Human Rights under Extreme Conditions

Dissertation

zur Erlangung der Würde einer Doktorin der

Wirtschafts- und Sozialwissenschaften

des Fachbereichs Volkswirtschaftslehre

der Universität Hamburg

(gemäß der PromO vom 24. August 2010)

vorgelegt von

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Hamburg, den 6. Juni 2016

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Datum der Disputation: 21. Oktober 2016

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1 Introduction

1.1 Motivation and research question

Tremendous progress in collecting and analyzing data on human rights violations in the past decades has brought forward a plethora of empirical studies examining cross-country differences of human rights standards. It has enabled researchers to provide more precise information on why governments choose to repress their population and violate their rights. This dissertation focuses on violations of the right to physical integrity, which encompass various forms of abuses by the government, including torture, cruel and inhumane treatment, forced disappearances, and extrajudicial executions (Fariss, 2014). The terms 'violations of physical integrity rights', 'repression', and 'state coercion' will be used interchangeably in this dissertation. Such rights violations are, for instance, more likely in times or in expectance of civil and international armed conflict (e.g., Danneman and Hencken Ritter, 2014; Carey, 2010; Moore, 2000) and after terrorist attacks (Davenport and Inman, 2012; Dreher et al., 2010). Although extensive research has resulted in a list of determinants of rights violations, only little attention has been paid to respect for physical integrity rights under extreme conditions. Extreme conditions such as natural disasters and financial crises are rare; yet, they severely constrain and challenge a government. This dissertation intends to close this gap and answers the following research question: What is the effect of extreme conditions on respect for physical integrity rights?

The decision which events or circumstances to consider in the realm of 'extreme conditions' is not straightforward as the notion of 'extreme' is highly country- and context-specific. In this dissertation, five types of (extreme) events leading to extreme conditions are scrutinized: (1) large-scale natural disasters, (2) extreme youth unemployment as a type of economic crisis, (3) financial crises, (4) coups d'état, and (5) arms imports as a situation related to belligerencies in more general. Although these types appear diverse at first sight, they share at least two similar characteristics. First, these events occur outside of a range, which is on average experienced in a country. Second, their occurrence and their extent are frequently unpredictable. These characteristics present both challenges and opportunities for human rights standards, which can either impede or promote the realization of physical integrity rights. Assessing under which circumstances state officials resort to repressive measures and which factors can mitigate or foster state coercion presents a crucial step towards the protection of physical integrity rights.

1.2 Main theoretical argument

The theoretical base for the papers included in this dissertation is to a great extent provided by Wintrobe (1998) and his model of dictatorship whose basic assumptions are also applicable to democratic regimes. Political leaders of all regime types maximize personal consumption and power. An incumbent's primary objective is to stay in office, i.e. to generate and maintain political power. According to Wintrobe (1998), they have two strategies at their hand to facilitate their survival in office: loyalty and repression. On the one hand, leaders can buy and accumulate the loyalty of their population, for instance, by distributing rents and other economic benefits. On the other hand, they can apply repressive measures such as rights violations which increase political opponents' costs of dissenting and deter them from mobilizing against the incumbent. Both loyalty and repression are costly and the incumbent will decide for that strategy with which he can retain power at lowest cost. Costs differ across regime types. Costs of repression, for instance, are higher for democracies than for autocracies. Given that these basic assumptions hold for political leaders irrespective of their regime type, this dissertation takes respect of physical integrity rights of both autocracies and democracies into consideration.

Wintrobe (1998, pp. 7ff) distinguishes four types of autocrats based on their objectives and their used levels of loyalty and repression: tyrants, timocrats, totalitarians, and tinpots. Tyrants seek to maximize their power by applying high repression and generate low levels of loyalty. Timocrats maximize the welfare of their population and thus are characterized by a low level of repression but a high level of loyalty. In a consumption-maximizing tinpot regime, both repression and loyalty are low and employed only until power is maintained. In a power-maximizing totalitarian regime, in contrast, both loyalty and repression are high as repression is employed until further increases in repression lead to a reduction in loyalty (ibid., p. 15). As - according to Wintrobe's definition - the occurrence of tyranny, timocracy, and totalitarian regimes is rare and since there is no straightforward way to empirically differentiate between these types, this dissertation draws upon the theoretical expectations for tinpots.

Emanating from Wintrobe's model, my main theoretical argument in this dissertation is that extreme conditions present a challenge to political leaders who fear for their political survival for at least the following two reasons. First, extreme conditions and crises can lead to a decrease in political support of the population to the incumbent. Possible reasons are economic hardship of the population, which is caused or fostered by crises, and discontent with crisis management of the government. Second, in times of adverse economic shocks

often resulting from crises fewer resources are available for the above mentioned reward or punishment mechanisms. In other words, the price of loyalty, which would have to be paid to counteract challenges to political survival, increases in the light of extreme conditions. As the incumbent wants to stay in power at lowest possible cost, he is thus more likely to use violations of physical integrity rights to ward off challenges to his regime. If the adverse economic shocks presented by such conditions and crises can, however, be cushioned, I argue that the negative effect on respect for physical integrity rights can be mitigated.

Formulated differently, I expect countries to show less respect for physical integrity rights under extreme conditions. Where economic consequences resulting from crises are less severe or dampened by additional financial resources, I anticipate the decrease of respect for physical integrity rights to be less pronounced. Conversely, the effect of extreme conditions is stronger when political leaders are faced with additional factors related to a decrease in loyalty of the population. Also, I expect to observe a stronger decrease in rights standards in autocratic regimes as opposed to democratic regimes.

1.3 Empirical approach

The expectations and hypotheses derived from existing theoretical frameworks are tested conducting a panel data analysis, i.e. all five papers are empirical cross-country studies. The degree to which existent theories are applied to the setting of extreme conditions and to which they are extended by additional explanatory factors varies. As the objective of this dissertation lies in a global analysis of the relationship between extreme conditions and repression, its empirical analyses do not focus on a specific country or time. Contextual examples, however, are provided in each paper. Given that the dependent variable, respect for physical integrity rights, is the focus of each paper in this dissertation, the estimation approach and the use of control variables are similar and may only vary according to data coverage. In each paper, I present a practicable and innovative solution to empirical challenges posed by the measurement of the respective type of extreme conditions.

Quantifying respect for physical integrity rights is challenging as violations of physical integrity rights are, by nature, not completely observable and thus difficult to compare. For one, in the case of disappearances and extrajudicial killings, political leaders and state officials often intend to operate in the shadows. This creates the problem of under-counting incidents of rights violations. In addition, the notion of what constitutes physical integrity rights violations, especially what is understood as torture, has changed over time. While there are limitations with respect to addressing the first shortcoming, a stricter standard of reporting and accountability of physical integrity rights violations over time can be

compensated by using the latent dynamic human rights scores by Fariss (2014). This indicator consists of different cross-national data sources, which account for various aspects of repression, and is based on dynamic ordinal item response theory models (Fariss, 2014, p. 302).

1.4 Contributions

This dissertation adds to previous research by systematically investigating how governments react to different types of extreme conditions through the use of repression of physical integrity rights. It contributes to the literature on repression and literature on each type of extreme condition theoretically and conceptually but also with regard to its empirical aspects.

This dissertation is the first to approach the concept of 'extreme conditions' in a systematic manner and to empirically examine violations of physical integrity rights in this context. As every country can potentially experience one of the assessed types of extreme conditions, answers to the question of how political leaders react to such crises in terms of rights violations provide a crucial contribution to crisis management. This dissertation is also among the first to apply established theories of state repression to the realm of natural disasters, socio-economic crises, arms imports etc. While theoretical models have outlined the conditions which make it more likely that political leaders resort to repression, the question whether the above listed extreme events actually bring such conditions about has received little attention. The conditions under which crises and extreme events can be associated with repression have thus remained under-researched. This dissertation contributes to our understanding of how incumbents are affected by extreme conditions and whether such events alter costs and benefits of repression.

While empirical research on repression and quantitative methods in more general have made considerable advances in capturing violations of physical integrity rights, the majority of studies rely on rights measures such as the Political Terror Scale index (Gibney et al., 2015) or data from Cingranelli and Richards human rights data project. In contrast to previous studies, this dissertation uses the indicator for respect for physical integrity rights provided by Fariss (2014). Due to its empirical approach, which is elaborated in more detail by Schnakenberg and Fariss (2014), this indicator accounts for a changing standard of accountability and provides thus a more accurate approximation for physical integrity rights violations. Furthermore, this dissertation adds to existing research using a more precise way of measuring extreme conditions. So far, the majority of studies on natural disasters, financial crises, and youth unemployment rely on the number of people affected by disasters, exchange rates, and youth unemployment rates as measures for their empirical analysis. The variables

included in these studies, however, do not allow measuring the effect of an extreme condition itself but capturing the whole scope of propensity and severity. The empirical contribution of this dissertation hence lies in identifying the impact of large, exogenous shocks. Therefore, extreme conditions are modeled using a crisis indicator. Arms imports in Chapter 4 present an exception to this modeling as they are strictly speaking not an extreme event per se. This topic is nevertheless included as arms imports are often linked to belligerencies and thus fall within the scope of my research question.

1.5 Outlook

The aim of this dissertation is to examine how governments experience the above mentioned five types of extreme conditions and how these affect respect for physical integrity rights. In other words, the objective of this dissertation is to find out under which of these five conditions physical integrity rights are especially vulnerable. Consequently, the dissertation consists of five papers. While all five papers in this dissertation assess the effect of extreme conditions on physical integrity rights directly, one of these papers also addresses the role of extreme conditions on democratization, which is commonly associated with a step towards higher respect for physical integrity rights (e.g., Davenport, 2007). Empirical findings of different types of extreme conditions are then compared.

More specifically, chapter 2 tests whether large-scale natural disasters are related to a change in respect for physical integrity rights and examines the role of disaster aid in this context. Chapter 3 observes the effect of large youth unemployment as an economic crisis on respect for physical integrity rights. Chapter 4 investigates the direct effect of financial crises on physical integrity rights. In addition, it deals with their impact on physical integrity rights indirectly by examining the effect of financial crises on democratization. Chapter 5 studies the effect of coups d'état on respect for physical integrity rights. Chapter 6 analyzes whether imports of small arms and light weapons lead to a change in physical integrity rights standards. Finally, chapter 7 concludes by summarizing the main findings of the previous five chapters, contrasting the effect of different types of extreme conditions on respect for physical integrity rights, pointing out potential limitations of this study and providing recommendations for researchers and policy makers.

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2

Aiding Autocracies in the Aftermath of Disasters?
The Effect of Large-Scale Disasters on Physical Integrity Rights

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Abstract

Disasters are commonly linked with a disruptive impact on economies, infrastructure, and political stability. These adverse effects are particularly pronounced in autocratic regimes. Recently, scholars have provided empirical support for this view suggesting that the availability of disaster relief only has a marginally significant effect on respect for physical integrity rights in autocracies when the number of disaster-affected persons increases. Yet, there are strong empirical reasons to re-examine these findings. In this paper, I reassess this relationship using a novel disaster measure based on primary geophysical and meteorological information as well as a more reliable physical integrity rights variable. The analysis provides empirical evidence that previous findings do not survive several robustness checks and argues that the effect of minor natural hazards differs from natural disasters.

Keywords: natural disaster, repression, dissent, humanitarian aid.

JEL classification: D74, H84, K33, P48.

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2.1 Introduction

Natural disasters are most commonly linked with a disruptive impact on infrastructure and economies. In 2014, more than 141 million people affected by natural hazards and 20 808 fatalities as well as a total damage of approximately US $ 98 billions have been recorded by the International Disaster Database (Guha-Sapir et al., 2016). To mitigate the impact of such events in an affected country both state and non-state organizations often provide international humanitarian aid: In the same year, aid flows in response to natural disasters amounted to approximately US $ 3.5 billion (OCHA, 2016). In this context, non-governmental organizations and international organizations also point out changes in human rights standards in the immediate aftermath of natural disasters. For instance, in resolution 22/16 in 2013 and in research report 28/76 in 2015, the Human Rights Council of the United Nations General Assembly (UNGA) repeatedly indicates that human rights are affected by natural disasters and emphasize the role of humanitarian post-disaster aid. Despite its practical relevance, empirical evidence on this relationship is scarce. This paper examines the link between natural disasters and respect for physical integrity rights while accounting for the role of disaster aid. As non-democracies are most adversely affected by natural disasters, the focus of this paper lies on non-democracies.

So far, two studies assess the direct effect of disastrous natural events on respect for human rights. While Gutmann and Voigt (2015) assess the role of economic incentives more broadly by accounting for per capita income, Wood and Wright (2015) are the only study also taking the role of humanitarian aid under scrutiny. Using the logarithm of the number of people affected by immediate-onset events as an indicator for the severity of disasters, Wood and Wright (2015) examine whether the link between natural hazards and repression is conditional on humanitarian aid between 1977 and 2009. Estimating an ordered probit model, they find that an increase in the number of people affected by natural hazards leads to a statistically significant increase in repression. Splitting the sample into hazard years as well as distinguishing between democracies and non-democracies, the authors also find that inflows of disaster aid dampen this increase in repression in democracies, but increase the likelihood of repression in non-democracies as natural events affect more people.

Drawing from this research, this paper re-examines the nexus between natural events, disaster aid, and rights violations applying three modifications: one of theoretical and two of empirical nature. At the theoretical level, Wood and Wright (2015) argue that democracies are more likely to use aid to mitigate grievances, which thus dampens the negative effect of natural hazards on rights violations. In autocracies, by contrast, disaster aid is argued to

present additional resources, which the autocrat can use to increase repression and distribute perks to supporters. While this is a valid argument, it omits that disaster aid is often provided as in-kind items and that the distribution of disaster relief to the affected population can also recuperate a population's loyalty to the incumbent. In addition to their theoretical considerations, I rely on Wintrobe's (1998) model of dictatorship and argue that disaster aid can also dampen the negative effect of disasters on physical integrity rights in autocracies.

As regards empirical modifications, I first use Wood and Wright's replication dataset and check the robustness of their results using a different measure for physical integrity rights. I rely on a latent physical integrity rights variable, which has been proposed as a novel, more accurate indicator for repression (Fariss, 2014). In contrast to Political Terror Scale scores (Wood and Gibney, 2010), which are used by Wood and Wright, this continuous variable combines several indicators of physical integrity rights standards into one variable. Its estimation approach also accounts for an increasingly strict standard of accountability over time. This robustness check thus aims at obtaining more reliable estimates for the effect of natural disasters on repression.

Second, this paper focuses on large-scale natural disasters. More specifically, I use a binary variable which includes only those events whose intensity exceeds what a country is used to experience on average. Disaster intensity is measured based on objective geophysical and meteorological data. With this measure, I intend to avoid upward biased and unreliable estimates which are likely to stem from the use of subjective measures such as the number of people affected (e.g., Gutmann and Voigt, 2015; Neumayer and Plümper, 2007). In addition, the focus on large, unusual disasters is in line with the theoretical framework presented in the following section.

Results of this paper show that Wood and Wright (2015) findings are rather fragile and not robust to these two modifications. Using the updated rights variable, results show that the number of affected persons in fact does not significantly affect repression. Similarly, findings in Wood and Wright (2015) lose statistical significance when focusing on extreme disasters instead of the number of affected people. Also in contrast to their findings, the interaction effect of disasters and disaster aid is in fact strongly statistically significant for autocracies and suggest an increase in repression.

The remainder of this paper is structured as follows. Section 2 provides a theoretical framework of an autocrat's repressive behavior in the aftermath of a large-scale disaster and how it is impacted by humanitarian aid inflows. The third section presents the definition and operationalization of each variable and the estimation methods. Results are presented and

checked for their robustness in Section 4. Section 5 concludes highlighting the need to distinguish between the effect of minor natural events and large-scale natural disasters.

2.2 Theoretical framework

The central argument of this paper is that violations of human rights increase in the aftermath of disasters in autocracies, but humanitarian aid can dampen this increase in rights violations. This section is divided in two parts: The first part focuses on why repression increases in the aftermath of disasters, while the second describes how disaster aid affects this relationship.

From a public choice perspective, autocrats are rational and self-interested actors, who derive their utility from maximizing personal consumption and power (Wintrobe, 1998). In other words, an autocrat's primary objective is to stay in office, i.e. to generate and maintain political power. According to Wintrobe (1998), autocrats have two strategies at their hands to facilitate their survival in office and achieve their goal, namely loyalty and repression. On the one hand, autocrats can buy and accumulate loyalty of their population, for instance, by distributing rents and other economic benefits. On the other hand, they can apply repressive measures such as coercion of the population and targeted violations of human rights which aim to deter the population from organizing an opposition to the incumbent. In times of adverse economic shocks, which result for instance from natural disasters, fewer resources are available for the above mentioned reward or punishment mechanisms of autocrats. Also fostered by potential disaster-caused grievances, there is a fall in the level of loyalty of the population to the autocrat, which will provoke an increase in rights violations (Wintrobe, 1998). Consequently, as a short-term response, an autocrat shows less respect for human rights in order to maintain power at the minimum level necessary for survival (Wintrobe, 1998, p. 55). This can be formulated as follows:

Hypothesis 1: Respect for physical integrity rights decreases in autocracies in the aftermath of disasters.

The decision of autocrats to change the level of repression is strongly linked to the availability of resources such as aid inflows and the conditions under which they are provided. According to Wintrobe (1998, p. 71), aid policies, which impose gradually more stringent human rights constraints over time, reduce the level of repression in any type of regime. The underlying rationale of the argument is that aid allows an autocrat to purchase and increase loyalty without having to reduce personal consumption (ibid., p. 70). The long-term nature of aid flows and human rights constraints provides sufficient time for the autocrat

to increase loyalty before successively reducing the level of repression without facing the immediate risk of being deposed. This is based on the assumption that rights violations can be properly observed and rights constraints are binding (ibid., p. 68).[1]

This argumentation with respect to long-term aid policies is not readily applicable to a post-disaster setting in which humanitarian aid is provided. In contrast to official development aid, which is orderly planned, scheduled for several periods, and often conditional on rights standards, disaster relief is - due to its nature - provided only irregularly and ad hoc. This relatively higher insecurity of when and how many resources will be available does not allow the incumbent to riskless decrease the level of repression little by little. In addition to states, also multilateral institutions and non-governmental organizations provide disaster relief (Fuchs and Klann, 2013). While the severity of a disaster and humanitarian need increase the likelihood that post-disaster aid is provided, political considerations and conditionality only play a minor role (e.g., Fuchs and Klann, 2013; Drury et al., 2005). Due to its high stakes with respect to the survival of the disaster-struck population, it is unlikely to be withheld due to a regime's human rights record or withdrawn in the case of unmet conditions. Summing up, in contrast to official development aid disaster relief does not provide the same conditions under which an autocrat may be more likely to respect physical integrity rights.

Whether the effect of post-disaster aid without a long-term binding human rights constraint can nevertheless lead to a decrease in repression depends on its effect on the loyalty of the population to the autocrat. If aid is not conditional, the autocrat will spend post-disaster aid on personal consumption and leave the amount of resources spent on loyalty and repression unchanged (Wintrobe, 1998, p. 68). Disaster relief is, however, not exclusively given in the form of financial support. A large share of humanitarian disaster relief is provided tangibly as in-kind aid such as food or non-food aid items, material relief assistance, and health services. For instance, of US $ 3.6 billion, which were provided as humanitarian disaster aid in 2010, at least US $ 1 billion can be unambiguously identified as in-kind aid (OCHA, 2016).[2] I assert that in-kind disaster aid is less likely to be redirected for the autocrat's personal consumption. Items and services encompassed in in-kind aid can only be employed in the recovery of the population and reconstruction of the disaster-struck

[1] Wintrobe (1998) does not discuss further aspects of aid policies such as the conditionality of aid.

[2] This includes all in-kind contributions as well as disaster relief, which cannot be liquidated or seized by the incumbent to maximize his personal consumption, such as tents and shelter, blankets, drugs, and soap as well as management, logistics, transportation, and coordination services provided by humanitarian workers. In-kind transfers would even amount to at least US $ 1.8 billion if food aid and aid dedicated at education were considered as in-kind transfers.

infrastructure. In this case, disaster relief dampens the effect disasters have on grievance and greed and subsequently increases the loyalty of the population to the incumbent. Assuming the autocrat can take credit for a subsequent improvement in disaster-struck areas and facing an increase in loyalty the incumbent needs to spend less on repression in order to stay in office. He will thus use these resources for personal consumption and decrease repression (Wintrobe, 1998, p. 62). Based on these theoretical conjectures, the following relationship is hypothesized:

Hypothesis 2: Respect for physical integrity rights decreases less in the aftermath of disasters when disaster relief is received.

2.3 Research design

2.3.1 Dependent variable: respect for physical integrity rights

Autocrats can repress their population either indiscriminately in form of civil rights violations or target human rights of individuals and opposition groups selectively. While human rights is a broad concept and violations of different human rights can occur, the majority of empirical studies have found that autocrats almost exclusively violate physical integrity rights when they resort to the repression of rights (e.g., Wood and Wright, 2015; Schnakenberg and Fariss, 2014; Hafner-Burton, 2005; Poe and Tate, 1994). In line with this research and also for reasons of data availability and reliability, I define human rights narrowly as physical integrity rights. The term 'physical integrity rights' encompasses the following human rights: freedom from political and unlawful imprisonment, freedom from torture as well as freedom from cruel and inhumane treatment. It also captures violations in terms of extrajudicial killings and forced disappearances. High respect for physical integrity rights consequently indicates low or only few violations thereof.

Commonly used physical integrity rights measures such as the Political Terror Scale index (Gibney et al., 2015), which is used by Wood and Wright (2015), underlie systematic changes in the way information about human rights abuses is processed and interpreted. This more rigorous standard of accountability masks the actual development of physical integrity rights practices over time (Fariss 2014, p. 297). I therefore use the currently most accurate dataset on respect for physical integrity rights, which is provided by Fariss (2014). This cross-national dataset combines the above mentioned two data sources with specific datasets on the prevalence of torture, genocide, and political executions (Fariss, 2014, p. 302). Using a dynamic ordinal item response theory model, Fariss (2014) obtains a latent basic human rights variable. Its underlying estimation approach includes random effects in response tendencies

which can alter the relationship between the latent traits of basic human rights and measured respect for rights.[3] Consequently, this variable allows accounting for the above criticized changing standard of accountability. Moreover, it answers the criticism of "unrealistic assumptions about the data generating process" of additive indices such as the Political Terror Scale index (Schnakenberg and Fariss, 2014, p. 1).

This physical integrity rights variable is a continuous measure with larger values indicating higher respect for physical integrity rights. To facilitate interpretation and comparisons, I normalize this variable to range between 0 and 100. A value of 100 would then indicate the highest respect for physical integrity rights, whereas a value of 0 expresses widespread violations of physical integrity rights. Despite improvements and advantages compared to other rights measures, it has to be noted that values of Fariss' (2014) variable can also not directly be attributed to the exact number of cases in which these rights were violated.

In this sample, respect for physical integrity rights is on average 44 % (see Table 2.1). Among all non-democracies encompassed in this sample, Oman scores highest with a respect of physical integrity rights of approximately 65 % since 2002. Burundi and Ethiopia, for instance, pertain to the non-democracies in which respect for rights amounts to less than 10 %. Most of these low human rights record years are agglomerated in the beginning of the observation period, i.e. in the 1980s; in general, respect for physical integrity rights improves over time (see also Fariss, 2014).

2.3.2 Independent variables: natural disasters and disaster aid

While various measurements and definitions of what constitutes a (natural) 'disaster' exist, Wood and Wright (2015), like most empirical studies, rely on the Emergency Events Database EM-DAT of the Centre for Research on the Epidemiology of Disasters for data (CRED, 2012). This dataset is based on observations and reports compiled from various sources such as UN agencies, insurance companies, or the International Federation of Red Cross and Red Crescent Societies. It contains information on the economic damage, fatalities, and the number of people affected by a natural or man-made event. For replication purposes, I first rely on the variable used by Wood and Wright (2015): the logarithm of the number of people affected by natural, rapid-onset disasters.

Despite its usefulness for the analysis of economic and human damages, there are doubts about the exogeneity and reliability of EM-DAT data. Human and economic damages

[3] See Schnakenberg and Fariss (2014) for a detailed description of the model.

caused by disasters are related to both a country's income and regime type and thus indirectly associated with a country's respect for human rights (e.g., Toya and Skidmore, 2007). As fatalities are not explained by disaster intensity alone, empirical findings might therefore be distorted. Furthermore, the selection of events into the EM-DAT database may not be random as information on disasters is among other sources based on insurance companies' reports (Guha-Sapir et al., 2004, p. 15). The number of events in lower income countries may be underreported. In addition, the number of persons affected by a natural event is a rather inaccurate and broad measure since it includes everyone who is in need of immediate emergency relief.

Instead of using such an 'output measure', I rely on a disaster measure which indicates the physical intensity of natural events and is therefore not correlated with aspects of economic development. Such data is provided by the Ifo GAME database, a dataset primarily based on geophysical and meteorological data (Felbermayr and Gröschl, 2014). It covers the period from 1979 to 2010 and draws upon the following five indicators for information on disaster intensity: Richter scale, wind speed, rainfall, temperature extremes, and the magnitude of volcanic eruptions. GeoMet data exceeds the coverage of EM-DAT data, especially with respect to earthquakes and volcano eruptions (Felbermayr and Gröschl, 2014, p. 95). As the impact of a natural event depends on the disaster intensity set in relation to the size of the disaster-struck country, I use the GeoMet disaster index, which is scaled by land area (Felbermayr and Gröschl, 2014, p. 98).

