. Therefore, the leader is still required to pay for the materials to repress and the income of the soldier, regardless of whether she follows the order. I assume that the added benefit of repression is greater than the difference between the cost of repression at a lower level, $q_{\chi H} - c_L\chi_H > q_{\chi L} - c_L\chi_L$. The leader also receives utility based on the amount he represses since it may deter future dissent. When the agent defects in the consolidating world, the leader loses some reputation r , in addition to the cost of repression. The leader also gains the benefit of being in power, B^{pow} , weighted by how much power he has, p . In the desperate world, the benefit is weighted by the probability the leader remains in power. Thus, the leader's utilities are as follows:

$$U_L = \begin{cases} U_L(D, \chi, s) = q_\chi B^{pow} p - c_L\chi \\ U_L(D, \chi, f) = (q_\chi + \epsilon)(B^{pow} p + \chi) - c_L\chi \\ U_L(C, \chi, s) = B^{pow} p - c_L\chi - r \\ U_L(C, \chi, f) = B^{pow} p + \chi - c_L\chi \end{cases} \quad (2)$$

³For simplicity, I use B^{rem} for the leader remaining in power and B^{imp} for whenever a leader is removed from power. Though this may imply impeachment, I am not restricting the removal from power to be strictly impeachment and is purely for distinction within the model.

2.3 Results

In this section, I present some equilibria derived from the formal model as well as some implications and comparative statics. I am primarily interested in the leader's ability to manipulate the signal to ensure the military does not defect. I consider the situations when separating and pooling equilibria exist where the military does not defect. A separating equilibrium means the leader can use different repression levels depending on the state of the world. The leader is able to avoid paying the cost of repression in the consolidating world but knows the military will not defect in the desperate world. Conversely, in a pooling equilibrium, the leader uses the same repression rate regardless of the true state of the world to distort his true type and encourage compliance. For brevity, I only present one pooling and one separating equilibrium; the others are outlined in an online appendix.

Proposition 1 If $c_L \geq 1$ and $p > \max\left\{\frac{c_{AXL}}{k^{rem}}, \frac{\epsilon(-B^{rem} + B^{imp} - k^{imp}) + c_A\chi_H + (1 - q_{chi_H})k^{imp}}{k^{rem}q_{\chi_H}}\right\}$, then there exists a separating equilibrium such that the leader chooses to repress at a high level, χ_H^* , in the desperate world and at a lower level, χ_L^* , in the consolidating world. The agent will follow the order, regardless of the signal received.

For Proposition 1, the leader can change his repression level based on type, which he prefers. The leader can use limited preventative repression and responsive repression in the face of dissent. The equilibrium is primarily a function of the amount of power the leader has. In addition, there are several comparative statics worth mentioning. First, the equilibrium space is increasing in the ability the leader has to punish. When punishment is severe, agents are more likely to follow orders to repress. Second, the equilibrium space is increasing in the benefit the agents receive if the leader remains in power. Similarly, the space is decreasing in the agent's benefit if the leader is removed from power. Lastly, the equilibrium space is decreasing in the cost of repression.

Bahrain in 2011 illustrates this proposition in the real world. Bahrain is one of the few Middle Eastern countries that does not rely heavily on repression (Nepstad, 2013). Bahrain's leaders are Sunni Muslim while the majority of Bahrain's citizens are Shi'ite Muslim. To keep a Sunni Muslim majority in the military, the leaders rely on immigrants from other Middle Eastern countries. These agents receive compensation and citizenship for their service.

When demonstrations started in February 2011, the military was ordered to repress and followed the order. Nepstad (2013) argues that agents followed orders for several reasons. First, a regime change would likely lead to increased tensions between the new leader and the Sunni immigrant military. Second, the military perceived the ruling family to have a large amount of power. Unlike the situation in Egypt, the United States stayed silent on the Bahraini conflict. In addition, forces from Saudi Arabia and the United Arab Emirates were sent in to assist the military. Military agents took this to mean the regime was secure in power. Therefore, following the order to repress was the optimal strategy for the Bahraini military.

