UNIVERSITÄT TRIER

Pascal Langer

Western Sanctions and Coups d'État

Research Papers in Economics
No. 14/24

Western Sanctions and Coups d'État*

Pascal Langer†

First Draft: December 20, 2024
This Version: February 7, 2025

*The author gratefully acknowledges comments and suggestions by Matthias Neuenkirch, Jerg Gutmann, Mehran Akbari and Manuel Walz.

†Trier University, e-mail: pascal.langer@uni-trier.de.

Western Sanctions and Coups d'État

Abstract

This paper investigates the relationship between Western sanctions and coups d'état in targeted countries. Employing a panel logit model and utilizing data from 1972 to 2013 drawn from the Global Sanctions Database and the Coup Leaders Dataset, we analyze the effects of Western sanctions on both occurrence of coups and successful coups. Western sanctions are found to initially increase the likelihood of coups by more than 4.0 pp with a diminishing impact over time. In the post-Cold War era, Western sanctions raise the probability of coups by 1.7 pp and successful coups by even 2.1 pp. The effects are particularly pronounced in non-democratic regimes, especially in personalist authoritarian regimes.

JEL Codes: D74, F51, H56.

Keywords: Sanctions; Coups d'État; Democracy; Autocracy.

1 Introduction

Many effects of sanctions on target countries have been widely studied, revealing significant economic, social, and political impacts. Economically, sanctions lead to GDP decline, reduced foreign investment and disrupting trade (Gutmann et al. 2023; Neuenkirch and Neumeier 2015; Crozet and Hinz 2020; Dai et al. 2021; Gutmann et al. 2024; Afesorgbor 2019). Socially, sanctions can intensify poverty, strain healthcare systems, reduce life expectancy, and heighten inequality (Gutmann et al. 2021; Afesorgbor and Mahadevan 2016; Moteng et al. 2023; Neuenkirch and Neumeier 2016). Politically, the effects of sanctions seem to be more ambiguous. While sanctions sometimes destabilize governments or drive policy changes, they may also consolidate authoritarian power by invoking nationalism or justifying increased repression. Some studies contend that the threat or imposition of sanctions motivates anti-government protests (Grauvogel et al. 2017; Liou et al. 2021), potentially pressuring the targeted government to meet the political demands of both sanctioning countries (Attia et al. 2020) and nonviolent domestic movements (Liou et al. 2023). Furthermore, Marinov (2005) finds that sanctions diminish target country leaders' prospects of maintaining their position office. Escribà-Folch and Wright (2010) also conclude that economic sanctions increase the likelihood of a change of a target country's autocratic ruler. In contrast, other research suggests that sanctions may trigger a rally-around-the-flag effect, which can bolster the regime's popularity and solidify its control within the country (Eichenberger and Stadelmann 2022; Gold et al. 2024; Grauvogel and von Soest 2014; Seitz and Zazzaro 2020).

This paper provides a statistical analysis of the impact of sanctions on the likelihood of coups as well as successful coups in the target country. Unlike other studies, which generally lack data beyond the late 1990s, this analysis incorporates more recent events. While Marinov (2005) explored the impact of sanctions on general "survival in office", his approach did not explicitly address the dynamics of coups. Additionally, although Escribà-Folch and Wright (2010) incorporated the concept of coups through their specification of irregular exits, their focus remained confined to authoritarian

regimes, without accounting for distinctions between the sanction sender or different types of sanctions. Furthermore, the concept of irregular exit includes further events, such as revolts or assassinations. By overcoming these limitations, this paper offers a more nuanced understanding of the role of sanctions in facilitating or deterring coups, across both democratic and authoritarian contexts.[1]

In order to empirically estimate the effect of sanctions on coups, we apply panel logit models with region and year fixed effects. The data is mainly derived from the Global Sanctions Database (GSDB, see Felbermayr et al. 2020) and the novel Coup Leader Dataset (Eschenauer-Engler and Herre 2023). 5,219 observations for 156 countries for the period from 1972 to 2013 are covered by the dataset. To accurately assess the impact of Western sanctions, we distinguish between (i) Western sanctions (i.e. imposed by the US and/or EU countries) and (ii) UN sanctions.[2] However, given that there are only five observations in the dataset where (lagged) UN sanctions coincide with a coup event, UN sanctions are treated as a control variable rather than a primary explanatory factor.