Following modifications of the continuous GeoMet disaster index are made to obtain a binary measure which identifies only large-scale disasters occurring in a country: First, for reasons of comparability and to facilitate interpretation, I normalize the disaster variable to a range between 0 and 1 with values of zero or close to zero indicating no or only minor natural events. Similar to the measurement approach provided by Gutmann and Voigt (2015), I consider a natural event as large-scale if the disaster intensity index exceeds the country-specific mean by a standard deviation of ¼. This threshold is chosen as it balances two important aspects. On the one hand, it is in line with the theoretical argument assuming that extreme, large-scale events are more likely to cause a decline in loyalty to the autocrat. On the other hand, it accounts for empirical needs as with a larger threshold the disaster variable would yield too few observations, little variation, and thus only little explanatory power for

the analysis.[4] The skewness to the right indicates that these events in fact present extreme and rare disasters.

This modification is motivated by the assumption that minor natural events put lower stress on the economy and consequently have fewer implications for loyalty of the population than extreme conditions. This claim is supported by Cavallo et al. (2013) who - in contrast to large natural disasters - do not find evidence of a significant impact of milder events on economic growth.

Table 2.1: Descriptive statistics

Variables	N	Mean	SD	Min	Max
Rights (Fariss, %)	5,559	44.71	18.11	0	100
Disaster aid (%)	4,666	0.17	0.85	0	25.77
Affected (ln)	4,666	3.76	5.26	0	19.24
Disaster (λ=0)	3,025	0.46	0.50	0	1
Disaster (λ=0.25)	3,025	0.37	0.48	0	1
Disaster (λ=0.5)	3,025	0.29	0.45	0	1
GDP per capita (ln)	4,666	8.35	1.25	4.89	12.13
Population (ln)	4,666	16.00	1.56	12.16	20.99
Democracy (Polity IV)	4,666	11.42	7.33	0	20
Democracy (Cheibub et al.)	5,559	0.46	0.50	0	1
Demonstrations	4,666	0.58	1.64	0	26
Dissent	5,534	1.06	2.96	0	49
Civil conflict	4,666	0.19	0.39	0	1
Cold war	4,666	0.38	0.48	0	1
Regime durability (ln)	4,666	2.56	1.27	0	5.30

To test the hypothesis that aid can help compensate the increased need of rights violations, I use the amount of disaster aid received as an independent variable. Again, I follow Wood and Wright (2015) and employ their disaster aid variable as contained in the replication dataset. This variable encompasses emergency assistance such as emergency

[4] For reasons of robustness, I also check for other parameter values of λ, namely λ=0 and λ=0.5 country-specific standard deviations above the mean. As the parameter value increases, the number of years in which a large-scale disaster occurs decreases. Findings are reported in Table 2.3 and Figure 2.3 in the appendix.

health services and food aid, reconstruction relief and material assistance and rehabilitation. Data on post-disaster aid inflows is taken from the AidData (2.0) dataset (Tierney et al., 2011). Disaster relief is given as a percentage of the recipient state's GDP. On average, aid flows in the replication sample amount to about 0.2 % of a country's GDP. Disaster relief that exceeds 1 % of GDP is exceptionally rare; this was only the case for 68 of 2247 events (see Table 2.1).

2.3.3 Control variables

The following social and political country-specific factors, which are likely to affect state repression, are controlled for. Variables are taken from the replication data of Wood and Wright (2015). For one, both the number of anti-government protests and the occurrence of armed civil conflict causing at least twenty-five battle-related deaths are included. This is supported by previous studies which have argued that internal armed conflict increases the likelihood of repressive actions (e.g., Davenport and Armstrong, 2004). The authors rely on Banks (2005) for protests and on the Uppsala Conflict Data Program/Peace Research Institute Oslo Armed Conflict Data set v.4-2014 (Themnér and Wallensteen, 2014) for data on civil conflicts. As an alternative measure, I control for the number of dissent activities, i.e. anti-government protests, riots, or strikes involving more than 100 persons, which are drawn from the Cross-National Time-Series Archive by Banks and Wilson (2013).

Previous research has also highlighted that democracy is positively related to respect of physical integrity rights (e.g., Bueno de Mesquita et al., 2005). The democracy variable of the replication data set, *polity2*, is taken from Polity IV (Marshall, Jaggers, and Gurr, 2011) and rescaled to range from 0 to 20. As robustness check, I use the binary variable by Cheibub et al. (2010), which was later extended by Bormann and Golder (2013). It ranges between 0 for autocracies and 1 for democracies. The replication data set also encompasses a control variable for regime durability, which is taken from the Polity IV data set, and a variable controlling for the Cold War period (Poe et al., 2001).

Also, population size (in natural logarithms) is considered since larger populations increase pressure on governments by putting more stress on available resources (e.g., Carey, 2010; Poe and Tate, 1994). As a country's income is also a crucial indicator for a country's capacity to redistribute resources as a mechanism dampening popular dissatisfaction, I also control for GDP per capita. These variables of replication data set are taken from Gleditsch (2002). Gleditsch (2002) stands out from other data sources as it provides additional GDP and population estimates, which are missing for some states over certain time periods in other commonly used databases such as the Penn World Table.

Given that a country's respect for physical integrity rights in previous periods is likely to be pervasive and relevant for current respect for rights, a lagged dependent variable indicating the level of respect for physical integrity rights of the previous year is included. This is in line with Wood and Wright (2015) who account for this using a series of binary lags of the dependent variable.

2.3.4 Model estimation

According to Wood and Wright (2015), the original data sample used in their analysis captures up to 166 countries and 4,738 country-year observations from 1977 to 2009. The number of countries and observations is marginally reduced to 163 and 4,666 when using the alternative variable for respect for physical integrity rights. Due to data limitations for the occurrence of natural disasters and alternative control variables, the date sample is reduced and consists of up to 3,060 observations at the country level from 1979 to 2009 and encompasses up to 106 countries. Due to variance in data availability, the dataset at hand is an unbalanced panel. Following the replication files provided by Wood and Wright (2015), I estimate the following baseline model using an ordinary least squares (OLS) estimator with country-clustered standard errors:

$$Rights_{i,t} = \alpha Rights_{i,t-1} + \beta Disaster_{i,t} + \rho Aid_{i,t} + \omega X_{i,t} + \gamma_i + \delta_t + \mu_{i,t},$$

where $Rights_{i,t}$ denotes the dependent variable 'respect of physical integrity rights' and $Rights_{i,t-1}$ the lag of respect for physical integrity rights by one year. $Disaster_{i,t}$ presents the main independent variable: It is the logarithm of the persons affected by natural hazards in the first specification and the occurrence of natural disasters in the second specification. The term $Aid_{i,t}$ captures humanitarian aid inflows. The model includes a vector $X_{i,t}$ encompassing the above described control variables: institutional democracy, population size (ln), per capita GDP (ln), anti-government demonstrations, regime durability, civil conflict, and cold war. I also account for country (γ_i) and year (δ_t) fixed effects.

Literature has expressed concern that accounting for fixed effects and a lagged dependent variable through a non-dynamic estimation approach can generate inconsistent estimates (e.g., Nickell, 1981). However, it has been argued that this bias becomes marginal when the period of observation exceeds 20 years (Beck and Katz, 2011, p. 342; Nickell, 1981, p. 1417). As my analysis covers a period of more than 60 years, concern about this bias is negligible.

Despite a low likelihood of estimators being biased due to the Nickell bias, I use the system generalized method of moments (GMM) estimator by Arellano and Bover (1995) and Blundell and Bond (1998). I employ the two-step estimator implemented by Roodman (2009) and Windmeijer's (2005) finite sample correction. I find no signs for higher-order autocorrelation for which I tested by including the second lag of the 'respect for physical integrity rights' variable. Due to the use of lags, 565 instruments would be included. In order to minimize the number of instruments in the regressions, the matrix of instruments is collapsed as suggested by Roodman (2009). The following reduction to 71 instruments, however, reduces statistical efficiency (Roodman, 2009).

2.4 Empirical results

2.4.1 Baseline regression

Table 2.2 reports the results for Wood and Wright's baseline model testing the effect of the number of affected people on the novel respect for physical integrity rights variable. Column 1 shows that the number of people affected by a natural event is not significantly associated with an increase in physical integrity rights violations. This finding stands in contrast to previous results by Wood and Wright (2015) who find that an increase in the number of affected persons increases the likelihood of repression by 12 to 16 %. Humanitarian aid as a percentage of GDP exerts a significant positive effect on respect for physical integrity rights.

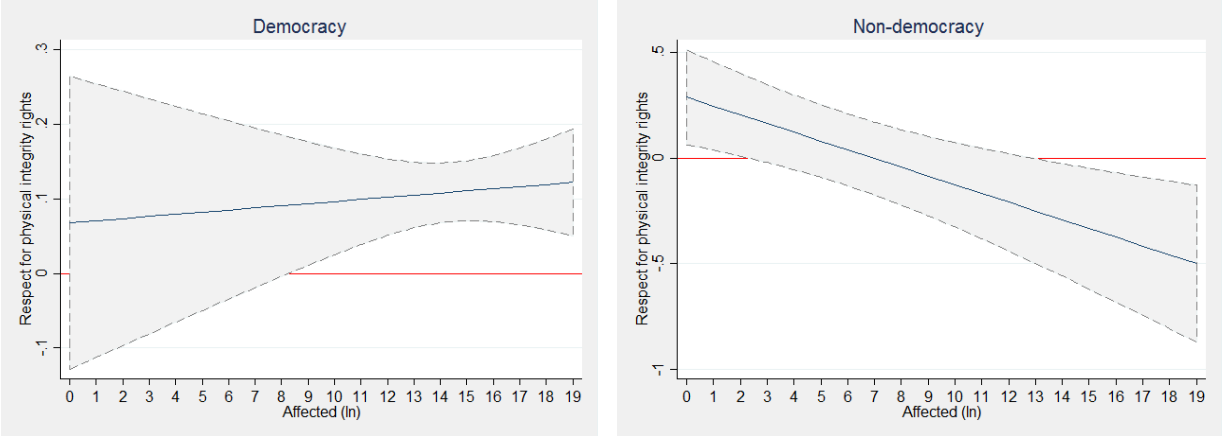
Table 2.2: Effect of affected persons and disaster aid on physical integrity rights

Variables	[1]	[2]	[3]
Rights (t-1)	0.924***	0.918***	0.918***
	(0.008)	(0.013)	(0.009)
Disaster	-0.007	0.001	-0.005
	(0.008)	(0.011)	(0.012)
Disaster aid	0.182***	0.068	0.289**
	(0.045)	(0.099)	(0.114)
Disaster x disaster aid		0.003	-0.041***
		(0.007)	(0.013)
Democracy	0.062***		
	(0.018)		
Population	-0.418	0.156	-1.762*
	(0.449)	(0.878)	(0.941)
GDP per capita	-0.120	-0.298	0.007
	(0.166)	(0.316)	(0.207)
Demonstrations	-0.068***	-0.049	-0.082***
	(0.022)	(0.031)	(0.030)
Regime durability	-0.064	-0.480**	-0.036
	(0.063)	(0.199)	(0.073)
Civil conflict	-1.499***	-1.486***	-1.595***
	(0.184)	(0.376)	(0.222)
Cold war	-0.797**	-0.557	-2.355***
	(0.381)	(0.533)	(0.798)
Sample	Full	Democ	Autoc
Time period	1977-2009	1977-2009	1977-2009
R^2	0.99	0.99	0.98
Observations	4,666	2,058	2,608

Note: OLS regression coefficients results with standard errors in parentheses clustered at the country level. The variable 'Disaster' captures the number of affected persons (ln). Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

With respect to the role of disaster aid, results in model 2 and 3 are split into a democracy and an autocracy sample in which the number of affected people is interacted with disaster aid. Marginal effects for democracies and non-democracies, respectively, are presented in Figure 2.1 since coefficients of interaction terms cannot be interpreted directly (Brambor et al., 2006). The left graph depicts the predicted effect of a one-unit increase in disaster aid on respect for physical integrity rights over the range of people affected by natural events in democracies. The results illustrate that in a democracy an increase in disaster aid significantly contributes to an increase in respect for physical integrity rights if the logarithm of affected persons is larger than 8, i.e. if more than about 3,000 persons are affected. In contrast to Wood and Wright (2015), this effect becomes only marginally stronger as the number of people affected by natural events increases.

Figure 2.1: Average marginal effects of disaster aid by affected persons



Note: Left panel calculated from model 2, Table 2.2. Right panel calculated from model 3, Table 2.2.

The right graph of Figure 2.1 shows the relationship of the interaction term and respect for physical integrity rights for the subsample of non-democracies. Results suggest that an increase in disaster aid is likely to decrease respect for physical integrity rights as natural events affect more people. When an event affects less than 100 people, which corresponds to a logarithm of about 4, the probability of a one-unit increase in respect for physical integrity rights increases to approximately 20 %. This provides support for Hypothesis 2. On average, however, natural events affect more than 100 persons. An increase in aid in concomitance with natural hazards, which render between 100 and 65,000 people affected, does not exert a statistically significant effect on rights violations. These findings provide no significant

evidence for a dampening effect of disaster aid with respect to physical integrity rights violations. Once again results slightly differ from Wood and Wright (2015): Except for minor events, which affect less than 65,000 persons, the effect of disaster aid increases as the severity of the natural event increases.

The results for the control variables are largely in line with previous studies as well as Wood and Wright (2015). Higher levels of democracy are positively associated with respect for physical integrity rights. Surprisingly, especially more durable democratic regimes are more likely to resort to physical integrity rights violations. When the sample is split according to regime type, larger populations increase the likelihood of rights violations in non-democracies but not in democracies. Anti-government demonstrations, civil conflict, and the Cold War period decrease respect for physical integrity rights. Per capita GDP exerts a negative impact on respect for physical integrity rights, but is statistically insignificant across all model specifications.

2.4.2 Robustness checks

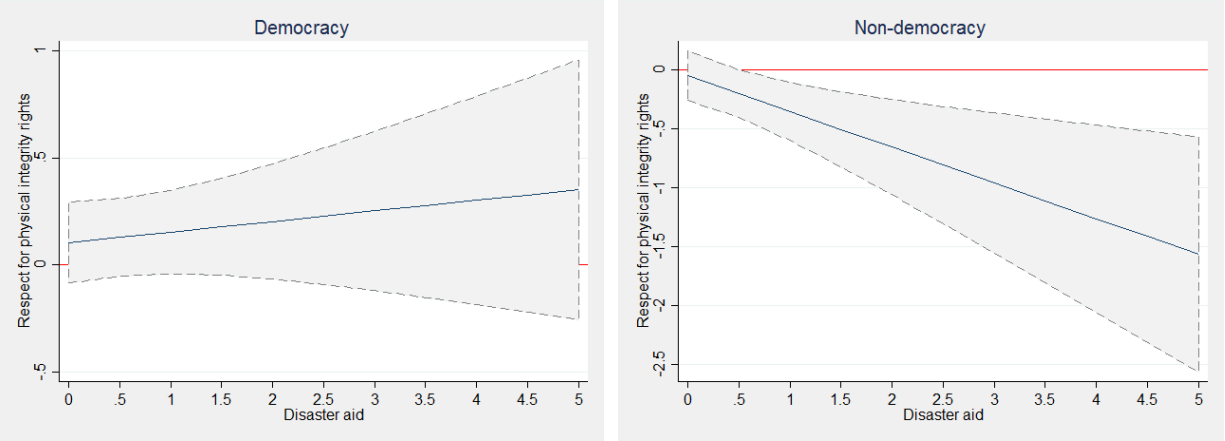
This section presents additional robustness checks involving the use of alternative measures and system-GMM as an alternative estimation approach. Table 2.3 presents the results measuring the effect of large-scale natural disasters. Due to data availability, the observation period is slightly reduced and ranges from 1979 to 2009. As in the baseline regression, there is no significant effect of the occurrence of a disaster on respect of physical integrity rights. Disaggregating the sample by regime type, Figure 2.2 illustrates the marginal effects of the interaction term. In contrast to previous findings, the left panel of Figure 2.2 shows that increases in aid do not significantly influence respect for physical integrity rights in democracies when natural disasters of a larger scale occur. In autocracies, an increase in aid contributes to lower respect for physical integrity rights in the light of a natural disaster. This influence is larger the more aid (as a percentage of GDP) is provided.

Table 2.3: Effect of disasters and disaster aid on respect for physical integrity rights

Variables	[1]	[2]	[3]
Rights (t-1)	0.918***	0.911***	0.912***
	(0.010)	(0.014)	(0.013)
Disaster	0.019	0.104	-0.051
	(0.072)	(0.095)	(0.105)
Disaster aid	0.163**	0.043	0.243**
	(0.078)	(0.062)	(0.132)
Disaster x disaster aid		0.049	-0.303***
		(0.064)	(0.105)
Democracy	0.054**		
	(0.027)		
Population	-0.316	-0.671	-2.884*
	(0.563)	(1.087)	(1.45)
GDP per capita	-0.307	-0.040	-0.364
	(0.265)	(0.388)	(0.425)
Demonstrations	-0.052**	-0.036	-0.053
	(0.023)	(0.032)	(0.037)
Regime durability	-0.040	-0.337**	0.030
	(0.077)	(0.152)	(0.093)
Civil conflict	-1.644***	-1.666***	-1.725***
	(0.236)	(0.426)	(0.299)
Cold war	-0.864*	-0.619	-3.225***
	(0.439)	(0.608)	(1.199)
Sample	Full	Democ	Autoc
Time period	1979-2009	1979-2009	1979-2009
R^2	0.99	0.99	0.97
Observations	3,029	1,559	1,466

Note: OLS regression coefficients results with standard errors in parentheses clustered at the country level. The variable 'Disaster' captures the occurrence of a natural disaster. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Figure 2.2: Average marginal effects of disasters by disaster aid



Note: Left panel calculated from model 2, Table 2.3. Right panel calculated from model 3, Table 2.3.

I also test for alternative thresholds of what constitutes a natural disaster. Table 2.4 and Table 2.5 in the Appendix reports results for natural events which are as strong as on average experienced and for events in which the country-specific mean is exceeded by more than a half of a country's standard deviation (λ=0.5). Results suggest that the occurrence of a minor disaster exerts only a little statistically significant effect on respect for physical integrity rights, even when disaster aid is provided. This finding provides only weak support for Hypothesis 2. Figure 2.3 in the Appendix, however, shows that the negative effect of disasters and disaster aid on respect for physical integrity rights is stronger when applying a stricter definition and a larger threshold.

In Table 2.6 in the Appendix, I stepwise include two alternative measures for control variables. Column 1 of Table 2.6 reports the results of all alternative control variables in one model. First, I replace the polity-democracy measure by a binary democracy measure from Cheibub et al. (2010). Results are largely robust to this operation: The replacement leads to marginal changes in the size of the coefficients. The coefficient for democracy, however, becomes statistically insignificant. As a second step, I use the sum of dissent events instead of anti-government demonstrations. Again, results are robust to this alternative measure. Only the effect of the interaction term in model 3 becomes more pronounced and the occurrence of a disaster leads to a stronger decrease in respect for physical integrity rights than under the previous specifications.

As a final robustness check, I assess whether results are robust to using the system generalized method of moments estimator as described above. Results are presented in Table 2.7 in the Appendix whereas marginal effects are again illustrated by Figure 2.4. While the baseline model is in line with previous findings, statistical significance of the interaction terms is affected. As can be seen in the left panel of Figure 2.4, an increase in disaster aid in times of a natural disaster leads to an increase of respect for physical integrity rights in democracies. Similar to Wood and Wright (2015), I find that an increase in disaster aid reduces repression in times of natural disasters. This decrease is stronger when more disaster aid is given. The right panel depicts that in non-democracies the effect of disaster aid is still strong and negative but only significant at the 5 % level.

2.5 Conclusion

This paper examined whether the occurrence of disasters is associated with changes in physical integrity rights violations and how disaster aid affects this change. The results presented above show that Wood and Wright's (2015) findings do not stand up to several robustness checks. With a change in the data used or in a theoretically justified econometric specification, i.e. focusing on large-scale disasters instead of minor events, there is no longer empirical support for the hypothesized relationship between disasters and repression. Neither an increase in the number of persons affected by natural hazards nor the occurrence of disasters is significantly associated with an increase in rights violations. Nevertheless, there is strong empirical evidence that disaster aid has a negative influence on respect for physical integrity rights in autocracies. With a lower significance, this pattern has also been detected by Wood and Wright (2015). This shows that one can be confident about the relevance of disaster aid in disaster-struck autocracies.

These findings bear interesting insights for disaster management and donors of humanitarian aid. First, the provision of humanitarian aid significantly increases respect for physical integrity rights. Second, in the light of disasters humanitarian aid can contribute to a worsening of physical integrity rights standards in autocracies. This finding suggests that a decrease in loyalty to the incumbent in the aftermath of disasters cannot be mitigated by disaster relief, potentially because the population is aware that disaster aid is provided by foreign donors and can thus not be attributed to the incumbent. It has to be noted that these findings do not suggest a deterministic relationship between natural disasters, respect for physical integrity rights, and disaster aid. Thus, in line with Wood and Wright (2015), results should not be interpreted as an advice to donors to stop providing humanitarian aid in the light

of disasters. By contrast, it recommends donors to more carefully observe the use of humanitarian aid in non-democracies when giving aid.

While this analysis highlighted the importance of using more reliable measures for repression and natural disasters, further investigation of how disaster aid is used in disaster-struck countries is desirable. As claimed in the theory section, I suspect that the effect of disaster aid on the disaster-repression nexus is dependent on the type of aid provided as in-kind contributions may be less likely to be misused for repression. Unfortunately, so far there is no disaggregated disaster data which allows to assess whether the effect of in-kind and cash contributions differ. Examining the influence of types of aid in a more differentiated manner could improve the understanding of the transmission channels.

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2.7 Appendix

Table 2.4: Effect of disasters (λ=0) on respect for physical integrity rights (1979-2009)

Variables	[1]	[2]	[3]
Rights (t-1)	0.923***	0.915***	0.903***
	(0.009)	(0.013)	(0.014)
Disaster	0.015	0.021	-0.093
	(0.071)	(0.094)	(0.110)
Disaster aid	0.162**	0.054	0.075
	(0.077)	(0.083)	(0.095)
Disaster x disaster aid		0.015	0.252*
		(0.065)	(0.143)
Democracy	0.479		
	(0.319)		
Population	-0.214	-0.543	-2.417
	(0.573)	(1.115)	(1.628)
GDP per capita	-0.371	-0.277	-0.505
	(0.253)	(0.394)	(0.386)
Dissent	-0.046***	-0.020	-0.060***
	(0.017)	(0.019)	(0.022)
Regime durability	-0.104	-0.304**	0.066
	(0.069)	(0.139)	(0.085)
Civil conflict	-1.649***	-1.820***	-1.761***
	(0.232)	(0.334)	(0.322)
Cold war	-1.017**	-0.737	-3.224**
	(0.430)	(0.648)	(1.292)
Sample	Full	Democ	Autoc
R^2	0.99	0.99	0.97
Observations	3,058	1,639	1,415

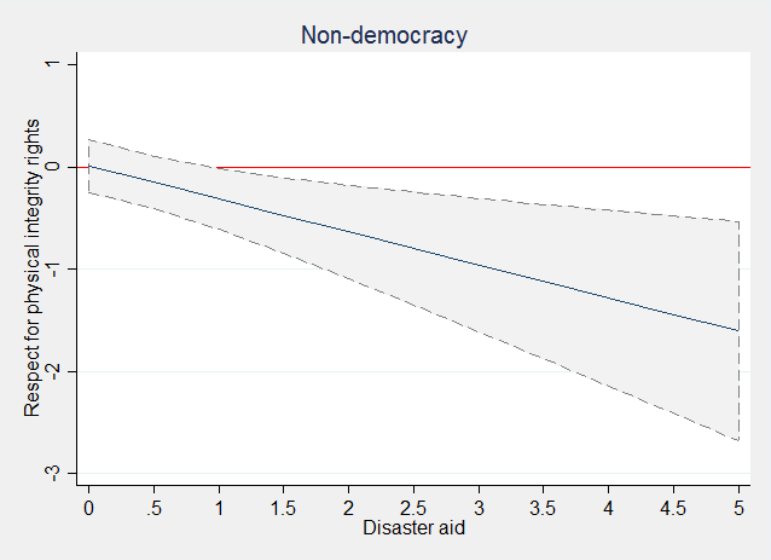
Note: OLS regression coefficients with standard errors in parentheses clustered at the country level. The variable 'Disaster' captures the occurrence of a natural disaster using a threshold of λ=0. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 2.5: Effect of disasters (λ=0.5) on respect for physical integrity rights (1979-2009)

Variables	[1]	[2]	[3]
Rights (t-1)	0.923***	0.915***	0.904***
	(0.009)	(0.013)	(0.014)
Disaster	0.023	0.088	0.011
	(0.081)	(0.110)	(0.130)
Disaster aid	0.162**	0.031	0.274**
	(0.077)	(0.075)	(0.126)
Disaster x disaster aid		0.054	-0.324***
		(0.070)	(0.111)
Democracy	0.479		
	(0.320)		
Population	-0.211	-0.504	-2.325
	(0.575)	(1.109)	(1.672)
GDP per capita	-0.371	-0.270	-0.476
	(0.253)	(0.395)	(0.414)
Dissent	-0.046***	-0.020	-0.059***
	(0.017)	(0.019)	(0.022)
Regime durability	-0.103	-0.305**	0.070
	(0.069)	(0.138)	(0.084)
Civil conflict	-1.648***	-1.818***	-1.734***
	(0.232)	(0.332)	(0.308)
Cold war	-1.014**	-0.715	-3.111**
	(0.430)	(0.649)	(1.332)
Sample	Full	Democ	Autoc
R^2	0.99	0.99	0.97
Observations	3,058	1,639	1,415

Note: OLS regression coefficients with standard errors in parentheses clustered at the country level. The variable 'Disaster' captures the occurrence of a natural disaster using a threshold of λ=0.50. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Figure 2.3: Average marginal effects of disasters (λ=0.5) by disaster aid



Note: Calculated from model 3, Table 2.5.