Proposition 2 There exists a pooling equilibrium such that the leader always chooses some χ_H^* , and the agent always follows the order, when

$$c_A \chi_H - \pi(\epsilon(B^{rem} - B^{imp} + k^{imp}) - (1 - q_{\chi_H})k^{imp}) < p k^{rem}(1 - \pi(1 - q_{\chi_H}))$$

and

$$c_L \leq \min \left\{ \frac{\mu(\chi_L - r) - \chi_H}{\chi_H - \chi_L}, \frac{\chi_H + r}{\chi_H - \chi_L}, \frac{\mu(-\chi_L + r) - \chi_H - \chi_L}{\chi_H - \chi_L}, 1 \right\}.$$

In Proposition 2, the leader uses the same level of repression, regardless of type. This equilibrium highlights the leader's ability to use repression as a signal to deter defections. Because the leader keeps a constant repression level, the military is unable to distinguish between a desperate leader and a consolidating leader. Given this, the military agent always follows the order. The equilibrium is characterized by the power of the leader and the cost of repression to the leader. First, the leader needs a sufficient amount of power to ensure the agents do not defect. Second, the cost of the repression to the leader must be sufficiently low. This result is rather intuitive, for a leader to use a constant and high repression level, the cost must be fairly cheap for it to be sustainable. Similar to Proposition 1, the equilibrium space is increasing in the benefit the agent receives if the leader remains in power and decreasing in the benefit the agent receives in the leader is removed from power.

The Iranian protests in 2009 illustrate the implications of Proposition 2. Iran's military forces have a substantial amount of material resources available to them, including many ties to companies that contribute to their annual revenue (Pion-Berlin, Esparza and Grisham, 2014). Therefore, the benefit they receive for remaining loyal is high. After the election in 2009, protests quickly spread throughout the country through the use of social media. Unlike Bahrain, Iranian is under constant pressure from organizations like Human Rights Watch to reduce its repression level. Even so, Iran's security forces took to the streets with batons, pepper spray, and firearms to stop the protesters. Eventually, the movement ended and President Ahmadinejad remained in power.

2.4 Strategic Repression to Prevent Military Defection

There is currently no exhaustive list of military defections as many of them are unobservable. This makes any large-N analysis of defections difficult. However, the threat of military defections has implications for the leader's decision to repress. I assume leaders want to avoid military defections whenever possible. When the probability of military defection is high, the leader's optimal strategy is to use less repression, rather than risk defection. Conversely, if the probability of defection is low, then leaders can use repression strategically. Therefore, instead of deriving hypotheses about when a defection will occur, I will use this logic to derive hypotheses about the realized repression level within a country.

One of the most important parameters in both equilibria is the amount of power the leader has. From Proposition 1 and 2, the military is more likely to follow the order if the leader has a sufficient

amount of power. Unsurprisingly, this implies that power-sharing reduces the level of repression. Most scholars agree that seemingly democratic institutions reduce repression within autocracies. For example, (Rivera, 2017) finds that when there is an elected legislature, an autocrat will use less repression than if the legislature did not exist.

I argue, however, that institutions not only reduce repression but also mitigate the leader's potential punishment for defectors. On an individual basis, the leader can punish the agents by firing them, disappearing them, or at an extreme level killing them. But the leader can also use punishments on the military organization as a whole. I argue that one such punishment is military purges. A military purge is a situation in which the leader removes a military officer because of a perceived threat from that officer (Sudduth, 2017). Military purges send a clear message to all elites about what happens when agents are disloyal.

In the case of (potential) military defections, leaders might decide to pursue military purges as punishment. On June 11, 1937, in one of the most notable military purges, a military court sentenced a group of Red Army's top officials to be executed immediately after the proceeding. Though debated, there is a general consensus that Stalin was worried about potential defections (Whitewood, 2015). Stalin used military purges to encourage agents to turn on each other. This produced a prisoners dilemma situation where agents would shirk on each other to avoid being purged themselves or allowing the purge to occur at random (Lskavyan, 2007). After the initial purges, the conflicts within the Soviet Union escalated. A secret order was eventually sent across the country, indicating how many people needed to be exiled from each region. Stalin's desire to maintain power and his willingness to use purges created a situation where defection meant death. This gave Stalin the ability to use repression against his opposition without fear that the military would defect. What started as a means of keeping control of the military, turned into a hunt to prevent political opponents from gaining power. Eventually, the killing spread to individuals outside of the military who had no connection to the political opposition (Volkogonov, 1991).

By purging the military, the leader can remove social ties and cause shifts in the military organization. This punishment disrupts the repression process and makes agents fear defection. Moreover, it is the social ties and the organizational capacity that allow members of the military to defection (Pion-Berlin, Esparza and Grisham, 2014; Albrecht and Koehler, 2016). Thus, the more the leader purges, the less the military is able to put up a credible threat of defection. Therefore, military agents should consider past military purges in their calculation of whether to repress. If the agents feel that the punishment is too grave, then the likelihood of defection is low, and the repression level should be high. This leads to my first testable hypothesis:

Hypothesis 1: Past military purges lead to a higher level of repression.