Our key findings suggest that Western sanctions significantly increase the likelihood of coups in the post-Cold War era, with an average rise of 1.7 percentage points (pp). This effect is more pronounced for successful coups and in non-democratic regimes, where the likelihood increases by about 4.1 pp. The impact is found to be stronger when sanctions target democratization rather than human rights or counterterrorism objectives. For the full study period, Western sanctions remain positively associated with successful coups, even after controlling for political conditions. Moreover, an analysis of the temporal effects of sanctions on coups reveals that Western sanctions initially raise the likelihood of coup events by even 4.2 pp, with the impact

1. von Soest and Wahman (2014) also study the relationship between sanctions and coups, but from a different perspective. The authors consider coups as "trigger events" for the imposition of sanctions against the target country in which the coup took place. To mitigate a potential reverse causality issue, sanctions are lagged by one year in this analysis. Further explanations on this issue can be found in section 3 and section 4.

2. Given the limited number of coups under sanctions (particularly under Russian and Chinese sanctions), a more granular differentiation of sanctions senders was not feasible.

subsequently decreasing by 0.7 pp per year. UN sanctions show no significant effect on coups.

In the following, section 2 explains the theoretical understanding of the relationship between sanctions and coups. Section 3 describes the empirical approach and the data used. Section 4 interprets and discusses the results, while section 5 concludes.

2 Theory

According to the most common definition of coups d'état in academic research, coups are defined as "illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive" (Powell and Thyne 2011, p. 252). Due to the complex nature and causes of coups, the definition can vary depending on whether the focus is on the actors involved, the methods used, or the legitimacy of such actions (Welch 1970; Janowitz 1977; O'Kane 1987; Finer 1988; McGowan 2003; Marshall and Marshall 2007; Edward 2016). However, most definitions share the idea that within the state apparatus, often from within the military, an (illegal) attempt is made to replace the ruling leader.

Following Gassebner et al. (2016), the decision for a coup attempt is assumed to be based on a rational cost-benefit analysis in which the expected utility after the coup $E(U_{coup})$ must be higher than the current utility $U_{status\ quo}$ ($E(U_{Coup}) > U_{status\ quo}$).

$$E(U_{coup}) = p \times B + (1 - p) \times C, \tag{1}$$

where p represents the probability of a successful coup attempt, B is the net benefit or payoff of a successful coup and C symbolizes costs or the negative payoff of a non-successful coup. It is important to note that these are benefits and costs for the coup perpetrators and therefore not necessarily for the population or the country as a whole.

International sanctions aim to exert pressure on targeted leaders, often with the hope of prompting policy change or regime transition. Sanctions typically inflict economic damage that weakens the financial and political stability of a government

(Gutmann et al. 2023; Neuenkirch and Neumeier 2015; Crozet and Hinz 2020; Dai et al. 2021; Gutmann et al. 2024; Afesorgbor 2019). The economic hardships caused by sanctions can undermine the leader's legitimacy and the capacity of the state to sustain patronage networks and governance operations, making coups more likely. According to Marinov (2005), sanctions increase the probability of leadership turnover, supporting the notion that sanctions make targeted leaders more susceptible to being ousted from power. The logic underpinning this theory is that political leaders require resources to maintain loyalty among elites and the public. By reducing these resources, economic sanctions place significant pressure on political leaders. Leaders facing the loss of economic benefits may struggle to finance the military and buy the loyalty of key elites, heightening the risk of a coup, at least in the long-term (Marinov 2005).

However, sanctions do not uniformly destabilize governments. In some cases, sanctions can trigger a rally-around-the-flag effect, where the population, including elites, unite in support of the incumbent leadership in response to perceived external threats. This effect can bolster the regime's legitimacy, reducing the likelihood of a coup, especially in the short term. Furthermore, sanctions can be seen as "enforced protectionism" (Eichenberger and Stadelmann 2022, p. 112), which on average leads to an overall loss of welfare, but also always produces domestic winners who substitute the import gap with domestic supply. Especially in authoritarian regimes, the state leadership has relatively strong control over domestic producers, who in turn benefit from the sanctions (Eichenberger and Stadelmann 2022; Grauvogel and von Soest 2014; Gold et al. 2024). Consequently, the following hypotheses summarize the ambiguous theoretical considerations:

Hypothesis 1a. *Sanctions increase the likelihood of a coup attempt in the target country.*

Hypothesis 1b. *Sanctions reduce the likelihood of a coup attempt in the target country.*

With that in mind, sanctions are likely to have different effects on the stability of democracies compared to authoritarian regimes. In democracies, sanctions can create economic discontent that translates into electoral pressure rather than coups. Democratic institutions often provide avenues for peaceful leadership change, mitigating

the risk of military intervention. So, if sanctions significantly harm the economy, public dissatisfaction may lead to political upheaval through elections rather than through military coups (Marinov 2005). On the other hand, some scholars argue that authoritarian leaders can more easily increase the costs of a coup by spending more resources on repression or coup proofing (Svolik 2009). However, as Escribà-Folch and Wright (2010) note, the vulnerability of an authoritarian regime to sanctions depends on its ability to adapt by reallocating resources or intensifying repression. The authors differentiate between different types of authoritarian regimes. Personalist regimes, which rely on a narrow base of elite support and external revenue, are particularly susceptible to coups when sanctions disrupt their patronage networks. In contrast, more institutionalized regimes, such as military or single-party systems, may be better equipped to withstand sanctions through repression and cooptation (Escribà-Folch and Wright 2010). Thus, assuming that evidence is found in favor of Hypothesis 1a, the second hypothesis states:

Hypothesis 2. *The positive effect of sanctions on coup attempts is larger in personalist authoritarian regimes.*

However, further studies find evidence rather for an effect on coup success instead of coup occurrence (Bell 2016). Successful coups are those coup events in which the perpetrators replace the sitting leader of the country. Regarding equation 1, the probability of a successful coup is represented by p. Again, the effects of sanctions can manifest in both directions. On one hand, sanctions serve as a tool for exerting increased international pressure, prompting incumbent governments to bolster their military expenditures (Eichenberger and Stadelmann 2022). This response can lead to the creation of a more centralized and robust state, making it more resistant to internal challenges, such as coup attempts, thereby decreasing the likelihood of their success. On the other hand, the adverse economic impacts of sanctions can weaken institutional structures over time, ultimately increasing the probability of a successful coup (Marinov 2005). Consequently, the corresponding hypotheses are as follows:

Hypothesis 3a. *Sanctions increase the likelihood of a successful coup in the target country.*

Hypothesis 3b. *Sanctions reduce the likelihood of a successful coup in the target country.*

Regarding the regime type, Bell (2016) argues that, due to legal constraints, it is more difficult to use coup-related repression instruments in democratic regimes. Based on that and assuming hypothesis 3a holds, the final hypothesis is the following:

Hypothesis 4. *The positive effect of sanctions on successful coups is larger in democratic regimes.*

3 Estimation Strategy and Data

3.1 Estimation Strategy

The effect of sanctions on coups d'état is estimated following a panel logit approach.[3] Logistic regression models enable modeling of binary outcomes while addressing unobserved heterogeneity and capturing non-linear trends over time.

$$y^*_{i,t} = \beta S_{i,t-1} + \gamma X^{pol}_{i,t} + \delta X^{econ}_{i,t-1} + \alpha_k + \tau_t + \epsilon_{i,t} \tag{2}$$

In the specified regression model, $y^*_{i,t}$ is the latent variable underlying the binary observed outcome $y_{i,t}$, where $y^*_{i,t}$ equal to one indicates that a coup (or a successful coup)[4] occurs in country i in year t, and $y^*_{i,t} = 0$ otherwise. The variable $S_{i,t-1}$ represents the primary explanatory variable of interest, sanctions, which is also binary and hypothesized to influence the likelihood of coups. To address the issue of reverse causality, sanctions are lagged by one year.

Yearly and regional fixed effects, τ_t and α_k respectively, capture broader temporal patterns and region-specific unobserved characteristics.[5] The inclusion of year fixed

3. Greene (2004) demonstrates that the bias associated with the incidental parameter problem in panel logit models is minimal. In addition, the estimation procedure only calculates coefficients for fixed effects only when variation exists in the dependent variable within a given data spell. Spells lacking such variation are excluded from the estimation. Additionally, the inclusion of region fixed effects considerably reduces the number of fixed effects compared to employing country fixed effects. However, bias corrected results are discussed later in the paper.