Table 2.6: Effect of disasters on physical integrity rights from 1979 to 2009 (OLS)

Variables	[1]	[2]	[3]
Rights (t-1)	0.923***	0.915***	0.904***
	(0.009)	(0.013)	(0.014)
Rights (t-2)			
Disaster	0.021	0.057	0.017
	(0.072)	(0.103)	(0.099)
Disaster aid	0.162**	0.030	0.298***
	(0.077)	(0.074)	(0.105)
Disaster x disaster aid		0.055	-0.377***
		(0.070)	(0.102)
Democracy	0.479		
	(0.077)		
Population	-0.212	-0.508	-2.351
	(0.574)	(1.109)	(1.650)
GDP per capita	-0.371	-0.268	-0.471
	(0.253)	(0.396)	(0.408)
Dissent	-0.046***	-0.020	-0.059***
	(0.017)	(0.019)	(0.022)
Regime durability	-0.103	-0.306**	0.073
	(0.069)	(0.138)	(0.084)
Civil conflict	-1.648***	-1.819***	-1.713***
	(0.232)	(0.333)	(0.307)
Cold war	-1.015**	-0.722	-3.144**
	(0.430)	(0.647)	(1.315)
Sample	Full	Democ	Autoc
R^2	0.99	0.99	0.97
Observations	3,058	1,643	1,415

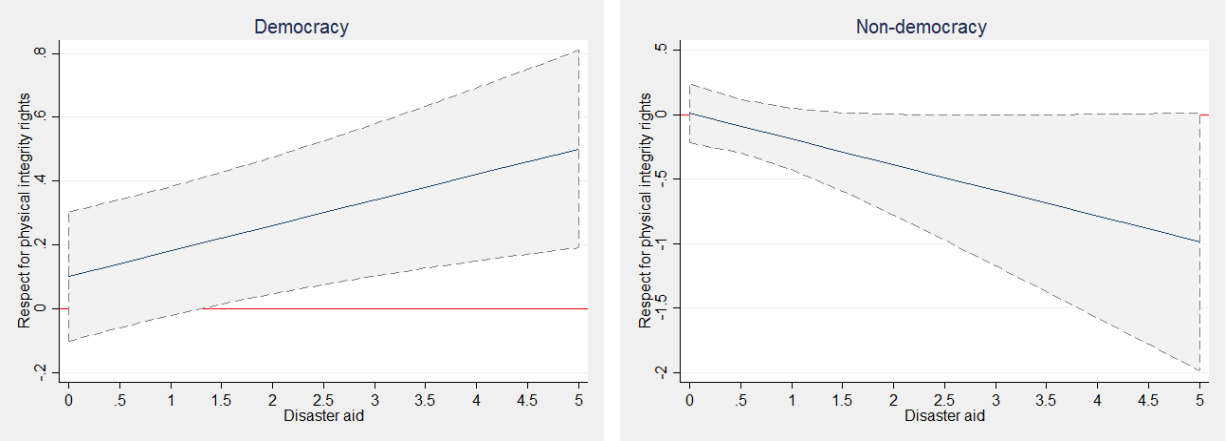
Note: Model 1-3 shows OLS regression coefficients; standard errors in parentheses are clustered by country. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 2.7: Effect of disasters on physical integrity rights from 1979 to 2009 (GMM)

Variables	[1]	[2]	[3]
Rights (t-1)	1.419***	1.429***	1.469***
	(0.046)	(0.050)	(0.052)
Rights (t-2)	-0.477***	-0.497***	-0.519***
	(0.022)	(0.026)	(0.043)
Disaster	0.0216	0.101	0.011
	(0.076)	(0.103)	(0.117)
Disaster aid	0.116***	0.040	0.154**
	(0.031)	(0.027)	(0.070)
Disaster x disaster aid		0.080***	-0.199*
		(0.027)	(0.110)
Democracy	0.377		
	(0.355)		
Population	-0.128	-0.170	-0.129
	(0.117)	(0.116)	(0.115)
GDP per capita	0.346*	0.381*	0.176**
	(0.186)	(0.216)	(0.086)
Dissent	-0.042*	-0.010	-0.047**
	(0.023)	(0.022)	(0.020)
Regime durability	-0.033	0.165	-0.056
	(0.110)	(0.177)	(0.082)
Civil conflict	-1.098*	-1.646*	-0.737*
	(0.629)	(0.959)	(0.436)
Cold war	-0.476	-0.067	-0.565
	(0.322)	(0.262)	(0.594)
Sample	Full	Democ	Autoc
A-B test 1st order	0.000	0.000	0.000
A-B test 2nd order	0.105	0.269	0.139
Observations	3,049	1,638	1,411

Note: Model 1-3 show results for dynamic panel data estimation, also with clustered standard errors in parentheses. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Figure 2.4: Average marginal effects of disasters by disaster aid



Note: Left panel calculated from model 2, Table 2.7. Right panel calculated from model 3, Table 2.7.

3

Young, frustrated, and repressed?
The Effect of Youth Unemployment Crises on Physical Integrity Rights

Katharina Pfaff[a]

Abstract

Media repeatedly, especially within the last five years, report that protests against rising youth unemployment in Europe and North African countries often coincide with arrests and infringements of the rights of young protesters. This paper presents a first attempt to empirically assess whether there is a systematic relationship between youth unemployment and respect for physical integrity rights. I argue that the occurrence of extreme youth unemployment leads to a decrease in loyalty of the young population to the incumbent, which he will respond to by using repressive measures. I expect that this factor adds to the threat of an incumbent's political survival. In a sample of 158 countries between 1991 and 2011, the effect of youth unemployment crises and their interaction with the size of youth cohorts on respect for physical integrity rights is analyzed. Contrary to theoretical expectations, the presence of extreme youth unemployment is associated with an increase in respect for physical integrity rights in democracies, while it decreases respect for physical integrity rights in autocracies. As the size of youth cohorts increases, the effect of youth unemployment crises in democracies decreases. This relationship, however, does not hold when using an alternative estimation approach. It thus provides only weak empirical evidence that youth unemployment crises are a determinant of respect for physical integrity rights.

Keywords: repression, physical integrity rights, youth unemployment, youth bulges.

JEL classification: D74, J11, J64, K33, P48.

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3.1 Introduction

Is extreme youth unemployment such a major source of discontent for the young generation that it drives political leaders to violate physical integrity rights? Extremely high youth unemployment rates and lack of economic opportunities are contributing factors which bring masses of, in particular young, people to the streets. Most recent examples are protests in the Arab region in 2010 and the *indignados* movement in Spain, which began in 2011 (ILO, 2012). Although demonstrations were met with repression indicating lower respect of physical integrity rights in times of large-scale youth unemployment, there are no studies examining this relationship so far. This paper attempts to close this gap and assesses whether the effect of extreme youth unemployment on respect for physical integrity rights varies with the size of dissent-prone youth cohorts.

Previous theoretical frameworks have argued that an incumbent decides to violate physical integrity rights when the loyalty of the population towards the incumbent decreases and the incumbent perceives his political survival to be threatened (e.g., Poe and Tate, 1994; Wintrobe, 1998). Such rights violations are especially likely in times of adverse economic crises in which buying loyalty is more costly than before. In addition, Nordås and Davenport (2013) argue that repression is likely to increase in the light of large youth cohorts as they are often associated with a higher rebelliousness and thus particularly threatening to a political leader's survival in office. One explanation is that opportunity costs of joining an anti-regime movement are lower because alternative income opportunities are lower in the presence of large youth cohorts (Collier, 2000, p. 94). In this paper, I build upon this theoretical reasoning and argue that exceptionally high youth unemployment is an indicator for an adverse economic shock, which can trigger a decrease in respect for physical integrity rights. In the context of such an economic crisis, large youth cohorts add to the negative effect of unemployment on respect for physical integrity rights because opportunity cost of protesting for young people are at lowest possible levels.

This paper contributes to the literature on the effect of extreme conditions such as, for example, natural disasters on human rights (Gutmann and Voigt, 2015). Large youth unemployment is conceptualized as an indicator for an economic extreme condition. This paper also contributes to the literature on youth bulges. Urdal (2006) and Nordås and Davenport (2013) suggest that unemployment and subsequently worsened income opportunities, which arise in the presence of large youth cohorts, make youth bulges threatening to political leaders and thus provoke repression. Whether the effect of youth bulges is in fact conditional on youth unemployment has not been assessed. This paper is the

first to examine whether a conditional relationship between youth unemployment and youth bulges exists.

Below, I provide a theoretical framework, which discusses a political leader's decision to repress when facing a youth unemployment crisis and large youth cohorts. The third section encompasses the research design of this paper, i.e. data and empirical methods. Empirical findings are presented in section 4. Finally, section 5 concludes.

3.2 Theoretical framework

One basic assumption of theories of state repression is that political leaders are interested in maximizing private consumption and maintaining political power. Their primary goal is to remain in office at lowest possible costs. To accomplish this aim, political leaders assess threats to their political survival and decide between different policies, which intend to discourage political opponents from challenging the incumbent (Poe and Tate, 1994). Wintrobe (1998) describes repression and loyalty as the two tools which can be used for this purpose. First, leaders can apply repressive measures such as violations of physical integrity rights. This strategy seeks to increase dissidents' costs of protesting and to deter political opponents from challenging the government. Second, leaders can buy loyalty of the population as an attempt to reduce threats to political survival. Soothing the population and buying off supporters is, for instance, accomplished through the distribution of rents. Both tools are costly and therefore involve a trade-off for the incumbent. He is expected to choose the strategy with which he can remain in power at lowest possible cost.

An incumbent is likely to choose repression over appeasing youth cohorts in times of negative economic shocks. Unusually large youth unemployment is an indicator for negative economic shocks because youth employment reacts particularly sensitive to economic downturns (Matsumoto et al., 2012). In the course of the recent financial crisis, for instance, global youth unemployment experienced a tremendous increase from 11.7 % in 2007 to 13.0 % in 2010 (ILO, 2015). When facing extreme youth unemployment, especially youth cohorts are susceptible to the use of violence and threatening to political survival as grievances and dissatisfaction among the young population are higher. With a heightened frustration from not being able to enter the labor market, loyalty of the young population to the political leader is likely to fall (Urdal, 2006). In the light of unemployment, alternative income opportunities are lower, i.e. opportunity costs of joining an anti-regime movement are lower (Collier, 2000). To mitigate adverse effects of unemployment, more resources would have to be invested in financial redistribution, social security systems, education programs, and labor market reforms. This corresponds to an increase in the costs of loyalty, which is

required to counteract a heightened threat to political survival. As with this increase in the costs of loyalty, it is - comparatively speaking - cheaper to remain in office using repression. Therefore, an increase in rights violations is more likely in the light of extreme unemployment. Based on these theoretical conjectures, the following relationship is hypothesized:

Hypothesis 1: Respect for physical integrity rights decreases in the light of extreme youth unemployment.

The negative effect of youth unemployment can be aggravated by demographic factors. In line with Nordås and Davenport (2013), I argue that large youth cohorts are likely to add to such a repressive reaction since they intensify the threat to political leaders. The underlying reasoning is that young people, in particular young men, are often associated with regime-challenging events such as protests, riots, and revolutions. Although both young and old cohorts can have incentives to express their dissent against the regime, the young population usually enjoys the benefits from a successful revolution longer (Shadmehr and Haschke, 2015). With a larger pool of potential political opponents, opportunities for violent conflict increase. Empirical evidence for this nexus has been provided, for instance, by Mesquida and Wiener (1999) and Urdal (2006) who find that large cohorts of young individuals relative to the overall population are positively related to both the occurrence and severity of conflict. Also, the prominence of such youth bulges in the French revolution in 1789 and in Arab spring demonstrations starting in 2010 serves as an example that youth bulges are related to threats to the political survival of the incumbent. As appeasing large youth cohorts by distributing rents is costly, political leaders prevent a concrete challenge to their survival in office by substituting repression for loyalty. This can be formulated as follows:

Hypothesis 2: Respect for physical integrity rights in the presence of extreme youth unemployment decreases more as the size of youth cohorts increases.

Regime type influences and restricts how political leaders can react to a decrease in loyalty and threats to the political status quo. Autocratic leaders are more likely to resort to coercive measures when facing a threat to their political survival as repression is less costly and less likely to be sanctioned than in democratic regimes (e.g., Davenport, 2007). Conversely, institutional constraints endue violations of physical integrity rights with more costs in democracies and democratic incumbents consequently are less likely to resort to

repression. In addition, democracies have other capacities and abilities of including dissent-prone youth cohorts in the labor market and addressing the issue of youth unemployment. Autocratic leaders are therefore more likely to use repressive measures than democratic leaders.

Hypothesis 3: Respect for physical integrity rights in the presence of extreme youth unemployment and an increase of large youth cohorts decreases more in autocracies than in democracies.

3.3 Research design

The following section describes the dependent and independent variables as well as the underlying estimation approach. The resulting dataset is a panel dataset. It encompasses 158 autocratic and democratic countries. The dataset consists of yearly observations at the country level from 1991 to 2011 as the main independent variable, youth unemployment, is only available from 1991 onwards. Due to variance in data availability for each variable, the dataset at hand is an unbalanced panel.

3.3.1 Dependent variable: respect for physical integrity rights

In line with the majority of studies on repressive behavior of state officials, I rely on respect for physical integrity rights as an indicator for repression (e.g., Hafner-Burton, 2005; Neumayer, 2005; Bueno de Mesquita and Smith, 2010). The variable 'respect for physical integrity rights' captures rights such as freedom from political and unlawful imprisonment, freedom from torture as well as freedom from cruel and inhumane treatment. It also includes cases of extrajudicial killings and forced disappearances.

In contrast to Nordås and Davenport (2013), I use the dataset on respect for physical integrity rights provided by Fariss (2014). This dataset combines commonly used physical integrity rights measures such as the Political Terror Scale index or Cingranelli and Richard's Human Right Dataset with other datasets on incidents of torture, genocide, and political executions. Due to its estimation method, however, Fariss (2014) accounts for the changing standard of accountability over time. Its main advantage over alternative data sources lies in accounting for more rigorous assessment of human rights abuses over the years and in capturing a more accurate picture of the development of respect for physical integrity rights. Unfortunately, neither this dataset nor any other available data sources on repression allow identifying only violations of physical integrity rights against the young, i.e. the alleged political opposition. Nevertheless, all else equal, I expect a bias from this discrepancy to be

negligible and the variable ‘respect for physical integrity rights’ to reflect repression against the youth.

The variable is continuous; higher values indicate higher respect for physical integrity rights and vice-versa. I normalize this variable to a range from 0 to 100. Descriptive statistics are provided in Table 3.1. Ranging from 0.34 to 100, respect for physical integrity rights in my sample amounts, on average, to 42. While autocracies show less respect for physical integrity rights (34.25), fewer violations of physical integrity rights are noted in democracies (50.21).

3.3.2 Independent variables

In this paper, I define unusually large youth unemployment as an adverse economic shock. Youth unemployment is defined as the percentage of young individuals aged between 15 and 24 who are not employed but seeking employment. As youth unemployment rates are subject to seasonal and cyclical unemployment, I assume that a low unemployment rate puts lower stress on the government and may not necessarily lead to a decrease in loyalty of the population to the incumbent as extreme unemployment would. I therefore construct a binary measure which identifies the presence of severe youth unemployment. Youth unemployment is considered as an extreme condition if the unemployment rate is larger than usually experienced in this country. In other words: An extreme condition to the population and the government is present if the rate of youth unemployment exceeds the country-specific mean of the youth unemployment rate. I also test the effect of the continuous youth unemployment rate on respect for physical integrity rights as such as a robustness check.

To maximize data availability, I draw upon data available from the World Bank (2016). This data source relies on data provided by the International Labour Organization (ILO). In contrast to ILO data, however, World Bank data covers a time period from 1991 to 2014 instead of 1998 to 2014. On average, youth unemployment amounts to 17 % in my sample. Youth unemployment ranges from a low level of 0.3 % in Cambodia up to high rates around 55 to 71 % in Macedonia and in Bosnia and Herzegovina (see Table 3.1). Youth unemployment is, on average, marginally higher in autocracies (18.41 %) than in democracies (17.19 %).

As alluded to above, youth bulges are understood as exceptionally large cohorts of young individuals relative to the overall population. Previous studies differ in the definition of the reference population to which young age groups are compared as well as in the cut-off values of age groups. I focus on youth cohorts relative to the adult population, which is defined as the population aged 15 and above. Using the adult population above the age of 15

instead of using the total population as a reference group has been suggested by Urdal (2006) in order to avoid bias caused by so-called demographic bottlenecks. Following Urdal (2006) and Nordås and Davenport (2013), I define 'youth' as the population aged 15 to 24. Conventionally, youth cohorts are thus measured as the ratio of 15 to 24 year old individuals relative to the adult population. The reason for focusing on these youth cohorts is that they present the share of the population whose income opportunities are low and who are therefore prone to engage in anti-government movements if unsatisfied. As a robustness check, I also account for youth cohorts with young men aged 15 to 24. The reasoning behind is that Collier and Hoeffler (2004) argue that predominantly young men are recruited as rebels and are more dissent-prone than women. I follow their approach and use the male youth population over adult population as a measure.

Annual data on population (in thousands) by five-year age groups is available from World Population Prospects (UN, 2015). This source is preferred over alternative data bases for reasons of data availability and comparability with Nordås and Davenport (2013). The mean proportion of the youth cohort to the adult population in my sample is about 31 % and varies between a low percentage value of 14 % in Spain in 2011 and, for instance, exceptionally large youth cohorts of 48.13 % in Cape Verde in 1984 (see Table 3.1). There is no significant difference in the size of youth cohorts across regime type.

The analysis also accounts for the following factors, which are in line with previous studies and theoretical considerations on youth bulges and physical integrity rights (e.g., Nordås and Davenport, 2013; Urdal, 2006). First, I use the binary variable by Cheibub et al. (2010), later extended by Bormann and Golder (2013), which takes the value of 0 for autocracies and 1 for democracies. This allows the distinction of the effect of regime type on respect for physical integrity rights and tests whether democracy is positively related. Second, population size (in natural logarithms) is included as larger populations are expected to increase pressure on governments which provokes repression (e.g., Poe and Tate, 1994; Carey, 2010). These data are drawn from the World Population Prospects (UN, 2015). As a country's income level is expected to affect repression as well I control for GDP per capita using data from Penn World Tables 8.1 (Feenstra et al., 2015).

I also control for the occurrence of non-violent dissent and armed conflict, which increase the likelihood of repressive actions (e.g., Davenport and Armstrong, 2004; Poe, 2004). Data on the occurrence of armed civil intrastate conflict, which leads to at least twenty-five battle-related deaths during the year, are taken from the Uppsala Conflict Data Program/Peace Research Institute Oslo Armed Conflict Data set v.4-2014 (Themnér and

Wallensteen, 2014). The number of anti-government demonstrations is available from the Cross-National Time-Series Archive by Banks and Wilson (2013).

Since previous studies argue and find that previous rights standards of a government are likely to explain current respect for rights, a lagged dependent variable is included (e.g., Davenport, 2007). This is in line with Nordås and Davenport (2013) who also use lagged binary dependent variables to account for past levels of repression. In contrast to the authors, I do not include lagged dependent variables for up to four years but only for one year since otherwise this would reduce the number of observations significantly.

Table 3.1: Descriptive statistics

Variables	N	Mean	SD	Min	Max
Physical integrity rights	3,131	44.71	17.39	2.22	100
Autocracies only	1,305	36.49	13.44	2.22	82.37
Democracies only	1,826	50.58	17.52	10.88	100
Youth bulge	3,131	30.05	7.58	14.48	44.38
Autocracies only	1,305	34.29	6.02	16.85	44.38
Democracies only	1,826	27.02	7.10	14.48	42.35
Youth unemployment (binary)	3,131	0.45	0.49	0	1
Youth unemployment (%)	3,131	17.69	11.44	0.3	71.9
Autocracies only	1,305	18.41	13.12	0.3	62.5
Democracies only	1,826	17.19	10.05	0.8	71.9
GDP per capita (ln)	3,131	8.61	1.27	5.21	11.77
Population (ln)	3,131	15.91	1.65	12.19	20.94
Democracy	3,131	0.58	0.49	0	1
Demonstrations	3,131	0.11	0.47	0	8
Civil conflict	3,131	0.011	0.105	0	1

3.3.3 Estimation approach

To test the above hypothesized relationships between youth unemployment, youth bulges, and respect for physical integrity rights, the baseline model is specified as follows:

$$Rights_{i,t} = \alpha Rights_{i,t-1} + \beta Unemployment_{\ i,t} + \rho Youth_{i,t} + \omega X_{i,t} + \gamma_i + \delta_t + \mu_{i,t}$$

where $Rights_{i,t}$ denotes the dependent variable 'respect for physical integrity rights' and $Rights_{i,t-1}$ the lag of respect for physical integrity rights by one year. For the variable $Unemployment_{i,t}$, I use the binary unemployment crisis indicator in the baseline model and the test for the simple youth unemployment rate in robustness analysis. $Youth_{i,t}$ stands for the independent variable 'youth bulge'. The term $X_{i,t}$ encompasses the above described control variables: democracy, population size (ln), per capita GDP (ln), anti-government demonstrations, and civil conflict. I also account for country-(γ_i) and year-fixed (δ_t) effects.

The inclusion of a lagged dependent variable together in a model with fixed effects has been argued to generate inconsistent estimates because of multicollinearity. This so-called 'Nickell bias' is believed to become marginal when the period of observation exceeds 20 years (Nickell, 1981, p. 1417; Beck and Katz, 2011, p. 342). As the data sample used in this paper covers a period of exactly 20 years, it is unlikely that the estimators are biased due to the Nickell bias. Hence, an ordinary least squares (OLS) estimator is used instead of dynamic panel data specifications. However, the time range of this analysis corresponds to the commonly accepted threshold value. As a robustness check, I therefore also estimate the system generalized method of moments (GMM) estimator by Arellano and Bover (1995) and Blundell and Bond (1998). The analysis does not suggest higher order autocorrelation after a third lagged variable of physical integrity rights is included. In line with previous studies, I employ the two-step estimator implemented by Roodman (2009) and Windmeijer's (2005) finite sample correction. Following Roodman (2009), the matrix of instruments is collapsed to reduce the number of instruments in order to avoid the number of instruments being too large relative to the sample size.

3.4 Regression results

3.4.1 Baseline estimation results

Table 3.2 reports the results for the baseline model testing the unconditional effect of a crisis of youth unemployment and the size of youth cohorts on respect for physical integrity rights. Emanating from the theoretical discussion, I expect a crisis of youth unemployment to be linked to a decrease in respect for physical integrity rights. Column 1 and 2 examining the full sample do not provide empirical support for this hypothesis. To separate the effect of youth unemployment crises from the size of youth cohorts, the two variables are included consecutively. The coefficient of youth unemployment is only marginally affected by this inclusion. Youth unemployment is not associated with a worsening of rights standards; only an increase in the size of youth cohorts is - contrary to theoretical expectations - positively and significantly related to respect of physical integrity rights. When the sample is disaggregated by regime type, however, empirical results with respect to youth unemployment are in line with expectations: In democracies, unusually large youth unemployment is linked to an improvement in respect for physical integrity rights in democracies, but it leads to a decrease in autocracies. A possible reason is that democratic governments - in contrast to autocratic leaders - are more likely to respond with buying loyalty and decreasing repression in the light of large unemployment as democratic leaders are constrained in their use of repression by institutional factors. This tendency to invest, for instance, in job market programs instead of violating physical integrity rights to counteract potential dissent is reflected in the positive estimate. The effect of the size of youth cohorts is vice versa: An increase in the size of youth cohorts decreases (increases) respect for physical integrity rights in democracies (autocracies). This finding is puzzling and not in accordance with existing theoretical frameworks.

Table 3.2: Effect of youth unemployment crises and youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]	[4]
Rights (t-1)	0.922***	0.922***	0.908***	0.922***
	(0.007)	(0.007)	(0.008)	(0.011)
Youth unemployment crisis	-0.047	-0.050	0.190**	-0.396***
	(0.068)	(0.068)	(0.084)	(0.115)
Youth bulge		0.051**	-0.078**	0.109**
		(0.024)	(0.033)	(0.043)
Democracy	0.424**	0.417**		
	(0.183)	(0.183)		
Population	-0.332	-0.450	-2.248***	-0.746
	(0.455)	(0.457)	(0.721)	(0.760)
GDP per capita	-0.378**	-0.389**	-0.857***	-0.100
	(0.157)	(0.157)	(0.321)	(0.219)
Demonstrations	-0.323***	-0.322***	-0.193**	-0.731***
	(0.081)	(0.081)	(0.088)	(0.166)
Civil conflict	0.021	0.060	-0.055	0.546
	(0.342)	(0.342)	(0.437)	(0.532)
Sample	Full	Full	Democ	Autoc
R^2	0.98	0.98	0.99	0.97
Observations	3,131	3,131	1,826	1,305

Note: OLS regression coefficients results with standard errors in parentheses. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Hypothesis 2 states that the effect of extreme youth unemployment is aggravated when interacted with the size of youth bulges as the latter add to the threat of political survival by the youth vis-à-vis the incumbent. Model 1 in Table 3.3 presents the results of the interaction term aggregated by regime type. Evidence provides support for Hypothesis 2: When the size of youth cohorts is interacted with the occurrence of large youth unemployment the effect on respect for physical integrity rights is negative and statistically significant. This negative effect is driven by democracies only (column 2).