The leader's ability to punish, though, is a function of the amount of power he has. Therefore, military purges will not have the same influence on repression across different institutional

arrangements. More specifically, I argue that when the executive’s power is sufficiently limited by domestic political institutions, military purges will have a smaller influence on repression than when the executive is acting without constraints. Independent judiciaries are one of the most important institutions for respecting human rights (e.g. [Lupu 2013](#); [Conrad and Ritter 2013](#); [Powell and Staton 2009](#)). These institutions constrain the leader from acting without consequence. Similarly, the existence of opposition parties in the legislature should create constraints on the executive. When opposition parties have seats in autocratic legislatures, it is easier for the opposition to overcome the collective action problem ([Rivera, 2017](#); [Aksoy, Carter and Wright, 2012](#)). Executives may be wary of using punishment in this situation. Given the potential to be prosecuted or overthrown by the opposition, the leader is unable to rely on military purges as punishment when constrained by institutions. Thus, in combination with an independent judiciary or an elected legislature with opposition parties, military purges should have little to no influence on state repression.

Hypothesis 2: As the leader becomes more constrained by political institutions, the influence of military purges on repression decreases.

3 Research Design

I seek to explain how the threat of military defections can influence the government’s use of repression. I test the above hypotheses on a Time-Series Cross-Sectional dataset of 108 autocratic countries from 1976 to 2007. I rely on the minimalist definition of democracy and autocracy presented by [Cheibub, Gandhi and Vreeland \(2010\)](#). The authors define democracy as a regime that has an executive and legislature that is elected via free and fair, multi-party elections with alternations in power. An autocracies is anything that fails to meet one or more of those conditions.

Given the continuous nature of the dependent variable, I estimate the influence of military purges on respect for PIR using OLS regression with robust standard errors clustered by country. I also lag all independent variables by a year to establish temporal precedence between the independent variables and dependent variable. Finally, I include year fixed effects in the model, to account for any changes in abuse reporting that may have occurred over time.⁴

I estimate three unique models to analyze the relationship between past military purges on repression. In model 1, I includes an interaction between military purges and opposition parties, *Weighted Past Purge* \times *Opposition Party*. Similarly, the Model 2 examines the interaction term between judicial independence and past purges, *Weighted Past Purge* \times *Judicial Independence*. The final model includes both of these interactions. I focus most of my discussion on Model 3, however, I have included relevant plots for Model 1 and Model 2 in the online appendix.

⁴Given the limited time frame of available data, country fixed effects absorb most of the variation that exists within the independent variables.

3.1 Dependent Variable

To test how military punishment and power influence repression, I rely on the state’s use of physical integrity rights (PIR) violations (i.e., extra-judicial killings, torture, political imprisonment, and disappearances). I operationalize respect for physical integrity rights using human rights score measure created by [Fariss \(2014\)](#).⁵ The *PIR* measure was created using a Bayesian measurement model, specifically a dynamic ordinal item-response theory model using common measures of respect for physical integrity rights.⁶ The variable is a continuous measure of respect for PIR where high numbers indicate greater respect and lower numbers indicate lesser respect.

3.2 Independent Variables of Interest

My first independent variable of interest is *Weighted Past Purges*. I used data collected by [Sudduth \(2017\)](#) who used news sources to code when officers were dismissed, demoted, or arrested because they: 1) were popular among other elites and are thus a risk to the leader’s survival, 2) had divergent preferences with the leader and openly criticized the leader, and/or 3) the officer had, or was presumed to have, plans to remove the leader from power. Since the number of past purges is a significant predictor of future purges ([Sudduth, 2017](#)), agents should expect that the number of past purges is a good indication of the punishment the military will receive if they defect from the leader. Therefore, instead of using whether a purge occurred in a given year, I account for history of purges in a country. Most recent purges should have a larger influence on agents than past purges. Thus, I calculate a linearly weighted past purge variable.⁷ Of the 108 autocracies in my sample, 33 countries have never experienced a military purge, 31 countries have experience only one military purge, and the remaining 44 have experienced more than one military purge. The maximum number of past military purges is 12, which occurred in Iraq. Figure 2 illustrates the density of the weighted past purges variable.