4. The analysis of successful coups relies on a subset of coups, removing all non-successful coups from the dataset while keeping all non-coup observations and successful coups.

5. The regional grouping follows the World Bank's classification, with additional subdivisions applied to East Asia and Pacific as well as Europe and Central Asia. Consequently, the fixed effects en-

effects τ_t adjusts for global, time-varying trends in sanction patterns, which may include evolving international norms or policy shifts over time, such as the post-Cold War increase in sanctions usage. Regional fixed effects α_k help control for unobserved, time-invariant factors specific to geographic areas, such as shared cultural or political contexts that may affect both sanctioning behavior and susceptibility to coups. Regional fixed effects were included instead of country fixed effects because coups are rare events that did not occur in some countries during the research period (see Table A1). Consequently, the variation in the dependent dummy variable is too low at the country level, and many countries would be excluded from the estimation process due to insufficient within-country variation. Aggregating to the regional level retains a broader sample while still accounting for shared regional characteristics.[6]

Additionally, the model incorporates $X_{i,t}^{pol}$ and $X_{i,t-1}^{econ}$, representing political and lagged (socio-)economic control variables for the target country, capturing relevant time-varying conditions that may influence sanctions. These controls account for potential confounding factors and are discussed in Section 3.2. Finally, $\epsilon_{i,t}$ denotes the error term, accounting for random, idiosyncratic variation in coup occurrence that is not explained by the model's covariates.

In a logit model, the observed binary outcome $y_{i,t}$ is linked to the underlying latent variable $y_{i,t}^*$, where $y_{i,t} = 1$ if $y_{i,t}^* > 0$ and $y_{i,t} = 1$ if $y_{i,t}^* \leq 0$. The probability of observing $y_{i,t} = 1$ is given by the logistic cumulative distribution function (CDF) denoted by $\Lambda(\cdot)$. Specifically,

$$P\left(y_{i,t} = 1 \mid S_{i,t-1}, X_{i,t}^{pol}, X_{i,t-1}^{econ}, \tau_t, \alpha_k\right) = \Lambda\left(\beta S_{i,t-1} + \gamma X_{i,t}^{pol} + \delta X_{i,t-1}^{econ} + \tau_t + \alpha_k\right) \quad (3)$$

compass the following regions: East Asia, Oceania/Pacific, Europe, Central Asia, Latin America and Caribbean, the Middle East and North Africa, South Asia, and Sub-Saharan Africa.

6. For robustness reasons, US-President fixed effects were included as an alternative to year fixed effects. This approach addresses the potential issue that coups did not occur in some years (2002, 2004, 2007), which might bias the estimation of time effects. US-President fixed effects provide a meaningful alternative temporal categorization, as presidential administrations can influence global foreign policy dynamics, including the imposition of sanctions, based on differing priorities and ideological orientations. This substitution allows for the capture of presidential-term-specific variations in international sanction behavior and its potential influence on coup outcomes. Since the results from models using US-President fixed effects do not substantially differ from those obtained with year fixed effects, we rely on the more conservative baseline models with year fixed effects. However, the model results incl. US-President fixed effects are available on request.

$\Lambda(z) = \frac{e^z}{1+e^z}$ represents the logistic function. In this logit framework, maximum likelihood estimation is used to estimate the parameters, allowing us to interpret the coefficient in terms of changes in the log-odds of observing $y_{i,t} = 1$.

As the coefficients represent changes in the log-odds of the binary outcome rather than direct changes in the probability, interpreting the substantive effect of each predictor on the probability of observing $y_{i,t} = 1$ requires calculating marginal effects. Marginal effects measure the instantaneous rate of change in the probability with respect to a given explanatory variable, holding other variables constant. For the binary variable $S_{i,t-1}$, which represents sanctions, the marginal effect captures the discrete change in the probability of observing $y_{i,j,t} = 1$ when $S_{i,t-1}$ changes from 0 to 1, holding all other variables constant. This discrete marginal effect is calculated as

$$P\Big(y_{i,t} = 1 \mid S_{i,t-1} = 1, X_{i,t}^{pol}, X_{i,t-1}^{econ}, \tau_t, \alpha_k\Big) - P\Big(y_{i,t} = 1 \mid S_{i,t-1} = 0, X_{i,t}^{pol}, X_{i,t-1}^{econ}, \tau_t, \alpha_k\Big). \quad (4)$$

This expression represents the change in probability associated with the occurrence of a coup, allowing us to interpret the substantive impact of $S_{i,t}$ on the likelihood of sanctions.