Table 3.3: Interaction effect of youth unemployment crises and youth bulges on respect for physical integrity rights (1991-2011)

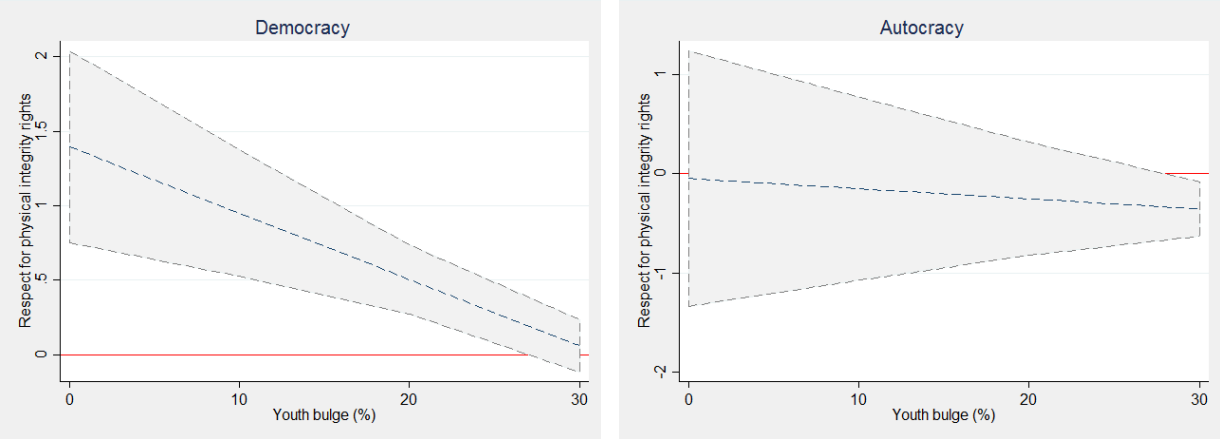
Variables	[1]	[2]	[3]
Rights (t-1)	0.920***	0.904***	0.922***
	(0.006)	(0.009)	(0.011)
Youth bulge x youth unemployment	-0.045***	-0.045***	-0.010
	(0.009)	(0.012)	(0.019)
Youth unemployment	0.060**	-0.067**	0.114***
	(0.024)	(0.033)	(0.044)
Youth bulge	1.303***	1.396***	-0.049
	(0.281)	(0.328)	(0.656)
Democracy	0.437**		
	(0.182)		
Population	-0.477	-2.168***	-0.760
	(0.456)	(0.719)	(0.761)
GDP per capita	-0.313**	-0.767**	-0.095
	(0.157)	(0.321)	(0.219)
Demonstrations	-0.341***	-0.206**	-0.733***
	(0.081)	(0.089)	(0.166)
Civil conflict	0.074	-0.061	0.554
	(0.341)	(0.436)	(0.533)
Sample	Full	Democ	Autoc
R^2	0.98	0.99	0.97
Observations	3,131	1,826	1,305

Note: OLS regression coefficients results with standard errors in parentheses. Country and year fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Estimation does not yield a significant interaction effect for autocracies (column 3). Looking at the marginal effects presented in Figure 3.1 provides a clearer picture. The effect of youth employment on respect for physical integrity rights is positive, but it decreases the larger the youth cohort. For autocracies, the interaction term is statistically insignificant for all values of youth cohort size. These findings give no empirical support for Hypothesis 3 that autocratic regimes will increase physical integrity rights violations more than democratic

regimes when large youth cohorts are present. The relationship between youth unemployment and repression does not appear to be conditional on the size of youth cohorts. Put differently: Large youth unemployment is not what makes large youth cohorts especially threatening for an autocratic regime.

Figure 3.1: Average marginal effects of youth unemployment crises by youth cohort size



Note: Left panel calculated from model 2, Table 3.3. Right panel calculated from model 3, Table 3.3.

3.4.2 Robustness checks

To examine the robustness of these results, Table 3.4 reports the results for the baseline model testing the unconditional effect of youth bulges and unemployment when the rate of youth unemployment is used instead of the binary crisis indicator. This robustness check is to test whether the previous results are unique for large unemployment shocks or already present for mere increases in youth unemployment. Again, column 1 shows the results when testing Hypothesis 1, i.e. whether youth bulges are associated with less respect for physical integrity rights. Except for the size of the coefficients, which is larger than with the binary measure, empirical results remain the same. The size of youth cohorts is significantly associated with an increase in respect for physical integrity rights, whereas youth unemployment rate as such is not. When disaggregated by regime type, an increase in youth unemployment has no statistically significant effect in autocracies, while it is associated with an increase in respect for physical integrity rights in democracies. And again, an increase in the size of youth bulges is considered to decrease respect for physical integrity rights in democracies but increase rights standards in autocracies.

Table 3.4: Effect of youth unemployment rates and youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]
Rights (t-1)	0.921***	0.902***	0.923***
	(0.007)	(0.008)	(0.011)
Youth unemployment rate	0.015	0.033***	-0.033
	(0.010)	(0.010)	(0.021)
Youth bulge	0.058**	-0.080**	0.115***
	(0.025)	(0.035)	(0.043)
Democracy	0.418**		
	(0.184)		
Population	-0.620	-2.63***	-0.749
	(0.466)	(0.743)	(0.765)
GDP per capita	-0.355**	-0.829**	-0.131
	(0.159)	(0.330)	(0.220)
Demonstrations	-0.339***	-0.211**	-0.719***
	(0.082)	(0.091)	(0.168)
Civil conflict	0.061	-0.052	0.513
	(0.346)	(0.444)	(0.535)
Sample	Full	Democ	Autoc
R^2	0.98	0.99	0.98
Observations	3,131	1,826	1,305

Note: OLS regression coefficients results with standard errors in parentheses. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 3.5 presents the results when assessing the interaction effect of youth unemployment rate and youth bulges on respect for physical integrity rights. Again, column 1 encompasses the full sample, while column 2 and 3 consider the effect of democracies and autocracies. Proving empirical support for Hypothesis 2, results in column 1 suggest that the concomitant occurrence of youth unemployment and youth bulges is associated with a decrease in respect for physical rights. This effect is, however, small. Regression results suggest that this negative effect is marginally stronger in democracies (column 2) than in autocracies (column 3), which would lead to a rejection of Hypothesis 3. A closer look at the

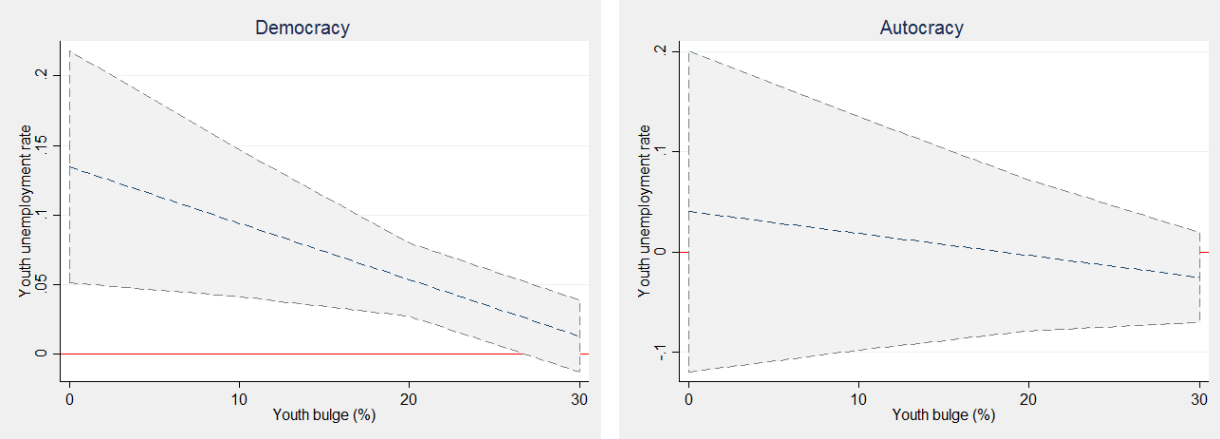
marginal effects provided in Figure 3.2 supports this initial interpretation: The interaction term is statistically insignificant for autocracies, while it is positive and statistically significant in democracies. This effect of youth unemployment on respect for physical integrity rights decreases as the size of youth cohorts increases.

Table 3.5: Interaction effect of youth unemployment rates and youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]
Rights (t-1)	0.919***	0.901***	0.923***
	(0.007)	(0.009)	(0.011)
Youth bulge x youth unemployment	-0.005***	-0.004**	-0.002
	(0.001)	(0.002)	(0.002)
Youth unemployment	0.145***	0.135***	0.040
	(0.032)	(0.042)	(0.082)
Youth bulge	0.156***	-0.001	0.155***
	(0.032)	(0.045)	(0.061)
Democracy	0.445**		
	(0.184)		
Population	-0.608	-2.581***	-0.762
	(0.464)	(0.742)	(0.765)
GDP per capita	-0.338**	-0.798**	-0.131
	(0.159)	(0.330)	(0.220)
Demonstrations	-0.361***	-0.225**	-0.730***
	(0.082)	(0.091)	(0.168)
Civil conflict	0.136	0.037	0.525
	(0.345)	(0.446)	(0.535)
Sample	Full	Democ	Autoc
R^2	0.98	0.99	0.98
Observations	3,131	1,826	1,305

Note: OLS regression coefficients results with standard errors in parentheses. Country and year fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Figure 3.2: Average marginal effects of youth unemployment rate by youth cohort size



Note: Left panel calculated from model 2, Table 3.5. Right panel calculated from model 3, Table 3.5.

I re-estimated the previous regressions using the measure for male youth cohorts to determine whether male youth bulges are particularly dissent-prone and repression-triggering. The results of the baseline regression are displayed in Table 3.6 in the Appendix and suggest that previous findings are robust to this alternative measure. As the coefficients and the statistical significance remain unchanged, I do not report robustness checks for the interaction terms given that they yield to the same results as well. This robustness check is in line with the findings of Nordås and Davenport (2013) who also show that the effect of youth cohorts is not driven by young men.

To assess whether the observed time period is in fact long enough not to suffer from a Nickell bias, Table 3.7 and 3.8 included in the Appendix present the results using the system GMM estimator. With the exception of demonstrations, estimates and standard errors of almost all variables are less strong such that the coefficient is no longer statistically significant. Only in democracies, the occurrence of large youth unemployment is associated with a (minor) increase in respect for physical integrity rights (see column 2 in Table 2.7). The interaction effect only exerts a marginal negative impact on respect for physical integrity rights and is insignificant when disaggregated by regime type (Table 3.8). When looking at the validity of the instruments of this dynamic model, the instruments cannot be rejected based on the Sargan-Hansen test result. Also, the hypothesis of the Hansen test cannot be rejected, which suggests that the model is correctly specified. These findings illustrate that the conventional use of OLS as suggested by Beck and Katz (2011) may not be suitable in this context as results are not robust to an alternative estimation approach.

3.5 Conclusion

Existing literature has argued that large youth cohorts are more dissent-prone due to the concomitance of adverse income opportunities and high youth unemployment. The presence of youth bulges has therefore been argued to provoke political leaders to preemptively violate physical integrity rights. However, the issue of youth unemployment as an extreme condition triggering or rather conditioning repression has not been examined by literature. This paper has filled this gap by assessing whether economic crises proxied by large youth unemployment are associated with a change in respect for physical integrity rights. It also illustrated the role of the size of youth cohorts in this context. The underlying theoretical argument - emanating from Wintrobe (1998) - suggests that youth unemployment crises are associated with a decrease in respect for physical integrity rights as in times of large-scale unemployment loyalty to the incumbent decreases and repression thus becomes more attractive.

Empirical results of the panel data analysis from 1991 to 2011 only partly provide support for the hypotheses presented in this paper. In line with theoretical expectations, youth unemployment crises are associated with a decrease in respect for physical integrity rights in autocracies. Conversely, unemployment is related to an increase in physical integrity rights standards in democracies. This might suggest that while democracies respond to unemployment crises by lowering repression (and potentially investing in labor market programs instead), autocracies tend to increase repression. Unexpectedly, when faced with a large youth cohort, political leaders are more likely to engage in repression in democracies; this effect, however, decreases as the size of youth cohort increases. In autocracies, an increase in the size of youth cohorts is associated with an increase in respect for physical integrity rights. The two findings are surprising and contrary to theoretical considerations. Empirical findings are, however, not strong and robust to the use of a system GMM estimator.

While the results presented in this paper provide interesting insights into the relationship between youth unemployment, demographic dynamics, and respect for physical integrity rights, more research on the rights impact of unemployment crises is recommended. This paper has focused on the effect on respect for physical integrity rights. It is possible that in times of youth unemployment, which drives young people to demonstrate, governments do not respond with an increase in repression but restricting civil and political rights. This could explain the lack of a robust and significant relationship. Further research in this field is also encouraged to understand to what extent governments choose ‘loyalty’ as a strategy to handle unemployment crises.

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3.7 Appendix

Table 3.6: Effect of youth unemployment crises and male youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]
Rights (t-1)	0.921***	0.908***	0.922***
	(0.007)	(0.008)	(0.011)
Youth unemployment crisis	-0.050	0.190**	-0.396***
	(0.068)	(0.083)	(0.116)
Male youth bulge	0.052**	-0.081***	0.120***
	(0.024)	(0.031)	(0.041)
Democracy	0.417**		
	(0.183)		
Population	-0.468	-2.26***	-0.847
	(0.459)	(0.720)	(0.760)
GDP per capita	-0.386**	-0.869***	-0.086
	(0.157)	(0.321)	(0.218)
Demonstrations	-0.323***	-0.193**	-0.739***
	(0.081)	(0.088)	(0.166)
Civil conflict	0.056	-0.055	0.538
	(0.341)	(0.437)	(0.532)
Sample	Full	Democ	Autoc
R^2	0.98	0.99	0.98
Observations	3,131	1,826	1,305

Note: OLS regression coefficients results with standard errors in parentheses. Country- and year-fixed effects are not reported. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 3.7: System GMM regression results of the effect of youth unemployment crises and youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]
Youth unemployment crisis	0.0002	0.002*	-0.001
	(0.0006)	(0.001)	(0.001)
Youth bulge	-0.0002	-0.000	-0.0001
	(0.0001)	(0.0003)	(0.0001)
Democracy	0.0004		
	(0.0017)		
Population	-0.0007	0.000	-0.0037
	(0.0009)	(0.0014)	(0.0024)
GDP per capita	0.0001	-0.0002	0.0009
	(0.0008)	(0.0015)	(0.0021)
Demonstrations	-0.0022***	-0.0016*	-0.0056*
	(0.0008)	(0.0009)	(0.002)
Civil conflict	-0.0016	0.0019	-0.0023
	(0.0028)	(0.007)	(0.0039)
Sample	Full	Democ	Autoc
A-B test 1st order	0.000	0.000	0.000
A-B test 2nd order	0.705	0.413	0.521
Sargan test	0.752	0.253	0.383
Hansen test	0.555	0.542	0.477
Observations	2,806	1,684	1,122

Note: System GMM regression coefficients results with robust standard errors in parentheses. Coefficients for the three lags of the dependent variable and year-fixed effects are included and not reported above. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 3.8: System GMM regression results for the interaction effect of youth unemployment crises and youth bulges on respect for physical integrity rights (1991-2011)

Variables	[1]	[2]	[3]
Youth bulge x youth unemployment	-0.0002**	-0.00006	-0.0002
	(0.0001)	(0.00013)	(0.0001)
Youth unemployment	0.0078***	0.0034	0.0066
	(0.0029)	(0.0037)	(0.0051)
Youth bulge	-0.0002	-0.00005	-0.00007
	(0.0001)	(0.0002)	(0.0001)
Democracy	0.0031*		
	(0.0019)		
Population	-0.0021**	0.0001	-0.0039
	(0.0010)	(0.0015)	(0.0024)
GDP per capita	0.0012	-0.0003	0.0010
	(0.0011)	(0.0015)	(0.0020)
Demonstrations	-0.0027***	-0.0016*	-0.0058**
	(0.0007)	(0.0009)	(0.0023)
Civil conflict	-0.0047	0.0020	-0.002
	(0.0029)	(0.0072)	(0.004)
Sample	Full	Democ	Autoc
A-B test 1st order	0.000	0.000	0.000
A-B test 2nd order	0.179	0.446	0.575
Sargan test	0.549	0.213	0.405
Hansen test	0.279	0.384	0.504
Observations	2,964	1,684	1,305

Note: System GMM regression coefficients results with robust standard errors in parentheses. Coefficients for the three lags of the dependent variable and year-fixed effects are included and not reported above. Democ= democracy sample, Autoc= autocracy sample. *: p<0.1, **: p<0.05, ***: p<0.01.

4

The Effects of Financial Crises on Political Institutions

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Abstract

The real economic effects of financial crises have been analyzed many times. In this paper, we ask whether financial crises are associated with changes in political institutions. When government budgets are under stress, sustaining sufficiently high levels of public spending to retain institutional quality might be increasingly difficult. At the same time, financial crises may also impel rulers to infringe upon rights and basic rules of society to overcome threats to their regime. Our analysis reveals that financial crises do have a significant negative effect on the respect for physical integrity rights – particularly in autocracies. We also find some evidence that financial crises can trigger democratization.

Keywords: financial crises, physical integrity rights, repression, democratization.

JEL classification: D74, D78, H10, K00.

Note: For a revised version of this article, please consider the following publication

Gutmann, J. , K. Pfaff, and S. Voigt (2017). Banking crises and human rights. *Applied Economics Letters* 24(19):1374-1377, DOI: 10.1080/13504851.2017.1279264

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4.1 Introduction

Economic crises have often been associated with an increase in rights violations (e.g., Islam and Winer, 2004; Wintrobe, 1998) and democratization (e.g., Acemoglu and Robinson, 2006; Haggard and Kaufmann, 1995). Although economic and financial crises may be interlinked and have similar outcomes, studies on financial crises have so far focused on their macroeconomic effects (e.g., Romer and Romer, 2015). We add to the literature by analyzing whether financial crises are associated with changes in two types of political institutions: respect for physical integrity rights and democratization.

4.2 Possible effects of financial crises on political institutions

In delineating the term ’financial crisis’, we follow Reinhart and Rogoff (2009) who include (1) banking crises, (2) sovereign debt crises, (3) domestic debt crises, (4) currency crises, and (5) inflation crises. Note that this delineation does not include ‘economic crises,’ which have been defined as a substantial contraction in per capita income (Barro and Ursúa, 2012).

The decision of autocrats to increase repression is strongly linked to the availability of resources. Wintrobe (1998) argues that autocrats, whose primary objective is to stay in office and to maintain political power, have two tools at their disposal to facilitate their survival in office, loyalty and repression. By distributing perks to their constituents, autocrats can buy loyalty. Repression is used to intimidate subjects and prevent potential opposition groups from organizing. In times of financial crises, there are fewer rents that the autocrat can hand out to buy loyalty, implying that autocrats may substitute repression for loyalty. As a result, the level of loyalty supplied by the population falls. This, in turn, provokes an increase in repression in the short-run as it serves to maintain the power necessary for the autocrat’s survival. We expect a substantially larger negative effect of financial crises on physical integrity rights in autocracies than in democracies.

Augmenting the substitution effect highlighted by Wintrobe (1998), Acemoglu and Robinson (2006) describe a possible income effect. They argue that an adverse economic shock may even make repression too costly and buying loyalty might also be insufficient to avoid a revolution. An autocratic ruler would then prefer a shift toward democracy over investing additional resources to prevent democratization. The non-elites can only credibly threaten the political survival of autocrats if they are able to overcome the collective action problem, which is assumed to be less difficult during times of crisis. The citizens will demand democratization because their de facto political power resulting from the financial crisis is transitory and promises of the elite to permanently adopt pro-citizen policies are thus not

credible (Acemoglu and Robinson, 2006, p. 175). We hypothesize that financial crises increase the likelihood of democratization.

4.3 Data and empirical analysis

To test our hypotheses, we use an indicator for the severity of financial crises provided by Reinhart and Rogoff (2009), which covers 70 countries annually from 1800 to 2010. Their indicator is a simple sum reflecting the number of 'types of financial crises' that occur in a given year. Reinhart and Rogoff take into account banking, currency, debt, and inflation crises as well as stock market crashes and call this their BCDI+ index. We normalize this indicator between 0 and 1, where higher values indicate a deeper financial crisis. As Reinhart and Rogoff do not directly measure the depth of financial crises, we can only infer from the accumulation of different concurrent crisis types that some financial crises are more severe than others. As the data by Reinhart and Rogoff limit our analysis to 70 countries, we work exclusively with indicators for our dependent variables that combine high quality data with coverage of a long time period. Descriptive statistics for our crisis indicator and the dependent variables of interest are presented in Table 4.1.

Table 4.1: Descriptive statistics

	N	Mean	SD	Min	Max
Physical Integrity Rights	4031	0.437	0.174	0.032	0.991
Democracy	4195	0.604	0.489	0	1
Financial Crisis[#]	4021	0.113	0.155	0.000	1.000

[#]: Financial crisis statistics reported for the intersection of the above samples.

To measure physical integrity rights, we rely on a latent human rights protection score by Fariss (2014), which we normalize between 0 and 1. Higher values indicate fewer violations of physical integrity rights such as torture, extrajudicial killings, disappearances, etc. This variable is preferable over alternative rights variables as it accounts for the stricter standard of accountability over time (Fariss, 2014, p. 302).

Finally, we use an indicator by Cheibub et al. (2010) to distinguish democracies from autocracies. The original data covers the period 1946 to 2008, but Bormann and Golder (2013) extend the dataset to cover more recent years. This indicator is important to differentiate the reactions of democratic and nondemocratic regimes, but it also allows us to test for the stability of regimes facing financial crises. The advantage of this binary indicator,

for example over the polity2-index, is that a change towards democracy presupposes replacing the chief executive, not just introducing some constraints on his exercise of power. In contrast to the polity2-index, this indicator does not implicitly capture respect for physical integrity rights and is thus not tautological.

Table 4.2: Effects of financial crises on political institutions

	[1]	[2]	[3]	[4]	[5]	[6]
Dependent Variable:	Physical Integrity Rights			Democracy		
DV (t-1)	0.976***	0.977***	0.971***	0.864***	—	—
	(0.004)	(0.011)	(0.005)	(0.016)		
Financial Crisis (t)	-0.011**	-0.016**	-0.008*	0.054*	0.115†	0.014
	(0.003)	(0.006)	(0.004)	(0.026)	(0.064)	(0.026)
Financial Crisis (t-1)	0.001	-0.002	0.002	-0.015	0.008	-0.037
	(0.003)	(0.004)	(0.004)	(0.028)	(0.068)	(0.027)
Financial Crisis (t-2)	0.004	-0.000	0.005	0.019	0.050	0.011
	(0.002)	(0.004)	(0.003)	(0.022)	(0.061)	(0.031)
Financial Crisis (t-3)	0.000	0.002	-0.003	-0.009	-0.042	0.024
	(0.002)	(0.005)	(0.003)	(0.030)	(0.062)	(0.030)
Financial Crisis (t-4)	0.005	0.002	0.003	0.003	-0.025	0.007
	(0.003)	(0.005)	(0.003)	(0.029)	(0.040)	(0.035)
Constant	0.013***	0.012*	0.011**	-0.047*	-0.073***	0.886***
	(0.002)	(0.006)	(0.004)	(0.021)	(0.017)	(0.032)
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES	YES
Time Period	1950-2010	1950-2010	1950-2010	1947-2010	1947-2010	1947-2010
Sample	ALL	AUTOC	DEMOC	ALL	AUTOC	DEMOC
Countries	70	48	57	70	49	57
Observations	4031	1621	2410	4195	1680	2515

Note: OLS regression coefficients, standard errors in parentheses are clustered to allow for intragroup correlation within countries. DV = dependent variable, AUTOC = autocracy sample, DEMOC = democracy sample. †: p<0.1, *: p<0.05, **: p<0.01, ***: p<0.001.

Table 4.2 presents the estimated regression results using OLS and clustered standard errors. OLS estimates are appropriate in panels with large T as the Nickell bias from combining country fixed effects and lagged dependent variable becomes small (Nickell, 1981)

and the OLS estimator can, due to its low RMSE, be expected to perform at least as well as alternative estimators. The average period of time covered in our sample of countries is 58 to 60 years, which is considerably above the threshold of 20 years suggested by Beck and Katz (2011, p. 342). We control for time lags of financial crises for the four preceding years, as financial crises can continue over several years and tend to cluster across time and space.

4.4 Discussion and robustness of results

In contrast, countries provide less protection of physical integrity rights during these crises. The estimated coefficient is not very large, but it should be noted that what we estimate is the average effect in every crisis-year. An ongoing financial crisis would accordingly be predicted to reduce respect for physical integrity rights over the course of four years by up to 0.04, which is equivalent to the difference in 2010 between Ireland and Singapore or that between Singapore and Botswana. Although the negative effect on physical integrity rights is also statistically significant in a subsample of democratic countries, it is twice as large for autocracies. Finally, countries are more likely to democratize during a financial crisis, as was argued by Haggard and Kaufman (1995) and Acemoglu and Robinson (2006). It is noteworthy that democracies do not become less stable under comparable financial distress. Our results are also interesting in light of a recent study by Knutsen (2014) who finds that low short-term economic growth induces revolutions against both democracies and autocracies. Yet, this study differs in several aspects: Knutsen assumes a linear effect of growth rates at any level without a specific focus on economic or financial crises. Moreover, revolutions aim at replacing the chief executive but not necessarily at institutional change, which we are interested in here. Thus, these results are not mutually incompatible and future research may dissect the role of economic performance and economic crises as a transmission channel between financial crises and institutional change.