To measure how punishment is mediated by leader power, I interact the *Weighted Past Purges* variable with both judicial independence and the existence of opposition parties. I use the latent measure for judicial independence developed by [Linzer and Staton \(2011\)](#). *LJI* scores were derived from an item response theory model designed specifically to account for bounds and trend in time series, cross-sectional data. The authors define judicial independence as the ability to make a decision without interference of the executive and for those decision to be executed. The data are coded such that higher values indicate greater judicial independence and lower values indicate

⁵I present the same model specifications with the CIRI data in the online appendix.

⁶This indicator incorporates different measures of repression from the following sources: [Cingranelli and Richards \(1999\)](#); [Cingranelli, Richards and Clay \(2014\)](#), [Hathaway \(2002\)](#), [Conrad et al. \(2010\)](#); [Conrad, Haglund and Moore \(2013\)](#), [Gibney and Dalton \(1996\)](#); [Gibney and Wood \(2013\)](#), [Harff and Gurr \(1988\)](#) [Harff \(2003\)](#), [Rummel \(1994, 1995\)](#), [Wayman and Tago \(2010\)](#) [Eck and Hultman \(2007\)](#), [Taylor and Jodice \(1983\)](#).

⁷In the appendix, I include the results of the same model using a non-weighted total count of past purges instead of the weighted count, which yields similar results to those presented here.

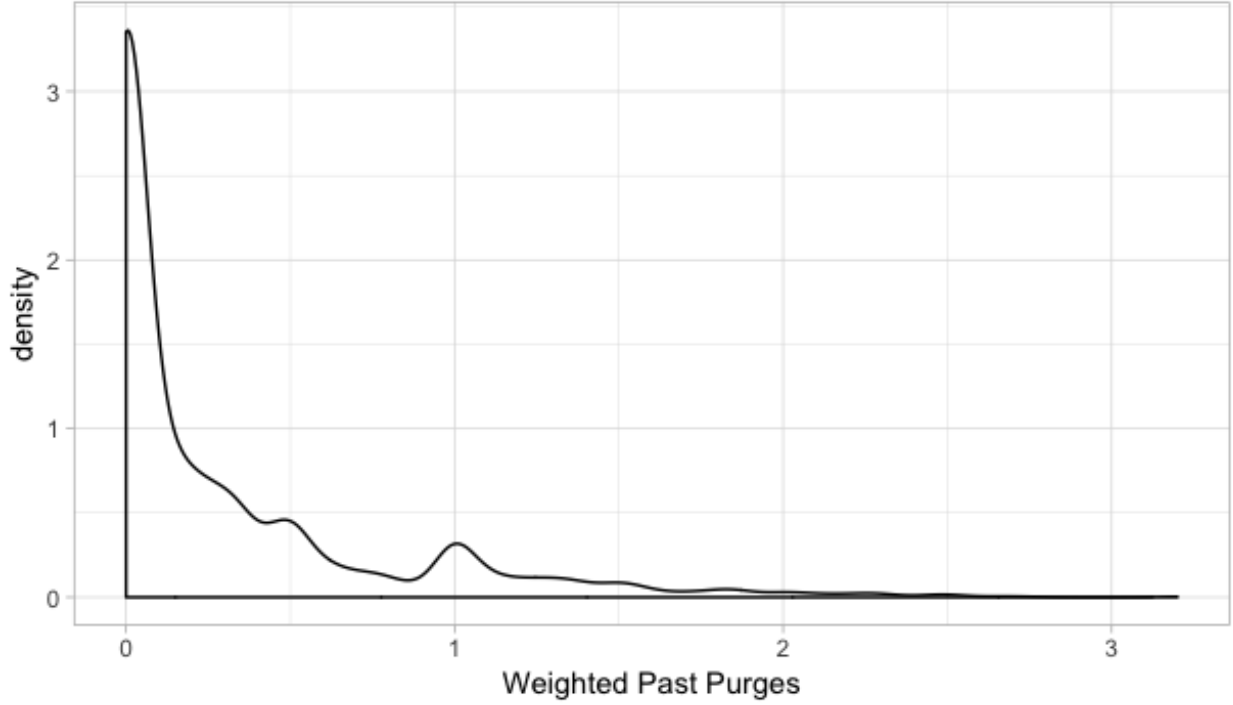


Figure 2: Density of Weighted Past Purges

less judicial independence. Figure 3 shows the distribution of values for the latent independence variable in my sample.

To measure the existence of *opposition parties*, I use Rivera (2017) recoding of Cheibub, Gandhi and Vreeland (2010) number of political parties variable. More specifically, Rivera (2017) uses (1) to represent the situations in which multiple opposition party exists outside the regime and (0) otherwise. Within the sample, multiple opposition parties are present in approximately 47.5 percent of the state-year observations.