For a continuous variable captured by variable $X_{i,t}^{pol}$ (similarly for $X_{i,t-1}^{econ}$), the marginal effect is computed as

$$\frac{\partial P\Big(y_{i,t} = 1 \mid S_{i,t-1}, X_{i,t}^{pol}, X_{i,t-1}^{econ}, \tau_t, \alpha_k\Big)}{\partial X_{i,t}^{pol}} = \Lambda'\Big(\beta S_{i,t-1} + \gamma X_{i,t}^{pol} + \delta X_{i,t-1}^{econ} + \tau_t + \alpha_k\Big) \cdot \gamma, \quad (5)$$

where $\Lambda'(z) = \Lambda(z)(1 - \Lambda(z))$ is the derivative of the logistic function, which scales the effect of $X_{i,t}^{pol}$ on the probability of $y_{i,t} = 1$. For binary explanatory variables, marginal effects capture the discrete change in probability when the variable changes from 0 to 1. Calculating these marginal effects allows us to interpret how changes in predictors impact the probability of sanctions, facilitating a more meaningful understanding of the model's results in probabilistic terms. The standard errors are clustered at the country level.

3.2 Data

The data for this study encompass variables that capture political, economic, and demographic characteristics of countries targeted by sanctions. Table A2 provides an overview of the variables used, including definitions and data sources. Our dependent variable, *Coups*, is a binary indicator representing whether a (successful) coup d'état occurred in a given country-year, sourced from the Coup Leaders Dataset (Eschenauer-Engler and Herre 2023).[7]

The main independent variable, *Sanctions*, is also binary and indicates whether sanctions were in place for the target country in each year, with data derived from the GSDB (Felbermayr et al. 2020; Kirikakha et al. 2021; Syropoulos et al. 2024). The selection of control variables for the probability of coup attempts or successful coups is based on the theoretical considerations outlined in section 2.

Control variables are divided into political and socio-economic categories to account for factors that might confound the relationship between coups and sanctions. Political controls include *Fractionalization*, measuring ethnic diversity based on the annual distribution of ethnic groups in a country, sourced from the Quality of Government (QoG) Institute, and *Polity2*, an indicator of democratic status ranging from strongly democratic (+10) to strongly autocratic (–10), derived from the Polity5 dataset (Marshall and Gurr 2020). Conflicts are divided into *Intra-* and *Interstate conflicts*, as research shows that both types have different effects on the likelihood of coups. Intrastate conflicts typically increase coup risk by destabilizing governance and empowering the military, while interstate conflicts may initially reduce risk through national unity but later increase it if the conflict is prolonged or poorly managed (Powell 2012; Powell and Thyne 2011, 2016; Belkin and Schofer 2003). Other political controls are *Human Rights*, *Previous Coup* within the last 10 years, and *Years since the last coup* as detailed in Table A2. Socio-economic controls, which are lagged by one year, include *Population Growth*, *log GDP per capita*, and *Resource Rents Share*. Together, these variables

7. Alternatively, the coup datasets by Powell and Thyne (2011) or Bjørnskov and Rode (2020) may be used. The dataset by Eschenauer-Engler and Herre (2023) can be considered a novel extension of Powell and Thyne (2011). Furthermore, the baseline results are also estimated using coup data from Bjørnskov and Rode (2020). The results are presented in the appendix and discussed later in the paper.

provide a comprehensive set of controls to account for political and socio-economic influences on coup dynamics.

Descriptive statistics for the dataset are presented in Table A3. The data include 5,219 observations, with 1,057 cases in which sanctions are present. Coups occurred 183 times in our dataset, successful coups which are a subset, removing all non-successful coups while keeping all non-coup observations and successful coups, happened 86 times.[8] Mean values for key variables are displayed across subsets of the data, including cases with and without sanctions. For example, target countries under sanctions tend to have lower *Polity2* scores (indicating more autocratic regimes), lower average human rights scores, and slightly higher levels of resource rents compared to cases without sanctions.