Defining robustness as parameter stability (see Neumayer and Plümper, 2015), we find that our results are robust to using the Arellano-Bond linear dynamic panel-data estimator with cluster-robust standard errors (Arellano and Bond, 1991). The change in estimator has only minor effects on the coefficient estimates for financial crises, but the estimated standard errors increase. As a result, the negative effect of financial crises on physical integrity rights in the democracy sample and the effect on democracy itself are not statistically significant anymore, which we attribute to the higher RMSE of the Arellano-Bond estimator. The effect of financial crises on physical integrity rights in both the full sample and in the sample of autocracies remains statistically significant.

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5

The Effect of Coups d'État on Physical Integrity Rights

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Abstract

The majority of coups against autocracies in the post-Cold War period has been hailed by scholars as 'good coups' since they have been followed by democratic elections. Democracy, in turn, is commonly associated with high respect for physical integrity rights. Yet, empirical studies have not assessed the link between coups d'état and respect of physical integrity rights. Do 'democratic' coups in fact increase respect for physical integrity rights? Does the converse argument and effect hold for coups triggering the breakdown of democracies? Is there effect heterogeneity of civilian or military coups d'état? Using a newly constructed dataset on *coups d'état* and improved data on respect for physical integrity rights from 1950 to 2010, this paper provides a detailed analysis on the effect of coups on physical integrity rights differentiated by coup success and subsequent regime type. Our results suggest positive effects of democratization on respect for physical integrity rights as well as negative effects when non-democratic regimes depose democratic regimes through coups d'état. Furthermore, civilian autocracies are more repressive than military ones after successfully ousting the previous government. Finally, we also find that military governments replacing civilian autocrats tend to repress less in the long run.

Keywords: repression, physical integrity rights, coup d'état, youth bulges, democratization.

Note: A revised version of this article is currently under consideration for publication.

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5.1 Introduction

While there has been a strong decline in the number of coups d'état in the recent decades from 84 coups in the 1970s to 36 coups in the 2000s, coups still mark important events in the history of a country. On the one hand, coups d'état, which are defined as unconstitutional attempts of an elite within the state to depose the executive, frequently either initiate a transition towards democracy like in Egypt in 2013 or cause a breakdown of democratic regimes. Such a regime change can have far-reaching consequences for a country's population: Empirical studies have established that the promotion and protection of physical integrity rights is higher in democratic regimes (Davenport, 2007; Poe and Tate, 1994). On the other hand, coups, which are put down or do not induce regime change, may increase rights violations against regime opponents. Although the outcomes of coups with respect to regime change are directly observable, their implication for physical integrity rights standards is ambiguous and empirically under-researched. In this paper, we illustrate the effect of the following four types of coups d'état on respect for physical integrity rights: (i) coups against a democratic government, which fail, (ii) coups causing a breakdown of democracy, (iii), coups leading to a change from civilian to military autocracies, and (iv) coups leading to democratization.

In this paper, we present a theoretical framework explaining the effect on physical integrity rights for each of these four distinct coup scenarios. First, we argue that although a surviving democratic government is interested in reasserting its power after a failed coup, it is constrained in resorting to physical integrity rights violations by democratic institutions. This means that a failed coup against a democratic regime only has a small negative effect on respect for physical integrity rights. Second, coups leading to a breakdown of democratic institutions, i.e. lowering costs of repression, are associated with a decrease in respect for physical integrity rights. Further, we contend that incentives to violate physical integrity rights are higher in autocracies, which have to account for more encompassing interests of the selectorate, i.e. where buying further support and loyalty would be comparatively more expensive. Hence, we expect that military autocracies show more respect for physical integrity rights after a successful coup than civilian autocracies. Fourth, we argue that coups, which cause a transition to democracy, are expected to increase respect for physical integrity rights as costs of repression are higher in democratic societies.

We address our theoretical assumption that not all coups have the same effect on repression by employing a new database of coups. This database encompasses data on successful and failed coups for 180 countries since 1950. Further, it allows not only to

separate successful and failed coups but also to distinguish between the type of challenged regime and challenger. Using a novel physical integrity rights measure by Fariss (2014), we investigate the effect of coups on respect for physical integrity rights for the period from 1960 to 2010.

Our paper contributes to two strands of research. For one, our analysis fills an apparent research gap in the research on coups. While coups d'état have been found to promote democratization (Thyne and Powell, 2014), neither the direct effect of 'democratic' coups nor the effect of 'autocratic' coups on respect for physical integrity rights has been examined. Similarly, previous studies have not provided a systematic distinction between successful and failed coups. Addressing these differences, we close this gap. Second, we add to the literature on determinants of respect for physical integrity rights. While researchers have tried to understand the relationship between political dissent and state repression, coups have not been analyzed as one of these dissent events triggering repressive action. As opposed to protest, riots, or rebellions, coups tend to be more organized, less spontaneous and binary events. Despite these differences, they have similar characteristics. The intention of both coups and protests etc. is to challenge the political status quo and also a coordination problem has to be solved by those desiring political reform. We thus assess to what extent coups are similar to the above mentioned forms of dissent in the sense that they also increase the likelihood of repression, in particular in autocracies, and therefore are suitable as an approximation of a repression-provoking event.

The findings presented in this paper are in line with our theoretical expectations. As expected, we do find strong evidence of an increase in respect for physical integrity rights in the aftermath of 'good', democratic coups in the years following the introduction of a proper electoral democracy. Conversely, we also find a negative effect on rights standards when democratic regimes are deposed through a coup. And in fact, we show that civilian autocracies are more repressive than military regimes after successfully deposing the previous government.

The remainder of this paper is structured as follows. In Section 2, we present our theoretical framework and elaborate on how respect for physical integrity rights is expected to change when facing the above introduced five types of coup scenarios. The third section contains a data description as well the estimation method. We provide our baseline results in Section 4 and an exploration of long-run repression consequences in Section 5. Findings are discussed and concluded in Section 6.

5.2 Theoretical framework

Our analysis encompasses a variety of coup outcomes and regime types. For our theoretical framework, we thus differentiate the effect of coups on physical integrity rights according to the following four scenarios: (i) failed coups after which a democratic regime remains in power, (ii) successful coups involving a regime change from democracy to autocracy, (iii) coups leading to a change from civilian to military autocracies, and (iv) successful coups inducing a regime change from autocracy to democracy.

We therefore first draw three necessary distinctions: 1) whether the coup succeeds, 2) whether a successful coup leads to democratization or autocratization, and 3) whether a coup within an autocracy changes the basic selectorate interests of the regime. First, for all regime transitions, both successful and failed coups d'état have one thing in common: Any major regime transition is accompanied by a period of fundamental policy and institutional uncertainty. Similarly, failed coups cause the same type of institutional uncertainty as the future of the regime itself has been challenged and as the coup generates uncertainty of whether the incumbent regime will implement institutional and policy changes in order to counter future insurgency.

One would therefore expect an increase in physical integrity rights violations following any substantial institutional and political uncertainty, which is most likely stronger in non-democracies. The reason is that a weakened economy represents a weakened position for the incumbent government and therefore a larger risk of experiencing a new coup, thus making any politician willing to invest in his own security and political survival. Given the opportunity to act on that willingness and that it is the most effective means to achieve the ends, it is generally assumed that in the face of a significant threat, any leader will be more likely to apply repressive measures (e.g., Poe et al., 1999). Previous studies provide empirical evidence for this relationship in the case of protests, riots, and rebellions (e.g., Davenport, 2005; Davenport and Armstrong, 2004). As the objective of any coup d'état is by definition to oust the incumbent regime and given that a coup is also often precipitated by protests or rebellions, we consider a coup attempt as a potentially similarly regime-challenging event. Any government, whether democratic or not, must therefore take steps to avoid such a situation, whether it is democratically elected or not. Governments will thus increase the use of repression in order to avert such threats from occurring again. As a result, coups are likely to provoke repressive government behavior.

The same logic applies to governments coming to power through a coup as well as to those that survive a coup d'état. These steps are the logical baseline compared to which we

evaluate additional effects of regime characteristics and actual transitions. Since there is little existing formal theoretical work to our research question whether coups d'état provoke similar repressive reactions as protests or riots, our theoretical considerations are kept relatively simple and intuitive.[1]

5.2.1 Coups against democracies

We start with the simplest situation in which the incumbent regime is democratically elected. Democratic regimes have the highest repression costs, as almost all forms of direct repression are illegal. Any executive or government introducing repressive measures is therefore not only faced with a loss of political credibility and legitimacy but also a likely impeachment or other legal action. However, when faced with an event such as a coup against the democratic regime, most constitutions in democracies include emergency provisions that allow immediate action that is otherwise unconstitutional (cf. Bjørnskov and Voigt, 2015). Such emergency constitutions provide democratic governments with some leeway in the sense that they can introduce repressive measures such as temporary censorship, curfews and limits on mobility. In all cases, these measures must nevertheless be entirely temporary, as they are objectively only necessary in the brief period that a coup attempt is rejected. This immediately yields a first testable implication:

Hypothesis 1: Failed coups against democracies lead to a temporary decrease in respect for physical integrity rights.

However, all these constitutional guarantees and costs in the sense of a loss of legitimacy and electoral support are likely to fall away and become irrelevant in the trade-off between introducing repressive action and gaining more popular support when a coup d'état against a democratic regime is successful. The balance thus shifts as both the trade-off changes structural character and the new regime gains an interest in preventing an immediate countercoup. An intuitive second testable hypothesis thus is:

Hypothesis 2: 'Autocratic' coups lead to a decrease in respect for physical integrity rights.

[1] One of the few encompassing analytical discussions dates back to Luttwak's (1968) 'Handbook of Coup d'États'. Luttwak bases his discussion mostly on examples from Latin America in the 1950s and 1960s.

A main difference between Hypotheses 1 and 2 thus is that, starting from a democratic regime, any coup may lead to an increase in repression, but only successful coups that remove the democratic and constitutional checks and balances on power are likely to cause a permanent increase in violations of physical integrity rights. As we next show, starting from the opposite type of regime yields rather different implications.

5.2.2 Coups against autocracies

In the following, we argue that the implications of coups within existing autocracies are both different and more complex. Wintrobe's (1998) model of dictatorship provides a straightforward formalization and answer to the question of why and when a regime resorts to violations of physical integrity rights. This model rests on Tullock's (1987) statement of "The Dictator's Dilemma": Most policy decisions are designed by the incumbent with the purpose of keeping other groups away from power. This motivation is shared by both the government surviving a failed coup as well as the new executive, which is responsible for deposing the previous government. In line with Wintrobe's theoretical framework, we argue that the effect of coups on physical integrity rights are determined by the need of the threatened regime to stay in power and constrained by the costs of physical integrity rights violations.

Our theoretical argument is based on the assumption that political leaders are rational actors, who have two tools at their disposal, which they can use to remain in office, namely political repression and distribution of rents to buy loyalty of the population. The use of both instruments is costly and – especially in autocracies – the incumbent trades off these two tools and chooses the option which allows minimizing resource costs of maintaining political power (Wintrobe, 1998, p. 46). Tullock (1987) had already noted that many policies in autocracies are probably designed to benefit one or more groups in society. These groups may be 'given' such policies in return for previous support of the autocracy or as a way to buy their continued support.

Bueno de Mesquita and Smith (2009) elaborate on Tullock's mechanism in autocracies by noting that the basic politics behind such policies is similar in democracies and autocracies. Politicians must, in their framework, always decide on the right mix between offering more selective incentives to the electorate (in democracies) or their selectorate – the particular group of quasi-voters providing political support to autocrats – and active repression of the opposition.

We therefore hypothesize that what may separate governments' willingness and ability to introduce more or less repression after coups does not only rely on whether they are

democratic or not but also on the structure of their selectorate. In particular, we hypothesize that autocrats with selectorates that represent more encompassing interests – political interests that include more groups, industries, and larger parts of the population – are more likely to repress significantly than autocrats ruling with the support of relatively narrow interests (cf. Bjørnskov, 2015).

While there is no way to measure the degree to which the selectorate of an autocratic regime has encompassing interests or not, Wintrobe's (1998) observation that some autocracies are structurally different from others provide a readily testable implication. Specifically, purely military dictatorships are characterized by a military selectorate with the interest in protecting and expanding the status of the military. Such regimes fit Wintrobe's (1998) definition of a "tinpot dictator" in which the military selectorate represents a very narrow set of interests. Conversely, civilian autocrats, i.e. autocrats without a military background that have been more common in Africa than elsewhere (Tullock, 1987), arguably tend to rule on the support of a more mixed group of interests. As such, their selectorates have more encompassing interests.

The main hypothesis that follows from these differences between civilian and military autocracies is that the more encompassing the interests of the selectorate, the larger the relative benefits of repression relative to buying further support and loyalty. First, the financial costs of buying support from a selectorate, which represents more encompassing interests, is logically higher as more diverse interests have to be bought. Second, the necessary diversity of the more encompassing interests also implies higher costs as the selectorate must offer selective interests (cf. Olson, 2000). It is also suggested that military dictatorships are less sensitive to public critique and scrutiny of particular industrial interests. Arrese (2016), for example, notes that while autocrats tend to limit press freedom, the business press is often given more freedom in many autocracies.

In civilian autocracies, these simple theoretical considerations thus lead us to hypothesize that the balance between buying support and protecting the incumbent regime by repressing the population and potential opposition is different than in military dictatorships. In addition, as civilian autocrats often may not have the immediate rapport to and network within the military, many of such regimes have developed parallel paramilitary forces that effectively compete with the military.[2] The existence of several, potentially competing,

[2] The most famous example is probably the Duvalier family in the Dominican Republic which developed an entire structure outside of the military. They both used a paramilitary force known as the *Tonton Macoutes*,

organizational structures available for repression may also lower the costs of choosing repression when faced with threats to the incumbent regime. We thus arrive at our third testable hypothesis:

Hypothesis 3: Military autocracies show more respect for physical integrity rights after a successful coup than civilian autocracies.

Finally, two alternative outcomes of coup attempts against autocracies remain as options. A coup d'état can fail in which case we can provide no clear hypothesis. It might be surmised that an autocracy already invests 'optimally' in repression and certain regimes may simply not have either the interest or the means to increase either repression or other means of staying in power. However, if the incumbent regime, which wards off a coup, is not clearly resource-constrained, it may have an interest in increasing repression because a coup attempt is a signal of a stronger or better-organized political opposition.

In contrast, implications for respect for physical integrity rights are likely to differ if a successful coup overthrows an authoritarian regime and subsequently induces democratization. After the former autocratic regime has been deposed, the new government's interest is to remain in power. Besides an ideological motivation, a coup plotter may choose democratization as a mean to achieve his aim (Thyne and Powell, 2014, p. 5). His focus thus lies on establishing and upholding a stable democratic system. There are several ways to do so and it mostly includes institutional reforms and the setup of democratic institutions. In the medium- and long-run, these changes are highly correlated with a country's per capita income as (newly) democratized countries and good institutions are more likely to attract investment (e.g., Acemoglu et al., 2015; North, 1990). This fosters political legitimacy of the incumbent and the regime. In addition, as stressed by Acemoglu and Robinson (2001), introducing democratizing reforms may be preferable to substantially increased repression when costs of repression become too high. Doing so thereby means a much lower political demand for physical integrity rights violations.

Hypothesis 4: Governments show more respect for physical integrity rights after a successful coup induced democracy.

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which was effectively a death squad, and the Haitian *chef de sections*, i.e. the heads of local police forces, to repress large parts of the population (Lundahl, 2013).

Yet, these theoretical considerations only apply during and in the immediate aftermath of a coup or coup attempt. In the slightly longer run, the question is not how to assert power but how to maintain it. We thus note that democratization should intuitively be linked with lower repression as new democratically accountable governments move towards establishing their popular legitimacy, which would be undermined by outright repression (Davenport and Armstrong, 2004, p. 538). However, the speed with which existing repressive institutions and practices are dismantled may vary considerably depending on the de facto power base of the new government.

To sum up, our theoretical framework proposes coups d'état as a determinant which influences respect for physical integrity rights. Similar to other types of dissent, coups challenge and threaten the political status quo and are thus expected to magnify repression effects in the negative direction. If a coup results in democratization, a positive effect on respect for physical integrity rights is expected. However, if a coup results in a shift of power between civilian and military interests, but without resulting in democratization, repression may decline or increase depending on the initial situation and the type of regime change.

5.3 Data and research design

5.3.1 Dependent variable: respect for physical integrity rights

In line with previous literature, we focus on repressive state behavior by measuring respect for physical integrity rights (e.g., Davenport, 2007; Hafner-Burton, 2005; Poe and Tate, 1994). Physical integrity rights encompass rights such as freedom from political and unlawful imprisonment, freedom from torture as well as freedom from cruel and inhumane treatment. It also includes cases of extrajudicial killings and forced disappearance. For data on respect for physical integrity rights, we rely on a dataset provided by Fariss (2014). In contrast to other commonly used measures such as the Political Terror Scale index (Gibney et al., 2015), this measure is more comprehensive as it combines nine standards- and event-based data sources of physical integrity rights violations into one dataset.[3] It is also preferable as its underlying estimation approach allows for a more accurate measurement of systematic changes over time in the way information about human rights abuses is processed (Schnakenberg and Fariss,

[3] The following data sources are used: (i) data on killings, torture, imprisonment, and disappearances by Cingranelli and Richards, (ii) Political Terror Scale index, (iii) data on the use of torture by Hathaway, (iv) data by Harff and Gurr, (v) data on ill-treatment and torture by Conrad and Moore, (vi) data on genocide and politicide available from the Political Instability Task Force, (vii) data on genocide and politicide by Rummel, (viii) the UCDP Violence dataset, and (ix) data on political executions available from the World Handbook of Political and Social Indicators (Fariss, 2014, p.302).

2014). The physical integrity rights variable is a continuous measure with larger values indicating higher respect for physical integrity rights. To facilitate comparison and interpretation, we normalize the variable to range between 0 and 100. A value of 0 expresses widespread violations of physical integrity rights, while values closer to 100 indicate higher respect for physical integrity rights.

5.3.2 Independent variables

Our main independent variables all capture coups d'états. As mentioned in the introduction, a coup is understood as an event in which a group attempts to depose the incumbent government and take over executive power of a country by unlawful means. While the difference between coups and civil wars and other military events may in principle be blurred, it is in practice an easy matter to distinguish them, as coups very rarely last more than a few days. More specifically, in line with Luttwak (1968), coups are different from other political events and dissent, as coups last at most one week.

Our data on coups d'état are derived from the database developed by Bjørnskov and Rode and presented in Bjørnskov (2015). The dataset lists all successful and failed coups since 1950 reported and confirmed in international media such as, e.g., the New York Times, The Guardian, the Sydney Morning Post, or the Frankfurter Allgemeine. Almost all of these newspapers are electronically searchable after 1970. Before the 1970s, the data also rests on several other sources, including the Encyclopaedia Britannica and Luttwak (1968). The full search yielded a database with information on 451 coups and coup attempts of which slightly less than half failed.[4] The identification of coups in the database is conservative, as it does not include coup rumors and attempts that could not be confirmed by several independent sources. Conversely, it is highly unlikely that coup attempts have gone unrecorded as it would require that no information of any arrests, deaths, or military activity became known outside the country.

The coups are categorized following the regime categorization of Cheibub et al. (2010), such that we can distinguish between coups with predominantly military or civilian leaders, and sort both successful and failed coups into six different types listed in Table 5.1 in the Appendix. A particular benefit of the new dataset relative to existing alternatives is the

[4] After 1970, the background search included all newspaper in the Lexis-Nexis database while earlier events derive from a slightly smaller sample of media. One of the particular sources that are available before 1970 is the Los Angeles Times, which exists in electronic format further back in time. The access to this specific source means that the database covers all coups in Latin America before 1970 while the coverage of coups in Sub-Saharan African countries around their independence in the 1960s may be less than perfect.

additional information on failed coups and the identification of coups that change the leadership between civilian and military interests without changing the non-democratic status of a country.

Table 5.1: Descriptive statistics

	Mean	SD	Min	Max
Physical integrity rights	43.53	16.81	0	1
Log GDP per capita	8.29	1.29	5.08	11.82
Openness	71.31	46.52	1.86	440.43
Investment prices	1.10	0.64	0.06	11.85
Log population size	2.74	0.12	2.40	3.04
Instability	0.112	0.328	0	1
Successful coup	0.027	0.162	0	1
Failed coup	0.029	0.167	0	1
Military coup	0.038	0.191	0	1
Civilian coup	0.009	0.098	0	1
Military against military autocracy (success)	0.009	0.094	0	1
Military against military autocracy (failed)	0.011	0.103	0	1
Military against civilian autocracy (success)	0.049	0.070	0	1
Military against civilian autocracy (failed)	0.005	0.070	0	1
Civilian against civilian autocracy (success)	0.003	0.054	0	1
Civilian against civilian autocracy (failed)	0.003	0.052	0	1
Civilian against military autocracy (success)	0.001	0.036	0	1
Civilian against military autocracy (failed)	0.002	0.044	0	1
Military coup against democracy (success)	0.005	0.073	0	1
Military coup against democracy (failed)	0.006	0.079	0	1
Civilian coup against democracy (success)	0.001	0.028	0	1
Civilian coup against democracy (failed)	0.002	0.042	0	1
Democratization	0.013	0.111	0	1
Democratization from military	0.008	0.089	0	1
Democratization from civilian	0.004	0.060	0	1
Democratization form communism	0.001	0.030	0	1

In order to be able to account for a regime change, which did *not* follow immediately from a coup, we also include three binary variables, which capture the following types of peaceful democratization: from a situation with military dictatorship, from a civil autocracy, and from communism, i.e. the Central and Eastern European experience. We do this in order to establish a clean comparison from which to identify effects of coups; the comparison group in all analyses in the following is thus one of regime stability. While it would, on purely theoretical grounds, be preferable to know which types of democratization follow coups, we cannot clearly distinguish between democratizations that are coup-driven and those that are

not. While some coups may have been motivated by democratic intentions such that it was the intention of coup leaders to maintain power for some time before democratizing, we can only account for democratizations which actually took place, as it is practically impossible to know whether coup leaders *intended* to democratize at some point in time. Our only practical option is to pool the disaggregated data on the observed democratizations based on the characteristics of the prior regime. In all cases, the definition of democratization in Cheibub et al. (2010) requires that elections, which are considered free and fair by international observers, are held.

With respect to control variables, we first of all include the lagged dependent variable. First, any government regardless of how it comes to power takes over the basic institutions of the country including the police, military, possible paramilitary groups as well as the judicial system. Given that a government's respect for physical integrity rights is likely to be influenced by such institutions, the inclusion of the lagged level of repression takes this into account. Its inclusion also alleviates some concern of reverse causality if the lagged level of repression would influence the likelihood of observing a coup d'état or the likelihood of a successful coup. Finally, the inclusion of a lagged dependent variable implies that we identify effects on the *change* in repression and not the levels. All estimates in the following must therefore be interpreted as effects on the change over time.

Other variables, which are common in literature on state repression, are controlled for. For one, we add the logarithm of population size as larger populations are considered to increase pressure on governments by putting more stress on available resources (e.g., Carey, 2010, p. 175). These data are drawn from the World Population Prospects (UN, 2015). We proxy a country's economic development using the logarithm of real purchasing-power GDP per capita, which is available from the World Development Indicators (World Bank, 2015). Given that internal armed conflict (henceforth: instability) increases the likelihood of repressive actions, we consider a binary variable capturing whether intrastate armed conflict between the government and at least one internal opposition group occurs. Data is available from the Uppsala Conflict Data Program (2015). Also, in line with Nordås and Davenport (2013, p. 7), a variable that counts the number of dissent activities, i.e. the number of anti-government demonstrations, strikes, and riots is included. The Cross-National Time-Series Archive by Banks and Wilson (2013) provides such data on domestic dissent. We also include openness to trade (as percent of GDP) and the relative investment price level (capital goods prices as a ratio of the overall price level), where openness proxies for globalization effects

and investment prices proxy for the business environment and the degree to which government regulations and control affect it. These last data are from Heston et al. (2012).

5.3.3 Estimation strategy

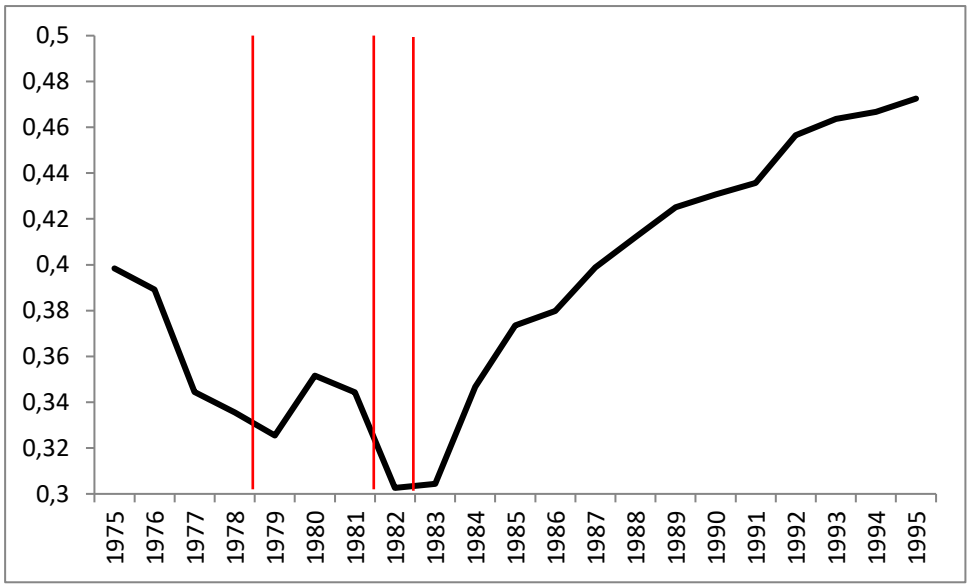
The resulting dataset consists of 7,759 yearly observations at the country level from 1950 to 2010 and encompasses 180 countries in the analysis. Due to variance in data availability, the dataset presents an unbalanced panel. To test the above stated hypotheses empirically, we estimate panel-data OLS models including year- and region-fixed effects. We provide a full set of Hausman tests that validate our approach.