3.3 Control Variables

I also include a number of control variables that are commonly associated with repression. First, one of the most robust findings in the repression literature is that rich countries repress less than poor countries (Poe and Tate, 1994; Poe, Tate and Keith, 1999; Hill and Jones, 2014). Therefore, I include an indicator of (the natural log of) *GDP per capita*. Similarly, scholars continually find that countries with larger populations tend to repress more than countries with small populations (Poe and Tate, 1994; Hill and Jones, 2014). Therefore, I include a variable for (the natural log of) *population* size. Both of these variables are taken from Gleditsch (2002). *Civil war* is also an important indicator of repression. I include a variable for whether the country is experiencing civil

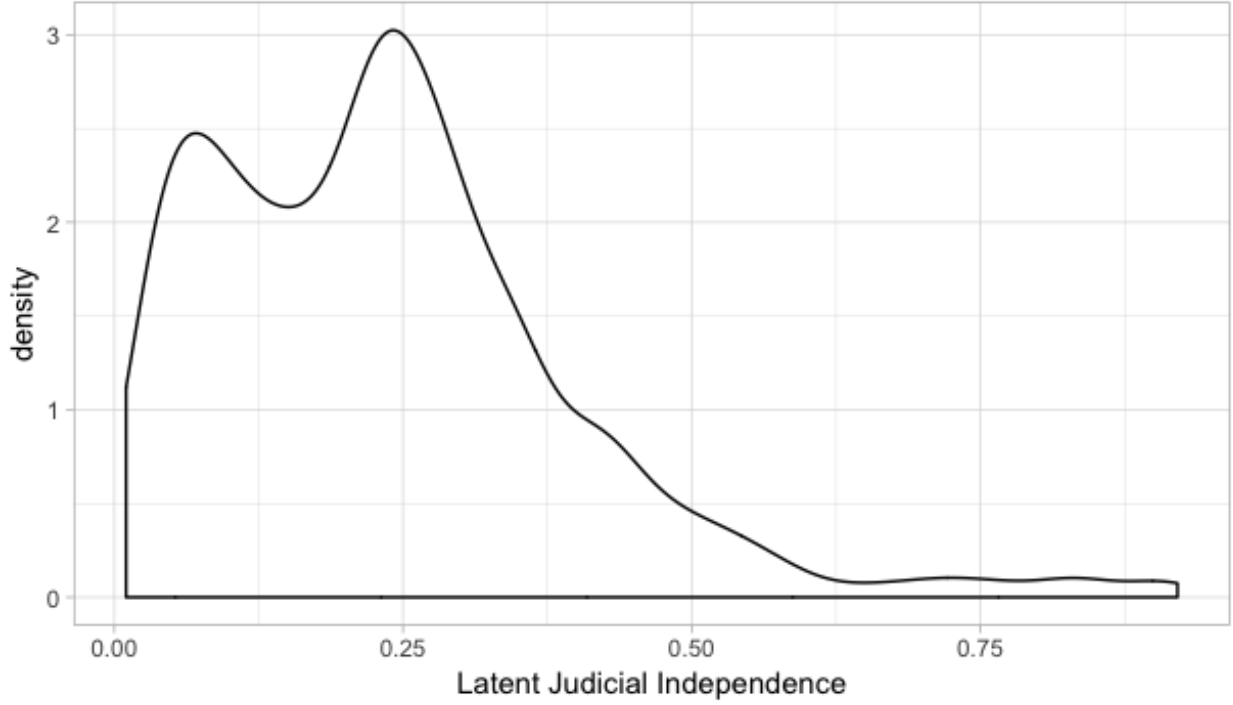


Figure 3: Density of Latent Judicial Independence

war, gathered from the Uppsala/PRIO Armed Conflict Dataset ([Gleditsch et al., 2002](#)). [DeMeritt and Young \(2013\)](#) argue that natural resources lower the cost of repression for the leader because of reduced reliance on the domestic population. Thus, I also include a variable for reliance on natural resources. I use a binary indicator for *Oil Rents* which corresponds to a (1) in country-years where at least one third of export revenue were from oil and (0) otherwise. I also include [Rivera \(2017\)](#) measure for whether an *elected legislature* is present in the country. The author codes this variable as (1) in cases where an elected legislature exists, and (0) otherwise. Lastly, to estimate the cost of repression for the leader, which is an important parameter for both propositions, I use data from the National Material Capabilities dataset. Military capacity is measured as a composite of iron and steel production, military expenditures, military personnel, energy consumption, total population, and urban population ([Singer, 1988](#); [Singer, Bremer and Stuckey, 1972](#)). Because I am not interested in capabilities between countries but rather capabilities within a country, I rely on the individual measures proposed by [Singer, Bremer and Stuckey \(1972\)](#). Given the extent to which these variables are correlated with one another, I only include *Iron and Steel Production* and *Military Expenditures* in the model.⁸

⁸Replacing iron and steel production for a different indicator such as military personnel or energy consumption does not yield different results than those presented here.