4 Empirical Results

4.1 Baseline Results

The baseline models are estimated using a stepwise approach. First, only clearly exogenous variables are included. These consist of the socio-economic variables lagged by one year, as well as ethnic fractionalization, the previous coup dummy and the time elapsed since the last coup event. Column (1) and (2) in Table 1 report the marginal effects from the panel logit estimations with (1) coups and (2) successful coups only as dependent variable.[9]

Lagged Western sanctions are, on average, associated with a 2.0 pp increase in the probability of both coup attempts and successful coup occurrences. The effects are statistically significant at least at the 5% significance level in both specifications. In contrast, the imposition of UN sanctions shows no significant effect on coup likelihood.

8. Theoretically, a useful split between control group and treatment could also be achieved by removing all non-coup observations and keeping successful as well as non-successful coups. Such a split would more precisely address *coup success* instead of *successful coup occurrences*. However, this would result in a dataset consisting of only 183 observations which is not enough for a proper empirical analysis.

9. For the sake of robustness, all baseline models were additionally estimated using a panel probit approach. The marginal effects are almost identical. The results are available on request.

Table 1: Baseline Results

	Coups	Successful Coups	Coups	Successful Coups
	(1)	(2)	(3)	(4)
Sanctions				
… lag Western	0.0202**	0.0196***	0.0042	0.0108*
	(0.0085)	(0.0054)	(0.0091)	(0.0064)
… lag UN	0.0057	–0.0008	–0.0211	–0.0101
	(0.0240)	(0.0191)	(0.0254)	(0.0210)
Fractionalization	0.0069	–0.0055	–0.0071	–0.0106
	(0.0162)	(0.0088)	(0.0160)	(0.0092)
Polity2			–0.0015*	–0.0018***
			(0.0008)	(0.0005)
Human Rights			–0.0101**	–0.0038
			(0.0049)	(0.0044)
Intrastate Conflict			0.0299***	0.0137*
			(0.0097)	(0.0076)
Interstate Conflict			0.0170	0.0118
			(0.0192)	(0.0147)
Previous Coup (10 years)	0.0104	0.0125**	0.0059	0.0100*
	(0.0076)	(0.0051)	(0.0076)	(0.0053)
Years since last coup	–0.0012**	–0.0004	–0.0014***	–0.0005
	(0.0005)	(0.0004)	(0.0005)	(0.0004)
lag Population Growth	0.0170	–0.0195	0.0287	–0.0096
	(0.0304)	(0.0241)	(0.0288)	(0.0213)
lag log(GDP pc)	–0.0148***	–0.0086**	–0.0079	–0.0052
	(0.0045)	(0.0036)	(0.0048)	(0.0040)
lag Resources Rents Share	–0.0002	–0.0002	–0.0004	–0.0004
	(0.0004)	(0.0003)	(0.0004)	(0.0003)
Region	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	4,721	4,093	4,721	4,093

Notes: Marginal effects of panel logit models according to Eqs. (2)–(5). The LHS variable indicates whether a coup occurred in country i at year t. Standard errors are clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects and (ii) the exclusion of non-successful coups.

Second, column (3) and (4) in Table 1 present the marginal effects of the panel logit estimations that incorporate the full set of variables, including controls for the political situation. In these models, the estimates for sanctions not only decrease in magnitude but also lose statistical significance. Given the reciprocal relationship between the

imposition of sanctions and the political situation in the target country, these results are not unexpected. However, the effect of lagged Western sanctions on successful coups remains significant at the 10% level with an effect size of 1.0 pp. Regarding previous coups, the years elapsed since the most recent coup emerge as a significant predictor of coup occurrences, whereas the likelihood of a successful coup is more strongly influenced by whether a coup occurred within the past 10 years. Specifically, the probability of a coup decreases by 0.1 percentage points for each additional year since the last coup, although this variable is not significant in predicting successful coups. Although lagged GDP per capita appears to significantly reduce the probability of a coup, it is not significant when political controls are included. Whereas interstate conflicts do not significantly affect coups, intrastate conflicts increase the likelihood of a coup d'état by 3.0 pp. The relationship between intrastate conflicts and successful coups is significantly lower with an increase in probability by only 1.4 pp at the 10% level. Interestingly, Human Rights appear to have only an effect on coup events but not success. Additionally, the level of democratization decreases the likelihood of coup and successful coup events by roughly 0.2 pp. Further research on that is provided in the following subsection.