Finally, as noted above, we include a lagged dependent variable in all regressions in order to focus on changes in repression around coups. Consequently, in order to both assess the immediate as well as the medium-run effects of coups, we also include multiple lags of coups. As discussed in the theoretical section, while the immediate effects of coups on repression are adverse, the long-run equilibrium effects of some types may be beneficial. We therefore vary the lag length from zero to three years and provide a test in which we include all four lags. While one could have added more lags, we limit the number to three lags for the following reasons. First, governments coming to power through a coup in developing and middle-income countries on average last four years and including longer lags than three years would therefore yield an increasing number of repression changes that cannot be causally associated to a coup with certainty. Second, although we have experimented with and included more lags, a practical finding is that longer lags are not robustly significant. Furthermore, increasing the lags means that we, in particular for some military coups, observe that lags above two years tend to overlap with subsequent democratizations. As such, longer lags of military coups may appear significant but tend to capture the effects of democratizations following a short period of military dictatorship. We therefore note that long lags may tend to generate conceptual confusion when attempting to interpret the empirical findings.

5.4 First impressions of the data

We first illustrate the structure of the data in two ways: a set of simple differences and an example. Figure 5.1 reports the development of the Fariss (2014) indicator of repression in Ghana in the 20-year period between 1975 and 1995. We use Ghana as a pertinent example of the types of development we deal with in the following, as it experienced both coups and substantial repression as well as a drastic improvement of the respect for physical integrity rights and a democratization during this period.

Figure 5.1: Repression in Ghana, 1975-1995



The figure clearly shows the declining state of physical integrity rights in Ghana, i.e. the increasing use of repression against the Ghanese population. In July 1978, General Akuffo took power in a military coup, which was followed 11 months later by a successful military coup that brought flight lieutenant Jerry Rawlings to power. This briefly improved the physical integrity rights situation, which subsequently deteriorated despite the democratization secured by the second military coup. In December 1981, Rawlings took power in another coup d'état that lead to long, stable military regime that peacefully democratized in 1993. As evident in the figure, it was Rawlings's non-democratic military regime that gradually improved respect for physical integrity rights.

In Table 5.2, we instead illustrate the structure of the repression data by reporting the immediate, year-to-year changes in repression around the different types of coups and democratizations for all countries in our dataset. These simple comparisons suggest that the repression reactions to military coups are relatively similar regardless of whether they take power from a democratic regime, a military regime, or fight off a coup attempt from another military faction. Conversely, coups against civilian autocracies tend to result in more minor changes to repression. In contrast, the few successful civilian coups against democracies go hand in hand with a strong increase in repression afterwards. Finally, although not shown in the table, we note that the immediate physical integrity rights improvement following the first year after democratization is substantially larger when formerly communist regimes or civilian autocracies introduce democracy (an improvement of approximately 8 %) and

substantially smaller (about 2 %) when military regimes democratize. Yet, as suggested by the Ghanese example, it remains a possibility that the latter is a reflection of military regimes reducing repression prior to democratizing such that some military dictatorships have almost 'prepared' for democratization by removing repressive measures prior to a political change. In the following, we therefore estimate the consequences of coups on respect for physical integrity rights holding the prior situation constant.

Table 5.2: Coups and democratization types

Type	# successful coups / failed coups	Initial repression	Change of repression
Coups	211 / 246		
Military coup against military dictatorship	80 / 95	0.33 / 0.33	-1.7% / -2.2%
Military coup against civilian autocracy	40 / 42	0.36 / 0.31	0.5% / 0.2%
Military coup against democracy	47 / 53	0.32 / 0.33	-2.8% / -2.3%
Civilian coup against civilian autocracy	24 / 25	0.33 / 0.33	-0.4% / -1.4%
Civilian coup against military dictatorship	14 / 16	0.30 / 0.32	-2.1% / -0.3%
Civilian coup against democracy	6 / 15	0.41 / 0.38	-9.1% / -0.4%

5.5 Findings

5.5. 1 Main findings – immediate effects of coups d'état

Table 5.3 reports our main results without distinguishing between types of coups. Contrary to our expectations, we find that failed coups do not appear to have an effect on respect for physical integrity rights that is distinct from successful coups. While failed coups are associated with what appears as a stronger decrease in respect for physical integrity rights, both successful and failed coups exert a negative effect and the point estimates are not significantly different. Lagging the coup effects one to three years suggests no significant reactions over and above those implied by the persistence of the lagged dependent variable, which include the immediate first-year effect. Conversely, we find that the comparative effects of democratization are to a significant degree implemented over several years as suggested by the significant lagged effects. As such, while stable democratization yields immediate effects, the results indicate that the full effects are implemented over the course of a number of years. With respect to the control variables, we find that more populous countries

with violent conflicts (instability) and relatively good short-term economic performance tend to repress more.

Table 5.3: Coup effects, separating successful and failed coups

	1	2	3	4
	No lag	1 year lag	2 year lags	3 year lags
Lagged repression	0.959***	0. 959**	0. 884***	0.796***
	(0.003)	(0.003)	(0.005)	(0.667)
Log GDP per capita	-0.391***	-0.389***	-0.595***	-0.692***
	(0.078)	(0.079)	(0.138)	(0.189)
Openness	-0.001	-0.001	-0.002	-0.004
	(0.001)	(0.001)	(0.002)	(0.002)
Investment prices	-0.054	-0.057	-0.135	-0.227*
	(0.049)	(0.050)	(0.088)	(0.119)
Log population size	-6.761***	-6.424***	-16.97***	-30.57***
	(2.133)	(2.140)	(3.82)	(5.22)
Instability	-0.832***	-0.851***	-1.975***	-3.113***
	(0.083)	(0.083)	(0.144)	(0.191)
Successful coup	-0.393***	-0.007	0.132	0.317
	(0.125)	(0.121)	(0.213)	(0.286)
Failed coup	-0.500***	0.079	0.281	0.478*
	(0.121)	(0.121)	(0.211)	(0.280)
Democratization	1.135***	0.631***	0.985***	1.354***
	(0.179)	(0.176)	(0.303)	(0.409)
Observations	7,759	7,759	7,579	7,399
Countries	180	180	180	180
Within R squared	0.956	0.956	0.865	0.761
F statistics	2389.26	2371.82	702.89	344.55
Hausman test	155.58***	157.43***	215.53***	351.08***

Note: Dependent variable: Respect for physical integrity rights. All regressions also include a constant term; numbers in parentheses are robust standard errors. * (**) [***] denote significance at p<.01 (p<.05) [p<.10].

In Table 5.4, we instead compare military and civilian coups with democratization, since the results in Table 5.3 suggest that we can disregard any general difference between successful and failed coups. We again note the gradual implementation of non-repressive institutions in democracies during the first years after democratization that is visible in the lagged effects of democratization. We also see no difference in the immediate effects of military and civilian coups but note one important difference: In the third year after a military

coup, repression tends to decrease significantly. Although the point estimates are similar, this effect is not statistically significant following civilian coups.

Table 5.4: Coup effects, separating military and civilian coups

	1	2	3	4
	No lag	1 year lag	2 year lags	3 year lags
Military coup	-0.602***	0.054	0.167	0.256**
	(0.107)	(0.106)	(0.107)	(0.108)
Civilian coup	-0.629***	0.093	0.248	0.300
	(0.208)	(0.209)	(0.214)	(0.218)
Democratization	1.157***	0.631***	0.381**	0.459**
	(0.179)	(0.176)	(0.176)	(0.181)
Observations	7,759	7,759	7,579	7,399
Countries	180	180	180	180
Within R squared	0.956	0.956	0.955	0.953
F statistics	2362.88	2341.92	2266.58	2183.58
Hausman test	196.70***	197.06***	189.04***	185.40***

Note: Dependent variable: Respect for physical integrity rights. Full baseline model is included. All regressions also include a constant term; numbers in parentheses are robust standard errors. * (**) [***] denote significance at p<.01 (p<.05) [p<.10].

5.5.2 Specific findings - types of coups d'état and long-run effects

Our results so far suggest that coups are similar in terms of their immediate repression effects, but they may not be so in the slightly longer run, i.e. the period following the first year after the coup. In Table 5.5, we therefore separate coup types on the basis of both their success, the type of incumbent regime, and whether the coup attempt is instigated and lead by people with either a civilian or military background.

Although the point estimates are negative, we find no significant evidence in favor of Hypothesis 1 that is observable on a year-to-year basis (first section of column 1). Conversely, as regards Hypothesis 2, the findings in the second section of column 1 suggest that the occurrence of a successful civil coup as well as a successful military coup against an incumbent democratic leader is associated with a strong increase in violations of physical integrity rights. However, we also observe that the immediate repression effects of a successful civilian coup against a democracy are significantly larger than similar military coups. These results also suggest that the significant effects of failed coups in Table 5.3 are driven mostly by failed military coups against military incumbents.

While we find that military incumbents react to failed military coups d'état by increasing repression immediately following the coup attempt, there is no empirical evidence

that other constellations of autocratic coups and coup attempts yield significant effects (see third section of column 1). Hypothesis 3 can thus not be supported by empirical evidence.

With respect to the fourth hypothesis, coups as well as other events leading to a regime change to democratic governments lead to an increase in respect for physical integrity rights (see fourth section of column 1). While this relationship holds for the change from all types of regimes, i.e. from civilian, military, and communist regimes, a change from communism to democracy is associated with the most pronounced increase in respect for physical integrity rights.

Our estimates of the long-run effects of coups are presented in columns 2 to 4 of Table 5.5 and Table 5.6 in the Appendix. Both successful and failed military coups against incumbent military regimes only lead to an increase in repression up to one year after the coup attempt. While a successful military coup against a democratic incumbent is associated with an increase in repression, the strength of this negative impact fades until it wears off two years after the coup occurred. In contrast, with an increase in the number of lags a successful military coup against a civilian incumbent exerts an increasingly *positive* effect on respect for physical integrity rights. We therefore find indications in support of Hypothesis 3 as we observe no such indications in civilian autocracies.

Finally, we find that for democratization an increase in respect for physical integrity rights after a regime change from a communist regime to a democratic government is the strongest and observable for a longer period than coups leading to a regime change from either civilian or military regimes. Conversely, all other things being equal, democratizations from military dictatorships only yield clearly significant reductions of repression in the first two years and the physical integrity rights gains tend overall to be smaller than for democratizations from other regime types. In summary, we consequently find that the specific types of regime transitions matter for the subsequent development of repression of physical integrity rights.

Table 5.5: Coup effects, specific types with different lag lengths

	1 No lag	2 1 year lag	3 2 year lag	4 3 year lag
Military against democracy, failed	-0.229	.0112	0.328	1.117*
	(0.256)	(0.255)	(0.445)	(0.589)
Civilian against democracy, failed	-0.412	-0.160	0.056	0.262
	(0.468)	(0.471)	(0.845)	(1.211)
Military against democracy, success	-1.191***	-.0571**	-0.837*	-0.588
	(0.275)	(0.277)	(0.484)	(0.639)
Civilian against democracy, success	-4.697***	-0.983	-0.403	0.477
	(0.711)	(0.716)	(1.356)	(1.794)
Military against military, success	-0.748***	-0.129	-0.455	-0.765
	(0.215)	(0.213)	(0.371)	(0.491)
Military against military, failed	-0.677***	-0.158	0.026	0.057
	(0.194)	(0.195)	(0.338)	(0.448)
Military against civilian, success	-0.069	0.609**	1.156**	1.749***
	(0.285)	(0.287)	(0.496)	(0.656)
Military against civilian, failed	-0.273	0.529*	0.702	0.615
	(0.286)	(0.289)	(0.498)	(0.659)
Civilian against civilian, success	-0.143	0.104	0.189	0.364
	(0.367)	(0.378)	(0.652)	(0.863)
Civilian against civilian, failed	-0.427	0.390	0.911	1.061
	(0.382)	(0.376)	(0.665)	(0.879)
Civilian against military, success	-0.163	0.435	0.122	-0.391
	(0.550)	(0.554)	(0.957)	(1.266)
Civilian against military, failed	-0.349	0.223	0.512	0.629
	(0.449)	(0.453)	(0.782)	(1.034)
Democratization from military	0.790***	0.489*	0.631	0.777
	(0.224)	(0.226)	(0.389)	(0.528)
Democratization from civilian	1.536***	0.609*	1.446***	2.353***
	(0.329)	(0.315)	(0.544)	(0.732)
Democratization from communism	3.286***	1.782***	1.905*	1.489
	(0.664)	(0.591)	(1.021)	(1.351)
Observations	7,759	7,759	7,579	7,399
Countries	180	180	180	180
Within R squared	0.956	0.956	0.866	0.904
F statistics	2029.42	1998.03	590.69	289.20
Hausman test	72.92	205.90***	305.38***	428.80***

Note: Dependent variable: respect for physical integrity rights. Full baseline model is included. All regressions also include a constant term; numbers in parentheses are robust standard errors. * (**) [***] denote significance at p<.01 (p<.05) [p<.10].

5.6 Discussion and conclusions

In general, it is taken for granted that the repression of physical integrity rights increases when government changes as a result of a coup d'état and decreases when countries democratize. In this paper, we have questioned this consensus by arguing that while physical integrity rights may suffer both when coups succeed and when they fail, certain coups may lead to less repression. We have furthermore argued that civilian autocracies may actively repress the rights of their populations more, as the interests of their background support – their particular of their selectorate – are different from those of military dictatorships and because they potentially represent a more diverse set of non-democratic interests.

Using the recent data on repression of physical integrity rights from Fariss (2014) and combining them with a new dataset containing detailed information on both successful and failed coups d'état, we estimate the repression effects of coups and democratizations since 1950. Unsurprisingly, we find strong evidence of the positive effects of democratization that are phased in across the years following the introduction of proper electoral democracy. Conversely, we also find an increase in repression when non-democratic regimes take power from democratic regimes through coups d'état.

Yet, separating different types of coups reveals less than trivial findings. Specifically, our results suggest that civilian autocracies may often develop into more repressive regimes than their military counterparts after successfully ousting the previous government. In support of this interpretation, we find that the increase in repression following a successful civilian coup against democracy is substantially larger than during military take-overs. Second, we observe that when military interests successfully force out a civilian, non-democratic government in a coup, repression typically *decreases* in the following years. In other words, military dictatorships are likely to show more respect for physical integrity rights than the civilian autocracies that they replace.

While we can only speculate on the reasons for the behavioral difference between civilian and military regimes, we note that it is consistent with other recent results that also indicate a need to separate different types of regime transitions instead of regarding all coups and all democratizations as fundamentally similar events. Revisiting democratization results, Rode and Gwartney (2012), for example, show that the economic policy consequences of democratization depend on whether the regime transition to democracy is stable or in risk of degenerating into (civilian) autocracy. Bjørnskov (2015) similarly finds that successful civilian coups substantially increase the risk of observing an economic crisis after the coup

and prolong already ongoing crises. Similarly, Yu and Jong-A-Pin (2016) suggest that military competence affects the likelihood that coup governments are going to survive in office.

In general, our findings in this paper support these recent findings by showing the need to separate different types of political events in order to gauge their consequences. A more thorough investigation, which allows pinpointing the causal links between coups and repression, would nevertheless require being able to forecast the occurrence and type of coups. We expect this undertaking to be difficult, if not practically infeasible. Yet, at least alleviating these concerns represents a fruitful field for future research.

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5.8 Appendix

Table 5.6: Coup effects, specific types with all lag three lengths included simultaneously

	1
Military against democracy, failed	-0.371
	(0.266)
1 year lag	0.191
	(0.262)
2 year lag	0.405
	(0.262)
3 year lag	0.899***
	(0.259)
Civilian against democracy, failed	-0.719
	(0.502)
1 year lag	-0.594
	(0.486)
2 year lag	-0.265
	(0.502)
3 year lag	0.845
	(0.537)
Military against democracy, success	-1.256***
	(0.278)
1 year lag	-0.572**
	(0.282)
2 year lag	-0.128
	(0.287)
3 year lag	0.188
	(0.283)
Civilian against democracy, success	-4.590***
	(0.718)
1 year lag	-1.249
	(0.719)
2 year lag	0.848
	(0.787)
3 year lag	1.679**
	(0.786)
Military against military, success	-0.773***
	(0.222)
1 year lag	-0.175
	(0.221)
2 year lag	-0.212
	(0.221)
3 year lag	-0.331
	(0.217)
Military against military, failed	-0.614***
	(0.201)
1 year lag	-0.192
	(0.199)
2 year lag	0.133
	(0.198)
3 year lag	0.070
	(0.197)

Military against civilian, success	0.002
	(0.297)
1 year lag	0.729**
	(0.297)
2 year lag	0.719**
	(0.291)
3 year lag	0.807***
	(0.292)
Military against civilian, failed	-0.136
	(0.301)
1 year lag	0.608**
	(0.289)
2 year lag	0.257
	(0.289)
3 year lag	0.072
	(0.289)
Civilian against civilian, success	0.025
	(0.388)
1 year lag	0.182
	(0.397)
2 year lag	0.110
	(0.379)
3 year lag	0.167
	(0.379)
Civilian against civilian, failed	-0.483
	(0.405)
1 year lag	0.350
	(0.384)
2 year lag	0.542
	(0.395)
3 year lag	0.278
	(0.386)
Civilian against military, success	-0.241
	(0.585)
1 year lag	-0.060
	(0.561)
2 year lag	-0.789
	(0.561)
3 year lag	-0.860
	(0.558)
Civilian against military, failed	-0.371
	(0.455)
1 year lag	0.103
	(0.454)
2 year lag	0.184
	(0.454)
3 year lag	-0.022
	(0.453)

Democratization from military	0.930***
	(0.230)
1 year lag	0.515**
	(0.229)
2 year lag	0.240
	(0.228)
3 year lag	0.445*
	(0.233)
Democratization from civilian	1.567***
	(0.334)
1 year lag	0.907***
	(0.338)
2 year lag	1.411***
	(0.339)
3 year lag	1.119***
	(0.327)
	3.519***
Democratization from communism	(0.720)
1 year lag	2.557***
	(0.721)
2 year lag	0.659
	(0.668)
3 year lag	-0.441
	(0.590)
Observations	7,399
Countries	180
Within R squared	0.955
F statistics	1214.09
Hausman test	517.08***

6

Still Tools of Repression?
Re-assessing the Effect of Arms Imports on Physical Integrity Rights

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Abstract

Small arms and light weapons (SALW) imports have been found to be linked to a worsening of human rights conditions in the importing state. In this paper, we re-examine the relationship of government's SALW imports and the decision to engage in violations of physical integrity rights using updated and more reliable repression data. Analyzing physical integrity rights violations and SALW imports of 176 countries from 1991 to 2010, empirical results indicate that SALW imports have a negative impact on respect for physical integrity rights in autocracies. When disaggregating findings by regime type, we find that SALW imports in autocracies are associated with more repression, while we have mixed results for democracies.

Keywords: arms trade, SALW, repression, physical integrity rights.
JEL classification: F14, H56, K33.

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6.1 Introduction

The trade of small arms and light weapons (SALW) is heavily criticized for fueling conflicts and facilitating violations of human rights world-wide. This type of weapons is defined as portable weapons, which can be used by a single person. Several non-governmental organizations (NGOs) campaign for a stricter arms trade regime arguing that small arms and light weapons (SALW) are used to commit human rights abuses. According to Amnesty International (2010), approximately 60% of all human rights violations between 1991 and 2002 involved the use of SALW. The Arms Trade Treaty (ATT), which is the first international agreement and specifically addresses the trade of SALW, has thus been especially embraced by NGOs. But do arms imports actually lead to an increase in physical integrity rights violations? In only two studies, the assessment of the relationship between arms imports and physical integrity rights violations is based on systematic cross-country empirical analyses over time. This renders this aspect of the often controversially discussed arms trade and human rights nexus clearly under-researched. The aim of this paper is to re-investigate whether arms imports can in fact be associated with changes in respect for physical integrity rights.

Two papers assess the effect of arms imports on respect for physical integrity rights. While Blanton (1999) focuses on imports of conventional arms, De Soysa et al. (2010) put an emphasis on SALW imports. Both of the two previous studies contend that arms imports lead to an increase in physical integrity rights violations (De Soysa et al., 2010; Blanton, 1999). Their argumentation is based on the claim that the import of arms provides the capability for engaging in violent and repressive action (Blanton, 1999). Although SALW differ from conventional weapons such as aircrafts and missiles in size, handling, and price, both studies find that arms imports are associated with a decrease in respect for physical integrity rights. Physical integrity rights are most often violated by the use of SALW. Although violations of physical integrity rights usually only occur at a later stage of repression when conflict is escalating, it is the most severe form of human rights violations and therefore deserves special attention by researchers. Thus, we follow the empirical approach by De Soysa et al. (2010) replicating their findings and re-examining the effect of small arms imports on repression with a new measure for physical integrity rights repression.

Using the replication data set, which is provided by De Soysa et al. (2010), we extend their analysis in two ways: First, we take advantage of a new latent variable for respect for human rights, which has been suggested by Fariss (2014) for its increased reliability. Second, we extend the period of observation and test the effect of a change in arms imports on respect

for physical integrity rights for a larger panel of up to 175 countries with an increased period of observation from 1991 to 2010. We find that the result that SALW imports decrease respect for human rights achieved by De Soysa et al. (2010) is robust to our changes in data and empirical strategy. We, however, fail to replicate the diverging result for autocracies compared to democracies at least in one model specification.

The remainder of this paper is structured as follows. Section 2 provides the theoretical framework for why we expect arms imports to increase or decrease respect for physical integrity rights. The third section presents our research design, i.e. data, operationalization, and estimation method. In section 4, we show our empirical results, provide further robustness checks, and discuss our findings. Section 5 provides a conclusion to the analysis of whether arms imports influence respect for physical integrity rights.

6.2 The link between small arms imports and respect for physical integrity rights

This section presents a theoretical framework of how arms imports are related to a change in human rights standards. According to theoretical considerations by Blanton (1999) and De Soysa et al. (2010), arms imports lead to a decrease in respect for physical integrity rights because of the most straightforward explanation that arms can be and are used for this purpose. We acknowledge this as a potential promoting factor and integrate it into Wintrobe's (1998) standard model of dictatorship and repression. Our theory section is divided in two parts. The first part briefly lays out the baseline model of repression according to Wintrobe (1998). The second part of this chapter suggests how arms imports can be related to rights violations.

Political leaders are rational individuals who decide between two strategies of staying in power and are interested in maximizing personal consumption. In other words: The primary objective of the incumbent is to stay in political power at the lowest resource cost possible so that his private consumption is maximized. To achieve this objective, the incumbent trades off the use of the following two instruments, which can both facilitate survival in office, but also generate costs. The first strategy involves the use of repression, which often takes the form of physical integrity rights violations such as torture and extrajudicial killings (e.g., Wintrobe, 1998; Poe and Tate, 1994). A restriction of these rights requires, for instance, expenditure costs of repression and is expected to increase a dissident's cost of mobilizing against the regime and thus deter the opposition from challenging the political survival of the incumbent. Wintrobe (1998) also discusses loyalty as another strategy: Autocrats can buy and accumulate loyalty of their population, for instance, by distributing rents and other economic benefits.

The level of repression and the level of loyalty supplied by the population are dependent on one another. A fall in the level of loyalty to the autocrat is expected to provoke a reaction of the autocrat. Either the autocrat increases the level of rent distribution or the level of repression. High levels of repression, however, will lead to a reduction in loyalty towards the autocrat (Wintrobe, 1998). This induces a negative spiral of dissent and repression. The more the incumbent relies on repression the harder the way back to non-violent forms of conflict resolution - without having to fear losing political power. The price of loyalty may become prohibitively high because citizens will hold the regime accountable for human rights violations. In order to prevent this, repressive regimes invest a lot in cover up for their rights violations.

The capacity for systematic repression is strongly linked to militarization of the state and, in particular, of police forces and secret services. A regime which has more resources available for repression has lower costs of immediate implementation of repressive measures (Davenport, 1995). In order to deter dissent effectively, repression has to be carried out in a systematic manner. Once repression is implemented systematically, it is very likely that it is cast in some sort of bureaucracy such as the East Germany's Ministry of State Security ("Stasi") or the Chilean National Intelligence Directorate DINA (Davenport, 1995).