4 Empirical Results

Table 1 displays the estimates from the OLS regression. To summarize, I find strong support for Hypothesis 1 and moderate support for Hypothesis 2. More specifically, I find that past military purges are a significant indicator of increased repression, however as the leader becomes more limited in his use of power due to an independent judiciary, the influence of military purges on repression decreases.

Except for oil rents and the existence of an elected legislature, all controls variable are statistically significant and in the intended direction. Civil War is negative and significant across all four models, indicating that countries facing civil conflict are likely to repress more. GDP per capita is positive and significant meaning there is a positive association between wealth and respect for human rights. Lastly, population is negative and significant, indicating resource scarce countries tend to use higher levels of repression. Surprisingly, the influence of having an elected legislature, which Rivera (2017) contends should have a positive influence on respect for human rights, is not significant in any specification of the models. The opposition party variable, on the other hand, is significant and in the intended direction. Oil rents is not significant across any of the models. Finally, higher military expenditures lead to higher levels of repression. Lastly, iron and steel production has no impact on the degree to which an autocratic country represses.

Considering Model 3, past purges, judicial independence, and the interactions between these variables are significant and in the intended direction. Contrary to expectation, the interaction term between opposition parties and weighted past purges is insignificant. This implies that opposition parties are unable to constrain the leader immediately following a military purge. One possible explanation for this null finding is that opposition parties need time to overcome the collective action problem to credibly check the leader. This is potentially exaggerated by the leader’s use of military purges, which may cause opposition parties to fear potential purges themselves.

Past purges, in the absence of an independent judiciary, has a negative influence on respect for physical integrity right. More specifically, without the constraints on the leader’s power, a one unit increase in the weighted past military purge variable leads to a 0.284 decrease in the latent human rights score. A one unit increase in the past military purge variable is typically associated with a recent military purge. This lends support to the idea that more recent military purges have a greater impact on repression than historical purges.

Similar to the findings of many scholars, judicial independence increases respect for physical integrity rights. More specifically, if there are no past military purges, having a fully independent judiciary increases the latent respect for PIR by approximately 1.067. As the number of past military purges increases, so does the influence of judicial independence on respect for PIR. Figure 4 shows that a history of punishment in combination with an independent judiciary leads to less repression.

At low levels of judicial independence, military purges lead to increased repression. As the

Table 1: Influences of Autocratic Repression, 1976-2007

	(1)	(2)	(3)
Weighted Past Purge	−0.242** (0.122)	−0.246*** (0.091)	−0.284** (0.117)
Iron/Steel	−0.017 (0.019)	−0.018 (0.019)	−0.019 (0.019)
Military Expenditures	−0.103*** (0.031)	−0.104*** (0.030)	−0.104*** (0.030)
Elected Legislature	0.066 (0.086)	0.075 (0.082)	0.074 (0.083)
Opposition Party	−0.353*** (0.077)	−0.423*** (0.086)	−0.417*** (0.088)
Civil War	−0.811*** (0.078)	−0.805*** (0.077)	−0.804*** (0.078)
GDP per capita	0.224*** (0.058)	0.225*** (0.057)	0.226*** (0.057)
Population	−0.095** (0.044)	−0.090** (0.043)	−0.090** (0.043)
Oil Rents	0.068 (0.113)	0.068 (0.112)	0.069 (0.112)
Judicial Independence	1.007*** (0.324)	1.122*** (0.324)	1.067*** (0.325)
Weighted Past Purge * Opposition Party	0.537 (0.453)		0.285 (0.422)
Weighted Past Purge * Judicial Independence		0.239** (0.104)	0.211** (0.098)
Constant	−0.250 (0.595)	−0.288 (0.585)	−0.283 (0.585)
N	2,001	2,001	2,001
R ²	0.616	0.618	0.619
Adjusted R ²	0.608	0.611	0.611
Residual Std. Error	0.556 (df = 1960)	0.555 (df = 1960)	0.555 (df = 1959)