The models presented (3) and (4) in Table 1, including all control variables, can be considered as conservative specification because it risks underestimating the effect of lagged sanctions by controlling for variables that may themselves be related to sanctions. For instance, if intrastate conflicts increase the likelihood of sanctions, which, in turn, make coups more likely, the full model would attribute this effect to these conflicts rather than sanctions, which enter the model lagged by one period. Therefore, it is reasonable to argue that the true effect of lagged sanctions on coups lies between the marginal effects estimated by the small model (upper bound) and the full model (lower bound).

Effects of Sanctions over Time. For a causal interpretation of the results, a pre-trend dummy is inserted in Table 2, capturing the three years preceding the imposition of (lagged) Western sanctions. This allows for an assessment of trends prior to sanctions.

The insignificant coefficients for the pre-trend dummy provide evidence that there is no significant increase in the probability of coups before the implementation of sanctions. Additionally, the results demonstrate that the initial impact of Western sanctions is most pronounced, increasing coup probability by 4.2 pp and the likelihood of successful coups by 4.1. pp. These effects diminish over time, decreasing annually by approximately 0.7 pp and 0.5 pp, respectively. These findings align with the conclusions by Gutmann et al. (2023), who observe that the economic effects of sanctions are strongest in the first year and weaken over time.

Overall, the baseline results support hypotheses 1a and 3a. Hypotheses 2 and 4 are tested in the subsequent subsections.

Table 2: Coups and the Effect of Sanctions over Time

	Coups	Successful Coups
	(1)	(2)
Sanctions		
… lag Western	0.0420**	0.0406***
	(0.0165)	(0.0126)
… Western Pre-Trend Dummy (-4 ≤ t ≤ -2)	–0.0052	–0.0129
	(0.0161)	(0.0125)
… Western Sanctions Duration	–0.0068***	–0.0048**
	(0.0022)	(0.0019)
… lag UN	–0.0193	–0.0084
	(0.0251)	(0.0210)
Fractionalization	–0.0086	–0.0107
	(0.0157)	(0.0090)
Polity2	–0.0015*	–0.0018***
	(0.0008)	(0.0006)
Human Rights	–0.0100**	–0.0038
	(0.0048)	(0.0043)
Intrastate Conflict	0.0290***	0.0127
	(0.0095)	(0.0073)
Interstate Conflict	0.0164	0.0115
	(0.0201)	(0.0156)
Previous Coup (10 years)	0.0046	0.0089*
	(0.0075)	(0.0052)
Years since last coup	–0.0013***	–0.0004
	(0.0005)	(0.0004)
lag Population Growth	0.0231	–0.0153
	(0.0275)	(0.0212)
lag log(GDP pc)	–0.0089*	–0.0059
	(0.0048)	(0.0040)
lag Resources Rents Share	–0.0005	–0.0005
	(0.0004)	(0.0003)
Region	Yes	Yes
Year	Yes	Yes
Observations	4,721	4,093

Notes: Marginal effects of panel logit models according to Eqs. (2)–(5). The LHS variable indicates whether a coup occurred in country i at year t. Standard errors are clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects and (ii) the exclusion of non-successful coups.

4.2 Extensions and Robustness

Effect Heterogeneity regarding Regime Type. To further contribute to the ongoing academic debate on how regime types influence the probability of a coup event, the extended analysis excludes one of the four regime types (Military, Personal, Party, and Democratic) at a time and re-estimates the models including all control variables. Table 3 highlights the effect heterogeneity when these regime types are excluded.

Contrary to hypothesis 2, sanctions have no significant effect on coup attempts in any of the specifications. However, lagged Western sanctions influence successful coups, if single-party regimes are excluded. These sanctions increase the likelihood of a successful coup by 1.7 pp, significant at the 10% level. When democratic regimes are excluded, sanctions no longer significantly affect the probability of successful coups. This suggests that the (slightly) positive effect of lagged Western sanctions on successful coups is, in part, driven by democratic regimes, providing some evidence for hypothesis 4. Regarding authoritarian regimes, the results perfectly align with the findings of Escribà-Folch and Wright (2010) arguing that single-party regimes usually have stronger institutions to withstand sanctions compared to other types of authoritarian regime. However, the varying effects of sanctions on coups across different regime types warrant further investigation, which is addressed in the following subsection.