The existence of such organizations brings new actors to the scene and creates new incentive structures and dependencies. Political leaders are very likely not the ones committing the crimes themselves but relying on organizations such as specialized military forces, secret services, or police forces. Later on, the incumbent regime and their human rights violating security forces will become dependent on each other. On the one hand, a repressive regime may be caught in the necessity of further repression when it wants to stay in power. Security forces, on the other hand, which violated physical integrity rights, might face prosecution when the incumbent regime collapses. Therefore, they will work on their own militarization in order to stay in office and to prevent the regime from collapsing. Davenport (1995) argues that a certain path dependency can be expected when state coercion is cast in bureaucratic structures (ibid.). These bureaucracies tend to work on their own stabilization and access to resources by becoming more and more watchful of dissident behavior and sensitizing the regime (ibid.). It will become its own lobby arguing that a threat is constantly high and thereby securing its own existence and access to resources. Thus, the higher the perceived threat of being ousted to the incumbent the more a political leader will invest in his security forces, not only in terms of personnel but also in terms of weapons available to these forces. Besides, the availability and the possibility to use up to date high tech weapons instead

of old equipment may be considered a status symbol by security personnel. Thus, buying new weapons instead of using the stock may be used to buy loyalty of the security services to the incumbent. As a result, demand for SALW increases the more dissent activities arise and consequently the more repressive a regime is. Especially, when protests or conflicts are threatening the survival of the regime, imports of SALW are argued to rise. Previous empirical findings suggest that the level of repression increases in the light of conflict (e.g., Davenport et al., 2008; Davenport, 1995). Davenport (1995) analyses the link between dissent and repression as follows: When dissent becomes violent, the probability of state repression increases, while non-violent dissent is less likely to provoke a violent reaction (Davenport, 1995). Hence, increasing dissent is followed by increasing repression, especially, when dissent activities become more violent or systematic. In reaction to the challenge to the regime it is increasing militarization of its security forces, thus imports of SALW increase.

Hypothesis 1: An increase in arms imports is associated with a decrease in respect for physical integrity rights.

Whether imported arms are used for rights violations also depends on regime type. It is widely established that in autocracies costs for neglecting the promotion and protection of physical integrity rights is relatively low compared to democratic regimes (Davenport, 2007; Cingranelli and Richards, 1999; Poe and Tate, 1994). One aspect, which contributes to lower costs of repression, is that state coercion is less likely to be sanctioned; at least as long as the regime is in power. We assume that thus the means or rather the use thereof with which countries can violate physical integrity rights, i.e. small arms and light weapons, are less likely to be sanctioned. Democracies, by contrast, have a higher tolerance towards dissident behavior as well as they are in general more legitimate forms of governments (Davenport, 1995). They are less threatened by low levels of dissent and therefore do not react with repression. The argued reason is that democracies have found other ways of resolving conflicts (Davenport, 1995; Henderson, 1991). The use of weapons and SALW in particular is a reaction to dissent activities and conflict, which is generally not accepted in democracies. It is thus more likely that small arms are used for physical integrity rights violations in autocratic regimes, while this is unlikely to be the case in democracies.

Due to this nexus, autocratic regimes also have more incentive to restrict private weapon ownership because political conflicts are more likely to result in violence. Therefore, a larger share of imported SALW will end up in the hand of citizens for private use such as hunting or sports in democracies than in autocracies. Although a higher diffusion of weapons

is likely to increase the severity of violence and crime both in democracies and autocracies and therefore the necessity to equip police forces accordingly, we do not expect that respect for physical integrity rights decreases with SALW imports in democracies to the same extent it does in autocracies (De Soysa et al., 2010; Efrat, 2010; Muggah and Batchelor, 2002; Cukier, 2002).

Hypothesis 2: An increase in arms imports leads to a decrease in respect for physical integrity rights in autocracies but not in democracies.

6.3 Data and empirical analysis

In brief, our estimation approach consists of first replicating the results of De Soysa et al. (2010). We suggest improvements over the empirical strategy and data: As a first step, we introduce a novel physical integrity rights variable as proposed by Fariss (2014). Subsequently, we expand the data source by six more years and introduce a variable capturing dissent activity additionally to the domestic conflict variable. De Soysa et al. (2010) suggest pooled OLS regression with Newey-West (1987) standard errors to control for serial correlation in the disturbances and heteroscedasticity. However, they do not consider unobserved heterogeneity. We propose to include country fixed effects to the model to deal with unobserved heterogeneity (Baum et al., 2010; Schaffer, 2010). We also argue that repression is more appropriately explained by a dynamic and linear model. Thus, we move to a lagged dependent variable model with country fixed effects (Beck and Katz, 2011).

6.3.1 Dependent variable: respect for physical integrity rights

Bearing in mind that the notion of physical integrity rights is a much broader concept, we focus on respect for physical integrity rights as our dependent variable for reasons of data availability. This measure captures violations of physical integrity rights committed by state officials against the population. Our choice is in line with previous research on state repression (e.g., Rivera, 2016; De Soysa et al., 2010; Blanton, 1999). Physical integrity rights consist of an array of rights such as freedom from political and unlawful imprisonment, freedom from torture as well as freedom from cruel and inhumane treatment. Reported violations in terms of extrajudicial killings and forced disappearance are also included in this variable.

In the replication model, we use the Cingranelli and Richards (1999) measure of physical integrity rights protection. In our robustness analysis, we rely on updated and more reliable rights data, which is provided by Fariss (2014). Using a dynamic ordinal item response theory model Fariss obtains a latent physical integrity rights variable (see

Schnakenberg and Fariss, 2014, for a detailed description of the model and estimation approach). This continuous variable is preferable over other commonly used physical integrity rights data sets such as Political Terror Scale index or Cingranelli and Richard's Human Right Dataset as Fariss' variable incorporates a more stringent way of reporting and accounting for physical integrity rights violations over time (Fariss, 2014). Hence, our estimates are more reliable and unlikely to be distorted by systematic changes in the way information about human rights abuses is processed and interpreted. In our sample, we normalize physical integrity rights for reasons of inter-country comparability and interpretation to range between 0 and 100. A value of 100 indicates no violations of physical integrity rights and value of 0 expresses no respect for physical integrity rights respectively. Descriptive statistics are provided in Table 6.1 in the Appendix.

6.3.2 Independent variables

Our independent variable is retrieved from the Norwegian Initiative on Small Arms Transfers (NISAT) project, which is provided by the Peace Research Institute Oslo (Marsh, 2014). This database compiles data from different sources such as the UN Comtrade database and the UNROCA database. It reports the import value (in US$ 1,000) for a variety of small arms and light weapons. We take the logarithm of SALW imports per capita. We test models both with and without this transformation as robustness checks.

In line with previous literature, we control for the following variables, which are likely to affect respect for physical integrity rights. Except for the variable 'dissent', all variables are also used by De Soysa et al. (2010). Table 6.2 in the Appendix provides an overview of how definitions and sources of the variables used in the replication analysis differ from De Soysa et al. (2010).

For one, we include population size (in logs). Larger populations are considered to increase pressure on governments by putting more stress on available resources of a country and increase scarcity (e.g., Carey, 2010, p. 175; Poe and Tate, 1994). Data are drawn from the World Population Prospects (UN, 2015). Previous research has repeatedly highlighted that being a democracy is positively related to respect for physical integrity rights since the political opportunity for rights violations is often constrained (e.g., Bueno de Mesquita et al., 2005). In contrast to De Soysa et al. (2010), who include a dummy constructed from the Polity IV dataset, we use the binary variable provided by Cheibub et al. (2010), later extended by Bormann and Golder (2013), which takes the value of 0 for autocracies and 1 for democracies. This choice is taken as we perceive the cut-off value for democracies and autocracies, respectively, which has been applied by De Soysa et al. (2010), as quite random.

Given that external conflict increases the likelihood of violations of physical integrity rights we consider a binary variable capturing whether interstate conflict occurs (e.g., Poe and Tate, 1994). Data for this variable is available from the Uppsala Conflict Data Program (2015). Similarly, a government is more likely to resort to rights violations if it faces domestic threats that challenge the political status quo. De Soysa et al. (2010) argue that the civil war variable captures dissent and they are confident to capture domestic conflicts, which drive repression. We argue that even lower level dissent already provokes repressive behavior and therefore include a variable counting the number of the following dissent activities: anti-government demonstrations, strikes, and riots. The Cross-National Time-Series Archive by Banks and Wilson (2013) provides such data on domestic dissent. Also, since economic development has been found to be inversely related to violations of physical integrity rights, we proxy a country's economic development using the logarithm of GDP per capita available from the World Development Indicators 2014 (World Bank, 2014). In order to proxy a country's own production capabilities and control for the fact that producers of weapons may not require to import as many weapons as non-producers, the log of SALW exports per capita is included to the model (De Soysa et al. 2010). Summary statistics of the variables used in the analysis are provided in Table 6.1. Finally, it has been suggested that a country's respect for physical integrity rights in period *t-1* is likely to play a role for current respect for rights (Davenport, 2007). As a conventional way to deal with autocorrelation, we therefore also include a lagged dependent variable in our analysis.

6.3.3 Model estimation

We use ordinary least squares (OLS) regression with Newey-West standard errors for the replication of De Soysa et al. (2010) estimation strategy in order to address autocorrelation and heteroscedasticity. More specifically, the baseline model is:

$$Repression_{i,t} = \rho SALW_{i,t} + \omega X_{i,t} + \gamma_i + \delta_t + \mu_{i,t}\,, \qquad (1)$$

where $Repression_{i,t}$ presents respect for physical integrity rights of country i in period t. $SALW_{i,t}$ denotes our main independent variable, i.e. imports of small arms and light weapons (SALW). The term $X_{i,t}$ includes the above described control variables, i.e. the logarithm of population size, dummy variables for democracy and interstate conflict, the number of dissent events, and the logarithm of per capita GDP. The baseline specification also controls for time-fixed effects δ_t. Subsequently, we introduce country-fixed effects $\gamma_i$to the model.

In the literature, the inclusion of a lagged dependent variable is a second, more prominent approach to tackle the issue of autocorrelation. This choice is also favored by Beck and Katz (2011). Additionally, it is supported by the panel data structure of our data sample and in line with previous research on the determinants of state repression and arms imports (e.g., Poe et al., 1999; Blanton, 1999). Our model specification then looks like:

$$Repression_{i,t} = \alpha Repression_{i,t-1} + \rho SALW_{i,t} + \omega X_{i,t} + \gamma_i + \delta_t + \mu_{i,t} \qquad (2)$$

In case there is still considerable amount of serial correlation after the lagged dependent variable has been introduced, it is possible to include a second lag while having first lags included to all other covariates (Beck and Katz, 2011). Performing Arellano/Bond tests for autocorrelation indicates that this additional transformation of the model is appropriate in our case (Roodman, 2009). Thus, we also estimate the following model:

$$Repression_{i,t} = \alpha Repression_{i,t-1} + \beta Repression_{i,t-2} + \rho SALW_{i,t} + (-\rho\theta) SALW_{i,t-1} + \omega X_{i,t} + (-\omega\varphi) X_{i,t-1} + \gamma_i + \delta_t + \mu_{i,t}\,. \qquad (3)$$

Including fixed effects together with a lagged dependent variable can lead to biased estimates when the observed period of time *t* is small, also known as Nickell bias (Nickell, 1981). Classical approaches to deal with this bias include the Arellano-Bond (Arellano and Bond, 1991) or the Arellano-Bover/Blundell-Bond (Blundell and Bond, 1998; Arellano and Bover, 1995) difference or system GMM estimators (Roodman, 2009). We opt for difference GMM estimation with cluster-robust standard errors because a precondition for valid system GMM estimation is that fixed effects are not correlated with the instrumental variables. This is not likely to hold in our case. Whether t=20 can be considered as a sufficiently short time period for feasible difference or system GMM is debatable. As a robustness check we therefore present regression results for OLS fixed effects regression.

6.4 Empirical findings

In Table 6.3, we estimate the effects of the imports of SALW on respect for physical integrity rights. Column 1 in Table 6.4 reports the results for the replication of De Soysa et al. (2010), i.e. the effect of SALW imports on repression. Column 2 displays the results for the model in which only the physical integrity rights variable is changed to the Fariss (2014) latent variable. Column 3 shows the results for the updated and extended dataset in which we use alternative variables for the share of Muslim population, oil exporter, total arms imports, democracy, population, and dissent in comparison to De Soysa et al. (2010) described in Table 6.2.

Across all three specifications, higher levels of arms imports per capita are associated with a decrease in respect for physical integrity rights. Based on these findings, our models provide empirical support for our first hypothesis that an increase in arms imports is associated with lower respect for physical integrity rights and confirms the findings of De Soysa et al. (2010). When adding a standard deviation to the mean of SALW imports, the baseline prediction of the physical integrity rights variable changes from 47.52 to 45.31. This corresponds to a change of 0.5% which is slightly higher than the effect De Soysa et al. (2010) find. Similar to De Soysa et al. (2010), we find that the impact on repression of the other variables in the model is larger than the impact of SALW imports on repression.

Our control variables perform as expected. Dissent and civil war are statistically significant and associated with an increase in physical integrity rights violations. Being a democracy has a positive effect on physical integrity rights. Higher income levels lead to an increase in respect for physical integrity rights. The negative effect of population on physical integrity rights is also in line with theoretical expectations that larger population size exerts more pressure on governments. The more time passes after a civil war, the higher respect for physical integrity rights. We also find that respect for physical integrity rights is lower in oil exporting countries as well as in countries, which employ a larger share of military personnel.

Table 6.3: Effect of SALW imports on respect for physical integrity rights

Variables	[1]	[2]	[3]
SALW imports per capita (log)	-0.070*	-0.613**	-0.499*
	(0.033)	(0.207)	(0.196)
SALW exports per capita (log)	0.024*	0.206***	0.101*
	(0.010)	(0.059)	(0.068)
Democracy	0.620***	4.282***	4.632***
	(0.121)	(0.716)	(0.709)
GDP per capita (log)	0.535***	5.442***	4.815***
	(0.070)	(0.436)	(0.360)
Population (log)	-0.568***	-3.928***	-3.393***
	(0.035)	(0.210)	(0.295)
Dissent (sum)			-0.611***
			(0.136)
Civil war	-2.147***	-9.972***	-9.249***
	(0.138)	(0.795)	(0.832)
Subsequent peace years	0.017***	0.202***	0.128***
	(0.003)	(0.020)	(0.015)
Share of Muslims	0.002*	0.037***	0.016*
	(0.002)	(0.009)	(0.011)
Oil exporter	-0.481***	-2.785**	-4.096***
	(0.138)	(0.914)	(1.000)
Share of military personnel	-0.109***	-1.359***	-1.284***
	(0.029)	(0.241)	(0.192)
Total arms imports / GDP	-0.111	-0.633*	0.103
	(0.186)	(0.840)	(0.179)
Constant	9.296***	59.420***	59.079***
	(0.837)	(5.086)	(4.587)
R^2	0.621	0.704	0.756
Observations	1,493	1,521	1,677
Year-fixed effects	Yes	Yes	Yes
Time period	1992-2004	1992-2004	1992-2010
Countries	130	130	152
F	94.98	94.64	98.46

Note: Newey-West standard errors in parentheses. Model 1 estimates the baseline model by De Soysa et al. (2010). Model 2 estimates the baseline model with Fariss' (2014) respect for physical integrity rights variable. Model 3 estimates and extends Model 2. *** p<0.001, ** p<0.01, * p<0.5.

In Table 6.4, we run an interactive term of democracy and SALW imports to test our second hypothesis. Again, column 1 in Table 6.4 reports the results for the replication of De Soysa et al. (2010), while model 2 uses Fariss physical integrity rights variable and column 3 shows the results for the extended dataset.

Table 6.4: Effect of SALW imports on respect for physical integrity rights

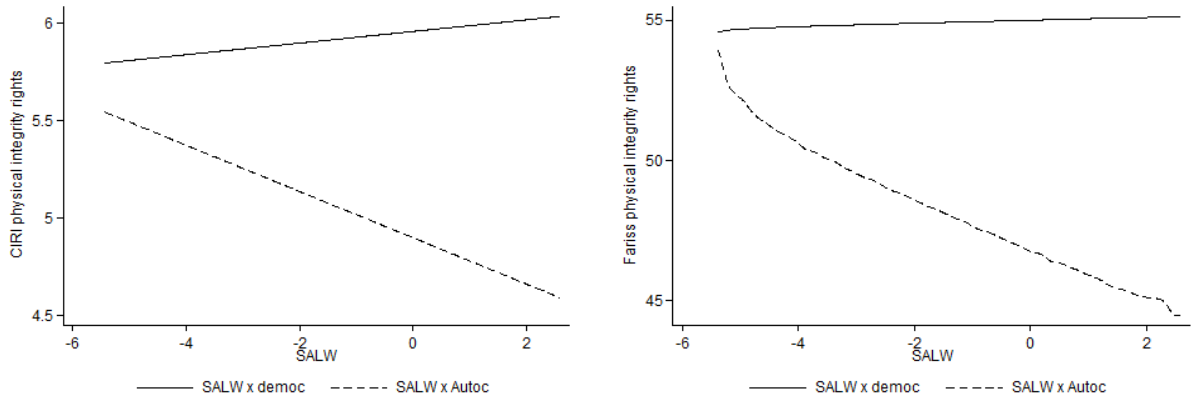
Variables	[1]	[2]	[3]
SALW imports per capita (log)	-0.119***	-1.175***	-0.893***
	(0.036)	(0.210)	(0.141)
SALW exports per capita (log)	0.026**	0.185**	0.205***
	(0.009)	(0.058)	(0.047)
Democracy x SALW imports per capita (log)	0.149***	1.887***	0.946***
	(0.045)	(0.346)	(0.189)
Democracy	1.060***	8.897***	7.991***
	(0.129)	(0.877)	(0.558)
GDP per capita (log)	0.438***	4.323***	3.493***
	(0.066)	(0.412)	(0.243)
Population (log)	-0.527***	-3.507***	-3.224***
	(0.033)	(0.203)	(0.158)
Dissent (sum)			-0.662***
			(0.125)
Civil war	-2.240***	-11.663***	-10.135***
	(0.133)	(0.827)	(0.711)
Subsequent peace years	0.016***	0.174***	0.118***
	(0.003)	(0.019)	(0.011)
Constant	9.053***	59.055***	65.885***
	(0.824)	(5.104)	(3.546)
R^2	0.613	0.696	0.722
Observations	1,698	1,727	2,985
Year-fixed effects	Yes	Yes	Yes
Time period	1992-2004	1992-2004	1991-2010
Countries	136	136	176
F	120.4	103.7	136.3

Notes: Newey-West standard errors in parentheses. Model 1 estimates the baseline model by De Soysa et al. (2010). Model 2 estimates the baseline model with Fariss' (2014) respect for physical integrity rights variable. Model 3 estimates the extended model. Estimates based on regression model (1) above. *** p<0.001, ** p<0.01, * p<0.5.

We clearly find a positive effect of the interaction between regime type and SALW imports on respect for physical integrity rights. However, in order to interpret the interaction effect of regime type and arms imports on physical integrity rights, we provide conditional

effects plots of SALW imports on repression conditional on being a democracy (see Figure 6.1). As we are interested in contrasting De Soysa et al.'s (2010) findings with those of obtained from most recent and updated data, we focus our interpretation of the results in the following by contrasting results of column 1 and 3. Figure 6.1 shows the same relationship holds in both model specifications: An increase of SALW imports is associated with a decrease in respect for physical integrity rights in autocracies. In democracies, however, an increase in arms imports marginally increases respect for physical integrity rights in democracies. When looking at the right panel of Figure 6.1, results from the extended dataset suggest that the conditional effect of SALW imports on repression is not linear. Concerning the interpretation of the strength of coefficients, we find that an increase in SALW imports only has a small effect on repression. These findings thus provide empirical support for our second hypothesis that an increase in arms imports leads to a decrease in respect for physical integrity rights in autocracies but not in democracies.

Figure 6.1: Conditional effects of SALW imports and democracy on physical integrity rights (baseline model)



Note: Left panel calculated from model 1, Table 6.4. Right panel calculated from model 3, Table 6.4.

As explained above, we intend to address the issue of unobserved heterogeneity, which has not been dealt with by De Soysa et al. (2010), by including country-fixed effects to the model. Table 6.5 presents the results of the interaction term including year- and country-fixed effects. Figure 6.2 depicts the conditional effect of regime type and arms imports on respect for physical integrity rights. While the effect of democracies and autocracies was diverging in previous estimations, they now both exert a negative effect on respect for

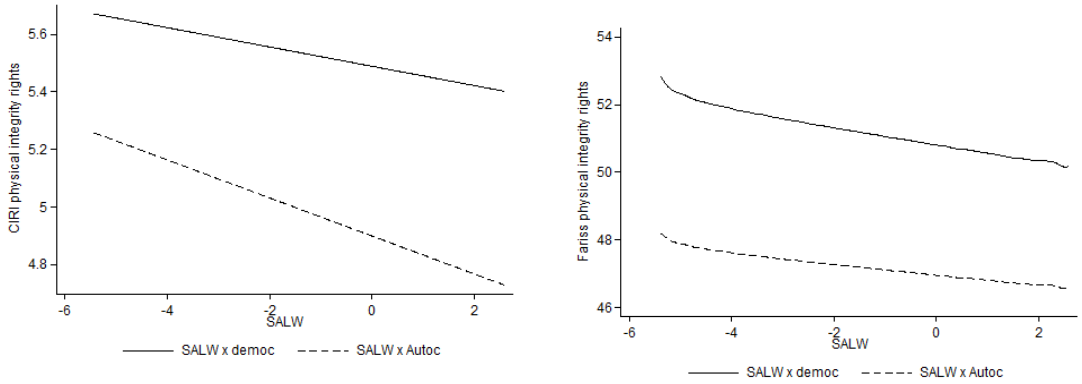
physical integrity rights. Although democracies still have higher levels of respect for physical integrity rights, they face an increase in repressive behavior when SALW imports rise. Figure 6.2 suggests that this decrease in respect for physical integrity rights is initially larger. This indicates again that the relationship between arms imports and repression may not be linear once the full sample is included in the estimation.

Table 6.5: Effect of SALW imports on physical integrity rights (fixed effects)

Variables	[1]	[2]
SALW imports per capita (log)	-0.066*	-0.154*
	(0.041)	(0.095)
SALW exports per capita (log)	0.015*	0.042*
	(0.009)	(0.029)
Democracy x SALW imports per capita (log)	0.033	-0.096
	(0.063)	(0.160)
Democracy	0.589**	3.868***
	(0.209)	(0.821)
GDP per capita (log)	0.534*	3.482**
	(0.364)	(1.106)
Population (log)	1.919**	2.559*
	(0.664)	(1.508)
Dissent (sum)		-0.201***
		(0.056)
Civil war	-1.410***	-6.556***
	(0.144)	(0.526)
Subsequent peace years	0.007*	0.085***
	(0.006)	(0.015)
R^2	0.123	0.264
Observations	1,697	2,984
Year-fixed effects	Yes	Yes
Country-fixed effects	Yes	Yes
Time period	1992-2004	1991-2010
Countries	130	130
F	8.778	18.52

Note: Newey-West standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.5. Model 1 estimates the baseline model of De Soysa et al. (2010) using fixed effects. Model 2 relies on Fariss' (2014) physical integrity rights measure and includes fixed effects.

Figure 6.2: Conditional effects of SALW imports and democracy on physical integrity rights (fixed effects)



Note: Left panel calculated from model 1, Table 6.5. Right panel calculated from model 3, Table 6.5.

In addition, we check whether repression is more appropriately explained by a dynamic and linear model. We thus include a lagged dependent variable to the model (see Table 6.6 in the Appendix). Firstly, results are robust to this change and, secondly, a linear dynamic model seems to be more appropriate to capture the conditional relationship between arms imports and physical integrity rights. The latter is observable from Figure 6.3 and 6.4, which no longer show signs of non-linearity. This indicates that the chosen lagged dependent variable approach is more appropriate, although the basic finding does not change: The level of SALW imports per capita correlates with an increase in repression in autocracies but not in democracies. Overall, in terms of actual effect size, we find that the relationship between SALW and physical integrity rights is rather small.

6.5 Conclusion

This paper has re-assessed whether arms imports are linked to a worsening of human rights conditions. We find that the level of SALW imports per capita is associated with higher levels of repression. When disaggregating the effect of arms imports by regime type, results suggest that an increase of SALW imports is associated with a decrease in respect for physical integrity rights in autocracies but not in democracies. This indicates that results of De Soysa et al. (2010) are robust to the use of more reliable data, increased coverage, thorough robustness checks, and sophisticated estimation strategies.

While our argument and findings provide empirical evidence for a robust relationship between small arms imports and repression, transmission channels are yet unclear for two

reasons. First, it has to be kept in mind that the existence and import of arms may not be the reason for repression per se. Although we find a link, we also show that SALW imports are not always decreasing respect for physical integrity rights. It is likely that domestic conflicts and the way how different regimes deal with such conflicts are causal to repression. The militarization of security forces, for instance, only follows the decision to repress dissent. Second, our analysis may be prone to endogeneity. For multiple reasons, the transmission channel may actually be reverse, i.e. higher repression may lead to an increase in SALW imports. Due to a lack of strong and appropriate instruments, however, the problem of endogeneity could not be sufficiently addressed with an instrumental variables approach so far.

Our findings bring up interesting follow-up questions. In particular, it should be further investigated to what extend human rights standards in importing countries affect the trade decision of exporters. While it has long been argued and shown by research that arms imports are associated with lower levels of protection of physical integrity rights, our findings suggest that rights standards do not seem to play a decisive role for the exporters. In this context, it would be especially interesting to investigate the role of the Arms Trade Treaty which came into force 2014 and is the first international agreement requiring exporting states to make an assessment of likely human rights consequences of an arms transfer before exporting. In addition, a closer look at the effect of SALW imports in democracies presents a fruitful avenue for future research. While we clearly find that democracies are unlikely to increase repression when increasing SALW imports, we wonder whether this is because democracies are more likely to resort to other coercive measures, which are not captured by our dependent variable.