*p < .1; **p < .05; ***p < .01

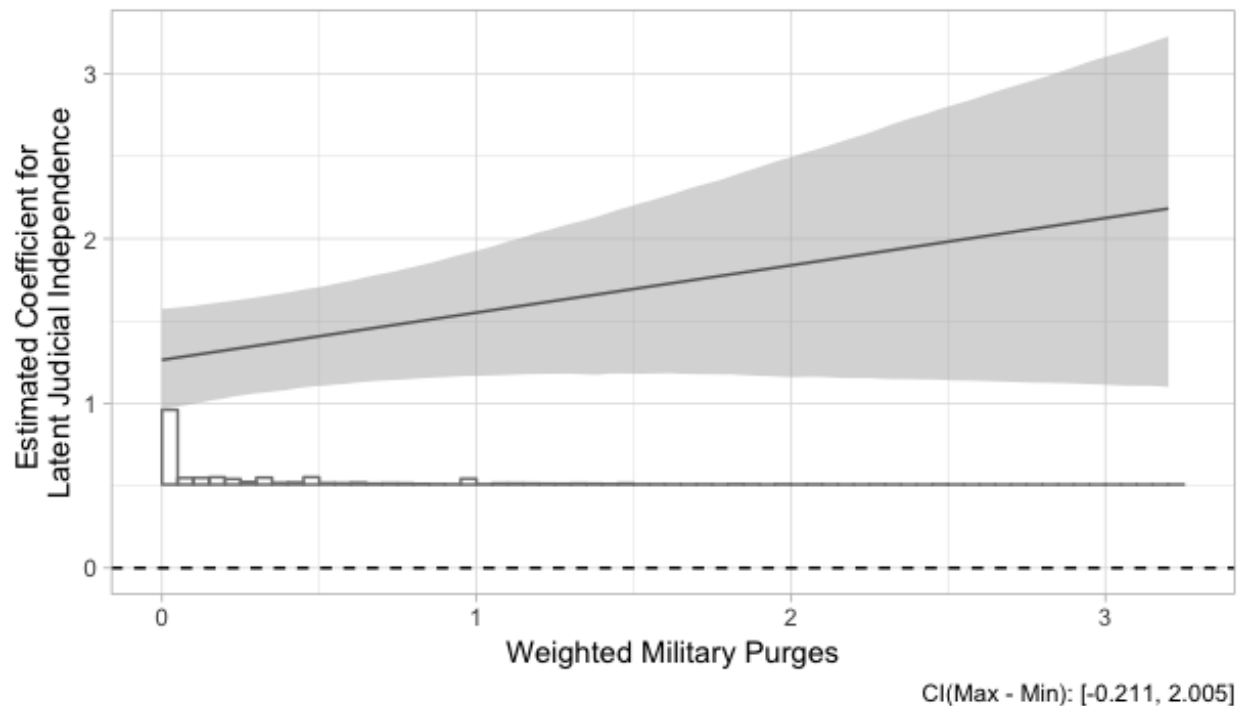


Figure 4: Relationship between Latent Judicial Independence and Respect for PIR by Number of Past Military Purges

judiciary becomes more independent, the negative impact of past purges becomes statistically indifferent from zero, as depicted in Figure 5. The point at which the effect of past military purges becomes insignificant is approximately 0.12 on the judicial independence variable. Only about 28% of the observations fall below this threshold. Thus the majority of observations in the sample do not experience the negative influence of past purges.

These finding imply that military agents are fearful of leader punishment, especially when the leader has punished in the past, lending support to Hypothesis 1. However, this fear is quickly alleviated when the executive's power becomes constrained by an independent judiciary, lending support to Hypothesis 2.⁹

5 Conclusion

In this paper, I question how a leader's decision to repress is influenced by the military's decision to follow or shirk the order. First, even though a leader may be strategically inclined to repress given certain situations, he must consider whether the military is willing to follow the order. If the leader makes the order when defection is likely, he risks losing power and risking his reputation.

⁹In addition to the results presented here, I also present results in the appendix where I run analysis on subsets of the sample, broken up by autocratic regime type. The results hold for all regimes except military regimes.

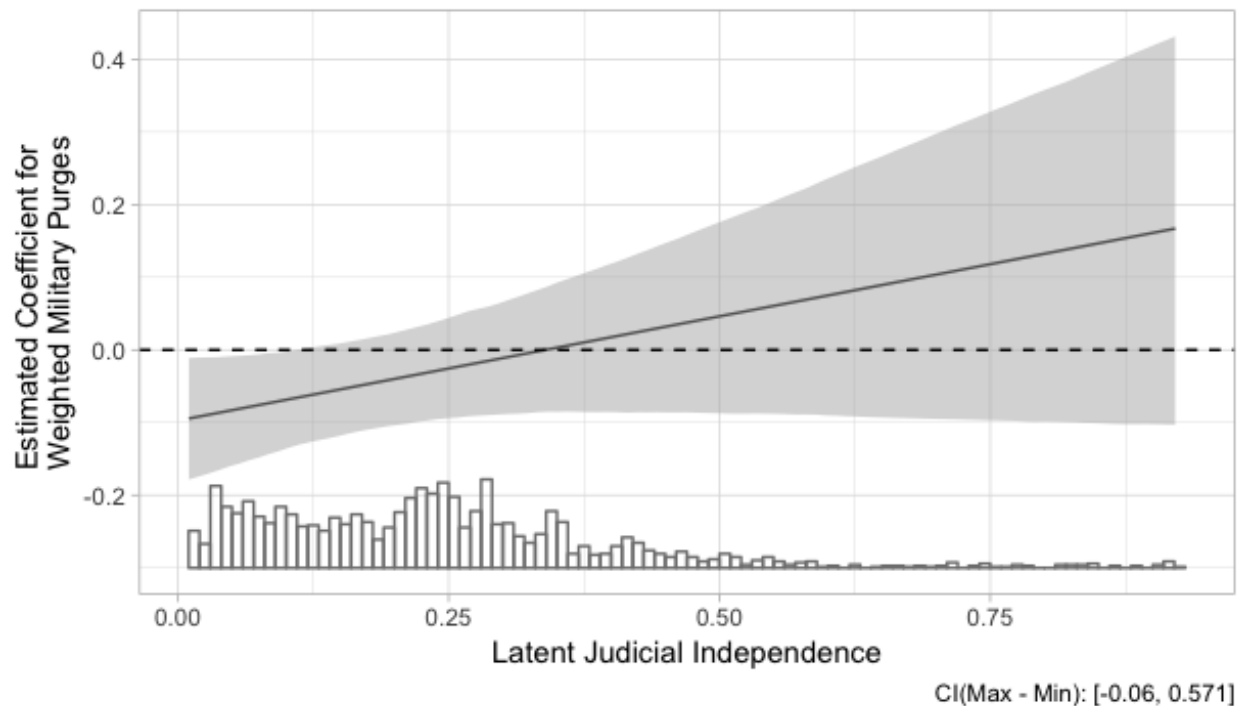


Figure 5: Relationship between Weighted Past Military Purges and Respect for PIR across Latent Judicial Independence

Leaders have the strategic ability, however, to use repression as a signal and minimize military defections. Specifically, when the leader has a sufficient amount of power, he can use repression as needed without fear of defection. As his power decreases, the leader has incentives to use repression strategically to distort his risk of removal.

I relax the unitary actor assumption to show the importance of considering how military agents can influence repression. I find support that a history of punishment decreases the likelihood of defection. However, as the leader becomes constrained, these historical punishments increase respect for human rights. Many studies focus on the benefits and cost of repression for the leader. However, it is important to consider the benefits and costs the agents receive. I distinguish between the leader's costs to repress, which is constant and an important indicator of equilibria behavior, to the agent's costs which fluctuates with the agent's decision to use repression. Future studies on repression should consider how these aspects of agent's costs and benefit relate to the theory being proposed to make more accurate predictions about when and how states use repression.

The human rights advocacy literature can gain from considering the importance of the military in state repression. Advocacy networks, such as human rights organizations, are often attempting to raise the leader's costs of repression, through strategies like naming and shaming. However, it is also important to consider the agent's costs, which is distinct from the leader's costs. If advocacy

networks can find more ways to raise the cost for agents, they may be more successful in improving human rights conditions within the state.

There are a few important limitations of the model that future research can extend upon. First, the endogeneity of mobilized dissent should be addressed to better account for the citizen's ability to influence the military. In the model presented here, mobilized dissent acts as a constant, however certain repressive tactics can limit the amount of mobilization within a country. Furthermore, repression in some instances can increase the rate of mobilization as a reaction to repression ([Moore, 1998](#)). This game could also be modeled dynamically in repeated play, to yield more accurate results about changing environments. Lastly, given that power is such an important component of military defections, it is reasonable to believe that the leader will make moves to gain power as well as repress. Therefore, future extensions should examine a multidimensional signaling model, where the leader will not only decide on a repression level but also choose whether or not to make some power grabs. Situations like this will better be equipped to explain Indonesia in the removal of Suharto and the persistence of Fujimori.

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