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6.7 Appendix

Table 6.1: Descriptive statistics

Variables	N	Mean	Std. Dev.	Min	Max
Physical integrity Rights CIRI°	2110	5.001	2.216	0	8
Share of Muslim population°	1847	27.202	37.259	0	100
Oil revenues (Fearon and Laitin)°	1686	0.153	0.360	0	1
Military personnel WDI°	1572	1.726	1.844	0.071	14.446
Arms imports/GDP °	1948	0.099	0.313	0	6.358
SALW imports/pc log°	1953	-1.819	2.010	-5.422	2.607
SALW export/pc log°	1889	-7.489	6.311	-15.527	2.576
GDP per capita log°	2028	8.470	1.136	6.137	10.889
Democracy °	1701	0.471	0.499	0	1
Population log°	2128	15.792	1.870	11.191	20.989
Civil war°	2184	0.151	0.358	0	1
Time since the last civil war between 1945 & 2004°	2184	22.501	19.936	0	60
Repression (Fariss, 2014)	2985	47.521	16.857	5.230	99.922
Share of Muslim population in 1980 (La Porta et al. 1999)	2985	23.008	35.249	0	99.900
Oil exports (Ross 2013)	2787	0.155	0.362	0	1
Military personnel WDI 2015	2720	1.649	1.836	0	16.230
SIPRI TIV imports 2015	1728	17.837	1.955	13.816	21.992
SALW imports/pc log	2985	-1.639	2.467	-11.291	3.936
SALW exports/pc log	2985	-7.415	6.393	-18.885	3.478
GDP per capita log	2985	8.013	1.606	4.735	11.364
Democracy (Cheibub et al. 2010; Bormann and Golder 2013)	2985	0.586	0.493	0	1
Population log	2985	15.759	1.898	11.168	21.003
Dissent (Banks and Wilson 2013)	2985	0.763	1.957	0	37
Civil war	2985	0.145	0.352	0	1
Time since the last civil war between 1945 & 2010	2985	32.206	24.641	0	65
Years	2985	2001.342	5.406	1992	2010

Note: ° indicates replication data, which have been provided by De Soysa et al. (2010).

Table 6.2: Differences in variables description and sources

Variable	De Soysa et al. (2010)*	Our variable
Physical integrity Rights	Cingranelli and Richards (CIRI)	Fariss (2014)
Share of Muslim population	CIA Factbook following Mehlkop and Graeff (2003)	La Porta et al. (1999): Share of Muslim population of total population in 1980
Oil exporter	Fearon and Laitin (2003): Oil exporter if oil revenues exceed 1/3 of total revenues	Ross (2013): Oil exporter if net exports/GDP exceeds the value 0.05
Military personnel	World Bank (2006)	World Bank (2014)
Total arms imports	Arms Imports / GDP following Blanton (1999)	SIPRI (2014): TIV for conventional weapons imports in log
SALW imports	Norwegian Initiative on Small Arms Transfers (NISAT)	Norwegian Initiative on Small Arms Transfers (NISAT)
SALW exports	Norwegian Initiative on Small Arms Transfers (NISAT)	Norwegian Initiative on Small Arms Transfers (NISAT)
GDP per capita log	World Bank (2007): GDP per capita, PPP adjusted	World Bank (2014): GDP per capita, constant USD
Democracy	Polity IV (Marshall et al., 2011): Democracy if Polity2 score > 6	Cheibub et al. (2010); Bormann and Golder (2013)
Population	World Bank (2007)	UN (2015)
Civil war	UCDP/PRIO Armed Conflict Dataset	UCDP/PRIO Armed Conflict Dataset; Gleditsch et al. (2002)
Time since the last civil war between 1945 & 2004	Calculations based on civil war data	Calculations based on civil war data
Dissent	-	Banks and Wilson (2013)

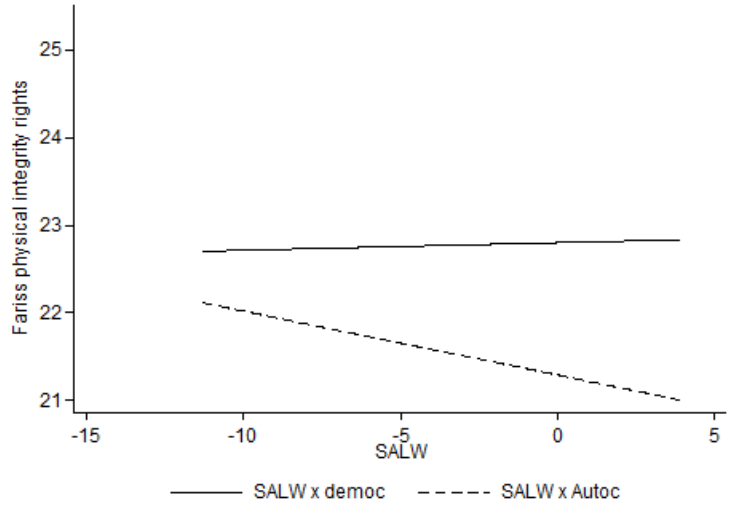
Note: De Soysa et al. (2010) replication data available for download at http://www.svt.ntnu.no/iss/Indra.de.Soysa/ default.htm

Table 6.6: Effect of SALW imports on physical integrity rights (OLS vs. Arellano-Bond)

Variables	[1]	[2]
Baseline model included		
SALW imports per capita (log)	-0.061*	-0.073*
	(0.036)	(0.067)
SALW imports per capita (log) (t-1)	0.058*	0.052*
	(0.037)	(0.065)
SALW exports per capita (log)	0.005	0.019*
	(0.010)	(0.016)
SALW exports per capita (log) (t-1)	-0.002	0.001
	(0.010)	(0.014)
Democracy x SALW imports per capita (log)	0.055*	0.082*
	(0.060)	(0.084)
Democracy x SALW imports per capita (log) (t-1)	0.009	-0.055
	(0.061)	(0.101)
Democracy	0.902*	1.511*
	(0.388)	(0.931)
Democracy (t-1)	-0.715*	-1.017*
	(0.392)	(0.917)
Respect for physical integrity rights	1.318***	1.268***
	(0.021)	(0.051)
Respect for physical integrity rights (t-1)	-0.441***	-0.400***
	(0.020)	(0.049)
R^2	0.900	
Observations	2,732	2,557
Year-fixed effects	Yes	Yes
Country-fixed effects	Yes	Yes
Time period	1991-2010	1991-2010
Countries	175	174
Number of instruments		1,690
A-B test 1st order		0.000
A-B test 2nd order		0.140
Sargan test		0.892
Wald chi-squared statistic		5,333

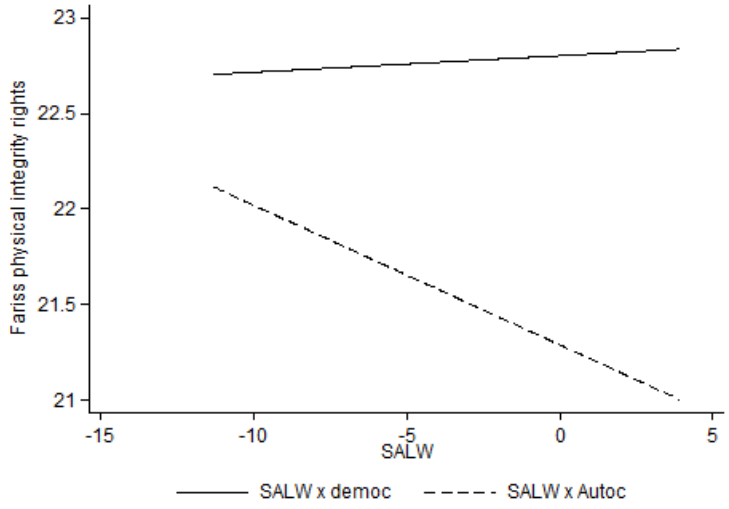
Note: Clustered standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.5. Model 1 estimates OLS with fixed effects, while model 2 uses an Arellano/Bond estimator.

Figure 6.3: Conditional effects of SALW imports and democracy on physical integrity rights (OLS)



Note: Figure calculated from model 1, Table 6.6.

Figure 6.4: Conditional effects of SALW imports and democracy on physical integrity rights (Arellano-Bond)



Note: Figure calculated from model 2, Table 6.6.

7 Conclusion

7.1 Brief summary of theoretical argument and empirical findings

Extreme conditions caused, for instance, by natural disasters, large youth unemployment, financial crises, coups d'état, and arms trade present a challenge to political leaders. As such shocks are often accompanied by a decrease in support of the population to the incumbent, who wants to maintain political power as he faces a trade-off between buying loyalty and resorting to repressive behavior against the population. All five papers included in this dissertation are based on the following assumptions. First, political leaders repress to remain in office and to pre-empt or counteract the expression of dissent on the part of the population. Second, dissent arises from conflict over some (mis-)management of a crisis situation or a particular good. The theoretical focus thus lies on explaining why governments willingly violate physical integrity rights and not on whether they may be unable to provide human rights due to a lack of financial resources. Emanating from these considerations, this dissertation encompasses five papers, which examined how different types of extreme conditions are associated with respect for physical integrity rights. This chapter briefly summarizes the main findings, contributions, and limitations of my research. Limitations of this dissertation are at the same time suggestions for a future research agenda. Finally, I discuss the implications for policy making of the papers included in this dissertation.

The comparison of the impact of each type of extreme condition is not straightforward. The analysis of large-scale natural disasters and respect of physical integrity rights presented in Chapter 2 showed that there is no empirical support for an association between disasters and repression and that disaster aid as such significantly increases respect for physical integrity rights. However, results also suggested that disaster aid is linked to a decrease in respect for physical integrity rights in autocracies in the aftermath of disasters. Chapter 3 discussed the impact of large youth unemployment on physical integrity rights standards. It found that there is no robust empirical evidence for a relationship between youth unemployment crises, youth bulges, and respect for physical integrity rights. This might be surprising as media reports of arrests and infringements of the rights of young protesters demonstrating against rising youth unemployment in South Europe and North African countries in the recent years would transfer such an image. Empirical findings presented in Chapter 4 revealed that financial crises have a significant negative effect on respect for physical integrity rights, which is particularly pronounced in autocracies. Chapter 5 and 6 provided results on how respect for physical integrity rights is affected under belligerencies. Chapter 5 focused on coups d'état and showed that coups, which lead to a change from a non-

democratic regime to a democratic regime, go along with an increase in respect for physical integrity rights (and vice versa for a change from a democratic to a non-democratic regime). There is also evidence that the type of non-democratic regime matters: Civilian autocracies have been found to be more repressive than military ones after successfully ousting the previous government. Also, results suggest that there is a decrease in physical integrity rights violations by military governments replacing civilian autocrats in the long-run. Chapter 6 showed that small arms and light weapons imports are associated with a decrease in respect for physical integrity rights, especially in autocracies.

7.2 Contribution and limitations

This study is the first systematic approach that examines the effect of extreme conditions on physical integrity rights and also the first analysis that is theoretically built upon Wintrobe's model of dictatorship. The mere frequency of natural disasters, financial crises, coups d'état as well as the prevalence of increasing arms imports and youth unemployment illustrates the importance of these events. This study has added to the understanding that irrespective of regime type, extreme conditions can be associated with changes in respect for physical integrity rights. It also made clear which tools can mitigate or foster the impact of extreme conditions. Above all, it presented new approaches of measuring extreme conditions by capturing only events, which are not on average experienced in a particular country in a particular year.

Although the assessed types of extreme conditions share similar characteristics that can trigger a decrease in loyalty of the population to the incumbent, evidence presented in the five papers of this dissertation does not suggest a uniform effect of extreme conditions on respect for physical integrity rights. This reflects the necessity to assess the impact of each type of extreme condition separately and to conduct context-specific analyses. Also, it has to be kept in mind that empirical findings of one type of extreme condition can be influenced by its relatedness to another type of extreme condition. For instance, oftentimes large youth unemployment arises in times of financial crises. More research focusing on the interrelatedness of different types of extreme conditions would improve our understanding on the dynamics of extreme conditions.

Despite a broad and yet thoughtful selection of topics, it has to be noted that this dissertation does not and cannot account for every extreme condition. The five types of extreme conditions assessed in this dissertation do not present an exhaustive list. There are other situations in which respect for physical rights may suffer, for instance, in the aftermath of terrorist attacks, cyber-attacks, or following exceptional migration inflows, such as the

recent refugee surge in Europe, which can also lead to severe socio-economic conditions. Mainly due to issues of data availability, an analysis of other types of extreme conditions has to be addressed in future research.

The empirical studies encompassed in this dissertation are among the first to rely on the latent respect for physical integrity rights variable. Notwithstanding the use of the most updated and reliable physical integrity rights dataset, which is currently available, analyses may not capture every violation of physical integrity rights. For instance, the empirical analysis of the effect of natural disasters on respect for physical integrity rights in Chapter 2 would provide a more precise picture if there was information on repression at the regional level. This would allow testing whether the occurrence of a natural disaster is in fact linked to rights violations in the same region. Also, as regards the analysis of the role of youth unemployment in Chapter 3, it has to be noted that despite the use of control variable one cannot be certain whether rights violations are directly addressed at the youth as datasets on repression are not disaggregated. For the scope of this paper, a panel data set providing information on the victims of rights violations would be preferable. Future data collection efforts with regard to respect for physical integrity rights will be required to provide more accurate insights into specific types.

7.3 Implications of empirical findings

In addition to shedding light on how physical integrity rights are respected under extreme conditions, it is the intention of this dissertation to provide suggestions to what respect these empirical findings can be translated into concrete policies. When it comes to the realm of respect for physical integrity rights under extreme conditions, policy recommendations should be directed at cost of repression and loyalty. Two aspects need to be addressed for this purpose. First, from the perspective of perpetrators of physical integrity rights violations, policies should deal disincentivizing political leaders from the use of state coercion. Second, from the perspective of the victims, attention has to be given to policies which counteract a pronounced fall in support to the incumbent of the population.

Policies aimed at increasing costs of violations of physical integrity rights can be expected to make political leaders less likely to resort to physical integrity rights violations in times of extreme conditions. As supported by the empirical findings of this dissertation, regime type is one factor, which influences the costs of rights violations. In contrast to autocracies, democracies have a lower likelihood to use repression if loyalty of the population falls. This is, however, does not serve as a policy recommendation given that non-democracies are not expected to democratize ad hoc for the sake of protecting physical

integrity rights - at least not voluntarily. Instead, policies should aim at closing a window of opportunity for political leaders to repress when extreme conditions arise. In countries especially vulnerable to, for instance, financial crises or natural disasters policies should be adopted to protect physical integrity rights in these circumstances. When adopting such policies particular attention has to be given to preventing potential loopholes, for instance, that physical integrity rights cannot be derogated under the state of emergency.

Transparency and information on rights violations and possibilities of rights protection is another way with which the costs of using repressive measures can be increased. This would enforce government accountability vis-à-vis the population but also at the international level. International and non-government organizations such as the Office of the High Commissioner for Human Rights and Amnesty International already call attention to the danger of rights violations under extreme conditions. The Arms Trade Treaty (ATT), which restricts the export of arms to governments known to direct and (mis-)use weapons against their own population, is one practical step into the right direction. Similarly, donors should be more stringent as regards conditions of eligibility for aid, especially in autocracies.

Another way to make the use of repression dispensable can be achieved by policies with aim at mitigating a decrease in loyalty of the population to the incumbent. Of course, international (disaster) aid and emergency funds can help to dampen grievance from economic shocks. However, their success in mitigating a decrease in loyalty is limited if the incumbent cannot claim credit for it and if it is apparent to the population that funds are unrelated to the management of the government. As a long term strategy, prevention is better than cure: To avoid a stark decrease in loyalty of the population, strategies, which aim at pre-empting extreme conditions in the first place, are recommended. This could encompass investment in early warning systems for natural disasters, social welfare systems, and stricter banking regulation.

Despite potential security implications for the population, extreme conditions should not be considered as an endpoint. Rather crises and disasters, which lead to extreme conditions, can be a pathway to a change towards better rights protection. This has been illustrated by the increased likelihood of democratization in the case of financial crises and coups d'état against non-democracies. While most commonly a negative connotation is attributed to disasters and crises, the findings of this dissertation hence provoke us to rethink the relation between extreme conditions and physical integrity rights.

Summary

Researchers examining human rights violations agree on the rationale for repression: Political leaders violate physical integrity rights to exert control over citizens and retain political power. So far empirical studies have, however, not analyzed how exogenous shocks and extreme conditions are related to violations of physical integrity rights. This dissertation investigates two central research questions: Do extreme conditions lead to a decrease or increase in respect for physical integrity rights? Under which conditions is the effect of extreme conditions on repression fostered or mitigated?

To answer these research questions in a more systematic approach, this dissertation consists of five papers. Each research paper focuses on a different type of extreme condition or crisis whose impact is assessed conducting a panel data analysis. In the first two papers, I construct and employ a binary indicator to determine the existence of extreme conditions. The first paper looks at the impact of large-scale natural disasters and examines to what extent disaster aid affects the relationship between disasters and repression. Empirical findings suggest that the occurrence of large-scale disasters is not associated with changes in repressive behavior. Inflows of disaster aid in the aftermath of large-scale disasters, however, lead to a decrease in physical integrity rights standards in autocracies. In the second paper, I observe the effect of extreme youth unemployment as a socio-economic crisis on respect for physical integrity rights. Irrespective of the size of youth cohorts, this study does not provide robust evidence that youth unemployment crises are associated with changes in respect for physical integrity rights. Empirical results of the third paper suggest that financial crises lead to a decrease in respect for physical integrity rights, but can also trigger democratization, which is in literature in the long-run generally associated with higher rights standards. The fourth paper provides empirical support that certain types of coups d'état, for instance coups led by civilian autocrats, are associated with a decrease in respect for physical integrity rights, while coups deposing non-democratic regimes are followed by an improvement in rights standards. In the last paper of this dissertation, I present evidence that an increase in arms imports is related to a decrease in respect for physical integrity rights in autocracies but not in democracies.

The findings show that most types of extreme conditions in fact play a role for physical integrity rights standards. Policies should aim at increasing the costs of physical integrity rights violations, in particular in countries vulnerable to the crises and shocks assessed in this dissertation. In addition to making repression less beneficial than buying loyalty of the population, strategies, which prevent a strong drop in support of the population

to the incumbent, are recommended. To analyze whether other types of extreme conditions such as cyber attacks also influence respect for physical integrity rights, more research and data collection efforts are necessary.

Zusammenfassung

Forscher, die sich mit der Analyse von Menschenrechtsverletzungen befassen, sind sich einig, was die Gründe für Repression anbelangt: Staatsführer verletzen das Recht auf körperliche Unversehrtheit, um Kontrolle über die Bevölkerung auszuüben und um politische Macht zu behaupten. Bisherige empirische Studien haben jedoch nicht analysiert, wie exogene Schocks und Extrembedingungen mit Verletzungen des Rechts auf körperliche Unversehrtheit zusammenhängen. Hierzu werden zwei zentrale Forschungsfragen untersucht: Führen Extrembedingungen zu einer Minderung oder zu einer Zunahme der Achtung des Rechts auf körperliche Unversehrtheit? Unter welchen Umständen wird der Effekt von Extrembedingungen auf Repression geschürt oder geschwächt?

Um diese Forschungsfragen anhand einer systematischen Herangehensweise zu beantworten, setzt sich diese Doktorarbeit aus fünf Aufsätzen zusammen. Jeder Aufsatz behandelt eine andere Art von Extrembedingung bzw. Krise, deren Auswirkung auf die Achtung des Rechts auf körperliche Unversehrtheit mithilfe einer Paneldatenanalyse berechnet wird. In den ersten beiden Aufsätzen konstruiere und verwende ich einen binären Indikator, der angibt, ob eine Extrembedingung auftritt oder nicht. Der erste Aufsatz betrachtet die Auswirkung von Naturkatastrophen großen Umfangs. Es wird zudem untersucht, in welchem Ausmaß Katastrophenhilfe die Beziehung zwischen Naturkatastrophen und Repression beeinflusst. Empirische Ergebnisse weisen darauf hin, dass das Eintreten einer solchen Naturkatastrophe an sich nicht mit einer Änderung der Achtung des Rechts auf körperliche Unversehrtheit assoziiert ist. In Autokratien führt ein Anstieg an Katastrophenhilfe jedoch zu einer Verschlechterung des Rechtsstandards. Im zweiten Aufsatz untersuche ich den Effekt von ausgeprägter Jugendarbeitslosigkeit auf das Recht auf Unversehrtheit als Beispiel als Auswirkung sozioökonomischer Krisen. Die Untersuchung liefert keine robusten empirischen Ergebnisse, dass Jugendarbeitslosigkeit mit einem Anstieg an Rechtsverletzungen verbunden ist. Empirische Ergebnisse des dritten Aufsatzes zeigen auf, dass Finanzkrisen zu einem Anstieg an Verletzungen des Rechts persönlicher Unversehrtheit führen, in manchen Fällen jedoch auch mit Demokratisierungsprozessen einhergehen, die in der Literatur langfristig mit einer Verbesserung der Menschenrechtssituation assoziiert werden. Der vierte Aufsatz unterstützt die Ansicht, dass Staatsstreiche, die von zivilen Autokraten durchgeführt werden, zu einer Verschlechterung der Rechtssituation führen. Staatsstreiche, die ein undemokratisches Regime beenden, sind jedoch gefolgt von einer Verbesserung der Rechtssituation. Der letzte Aufsatz konzentriert sich auf die Analyse von Importen von Kleinwaffen und leichten Waffen, die ein Vorbote für einen bevorstehenden

Konflikt und Extrembedingungen sein können. Dieser Aufsatz verdeutlicht, dass Waffenimporte in Autokratien mit einem Anstieg an Rechtsverletzungen zusammenhängt, in Demokratien jedoch keine Auswirkungen auf die Rechtsstandards hat.

Die Ergebnisse dieser Arbeit zeigen, dass die meisten Extrembedingungen tatsächlich eine Rolle bei Verletzungen des Rechts auf körperliche Unversehrtheit spielen. Politiken sollten daher darauf abzielen, die Kosten der Verletzungen des Rechts auf körperliche Unversehrtheit erhöhen; insbesondere in den Ländern, die besonders gefährdet von den in dieser Arbeit untersuchten Krisen und Schocks sind. Zusätzlich zu der Strategie, Repression weniger vorteilhaft zu machen als ihre Alternative, die Loyalität der Bevölkerung zu kaufen, werden Strategien empfohlen, die einen starken Fall in der Unterstützung der Bevölkerung des politischen Amtsinhabers vorbeugen. Um zu analysieren, ob auch andere Arten von Extrembedingungen, wie z.B. Cyber-Angriffe, einen Einfluss auf den Respekt des Rechts auf körperliche Unversehrtheit haben, sind weitere Forschung und Datenerhebungen notwendig.

Erklärung

Hiermit erkläre ich, Katharina Gabriela Pfaff, dass ich keine kommerzielle Promotionsberatung in Anspruch genommen habe. Die Arbeit wurde nicht schon einmal in einem früheren Promotionsverfahren angenommen oder als ungenügend beurteilt.

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Eidesstattliche Versicherung

Ich, Katharina Gabriela Pfaff, versichere an Eides statt, dass ich die Dissertation mit dem Titel:

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selbst und bei einer Zusammenarbeit mit anderen Wissenschaftlerinnen oder Wissenschaftlern gemäß den beigefügten Darlegungen nach § 6 Abs. 3 der Promotionsordnung der Fakultät Wirtschafts- und Sozialwissenschaften vom 24. August 2010 verfasst habe. Andere als die angegebenen Hilfsmittel habe ich nicht benutzt.

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Acknowledgements

I would like to express my deep gratitude to my supervisors Professor Stefan Voigt and Junior Professor Franziska Weber for their critiques and encouragement of this research work. Their guidance helped me both during my research on the rule of law under extreme conditions and the actual writing of this thesis.

Advice given by the participants of the Jour Fixe, in particular Jerg Gutmann, Stephan Michel, and Konstantinos Pilpilidis, has been a great help in improving early drafts of my papers. I would also like to express my great appreciation to my fellow doctoral researchers of the Graduate School of Law and Economics for the exchange of ideas. I am particularly grateful for the assistance and invaluable friendship by my dear colleagues Agnes Brender and Julia Lemke. I cannot express how much I owe you for the endless conversations, coffees, and moments we enjoyed during this entire time. Thanks for constantly motivating me to go after new, more challenging projects and for believing in me.

I am thankful to Dr. Elisabeth Bublitz (HWWI, Hamburg), Dr. Viola Lucas (GIGA, Hamburg), and Sarah Langlotz (University of Heidelberg) for their advice and suggestions with respect to quantitative methods, dictators, and disaster aid.

My sincere thanks goes to a number of scholars at the Department of Government of the University of Essex. I am grateful to them for introducing me into research in political science. In particular, I am indebted to Professor Thomas Plümper for his straightforward, constructive feedback, his patience, and for pushing me to aim higher in less amount of time.

I would like to thank the German Research Foundation for making this dissertation, including the participation at conferences and my research stay at the University of Essex, possible in the first place.

This work would have been almost unbearable if I had not received so much help from my family and friends. I owe special thanks to my parents, my brothers, my sisters-in-law, and my Godmother Anne-Marie for supporting me in so many ways. This work would have been much more challenging without their love, encouragement, advice, and expertise. My heartfelt thank goes to Jan-Wilhelm for listening, understanding, and reminding me about a life outside of academia, every single day.

I am grateful to my friends Friederike D. Conchi and Franziska von Kessler for stimulating discussions whenever I needed them. My thanks also goes to Beke, Jenny, and Kirsti for reading and commenting on my thoughts practically every day. I need to thank my buddy Robert for daring me to be better and for accompanying me on this journey, in spite of distance and time difference. I also thank Maja and Axel for being at my side from the very day I started my undergraduate studies and for providing me with Wollensstärke along the way. My gratitude also goes to Nelly and Alex whose time, strength in proof-reading, and maddening attention to details made this work better. Also big thanks to Ani, Britta, Juditha, Sofia, Karen, Johanna, Annika, Pauline, and Youcef, for contributing an important piece to the completion of this dissertation; you all know which one.