Effect Heterogeneity regarding Objective of Sanctions. Furthermore, the GSDB identifies nine non-exclusive categories of objectives or motivations for imposing sanctions – democracy promotion, human rights protection, regime destabilization, policy change, war prevention, conflict resolution, territorial disputes, counterterrorism, and other miscellaneous goals – based on data derived from official documents. To examine whether the influence of sanctions on coups d'état differs depending on the specific objectives, we re-estimate our models including all controls while sequentially excluding sanction cases associated with each objective category. Table A4 in the appendix reveals the results for the full research period.

Table 3: Effect Heterogeneity for Regime Types

		Coups	
	Excl. Military Regimes	**Excl. Personalist Regimes**	**Excl. Single-Party Regimes**
Lag Western	0.0015	–0.0025	0.0116
	(0.0087)	(0.0093)	(0.0113)
Lag UN	–0.0067	–0.0475	0.0042
	(0.0162)	(0.0322)	(0.0276)
Observations	4,053	3,931	3,656
	Excl. Democratic Regimes	**Full Dataset**	
Lag Western	0.0093	0.0042	
	(0.0161)	(0.0091)	
Lag UN	–0.0319	–0.0211	
	(0.0453)	(0.0254)	
Observations	2,565	4,721	
		Successful Coups	
	Excl. Military Regimes	**Excl. Personalist Regimes**	**Excl. Single-Party Regimes**
Lag Western	0.0110	0.0043	0.0169*
	(0.0078)	(0.0068)	(0.0087)
Lag UN	0.0097	–0.0095	–0.0091
	(0.0142)	(0.0224)	(0.0298)
Observations	2,381	3,446	3,039
	Excl. Democratic Regimes	**Full Dataset**	
Lag Western	0.0167	0.0108*	
	(0.0117)	(0.0064)	
Lag UN	–0.0256	–0.0101	
	(0.0372)	(0.0210)	
Observations	2,231	4,093	

Notes: Marginal effects of panel logit models acc. (Eqs. (2)–(5)). LHS variable: (successful) coup in country i at year t. Std. errors are clustered by country. ***/**/* indicates signif. at 1%/5%/10% level. The diff. in the number of obs. are due to (i) the absorption of data spells by the FEs, (ii) the excl. of non-successful coups and (iii) the excl. of specific regime types. Models include all controls, region- and year-fixed effects.

Again, there is no significant effect of sanctions, neither of UN nor of Western sanctions, on coups in any of the specifications. However, it is found that the effect of Western sanctions on successful coups is mainly driven by sanctions aiming for democratization or conflict resolution in the target country, as the significantly positive relationship vanishes if one of those two objectives is removed.

Cold War Sample Split. As sanctions have been increasingly used as a tool in international politics since the beginning of the 1990s, all models were re-estimated with a sample split in 1991 when the Soviet Union collapsed and the Cold War came to an end. Columns (1) and (3) in Table 4 present the marginal effects for the Cold War era (here 1972 to 1991), while (2) and (4) include the post Cold War results (1992 to 2013).

The increasing importance of sanctions since the 1990s is confirmed by the statistical results. Prior to 1992, no significant influence of sanctions on the probability of coups or successful coups is evident. After the Cold War, there is a significant effect of 1.7 pp, on average ceteris paribus, on coups and even more than 2.1 pp on successful coups, providing further evidence for hypotheses 1a and 3a. Interestingly, the influencing factors for coups change considerably along the Cold War sample split. In particular, the influence of internal conflicts should be emphasized. While such conflicts had a highly significant, positive influence on the coup probability during the Cold War, the effect has not been statistically significant since the 1990s. One possible explanation is that during the Cold War, major powers often relied on direct (covert or overt) interventions to influence the internal affairs of target countries. In contrast, since the 1990s, sanctions have become a more commonly employed political instrument (Felbermayr et al. 2020; Berger et al. 2013). In addition, the level of democracy and GDP per capita were negatively correlated with coups until 1991. Since 1992, these effects have been insignificant.

Table 4: Cold War Sample Split

	Coups		Successful Coups	
	(1)	(2)	(3)	(4)
	Cold War	Post-1991	Cold War	Post-1991
Sanctions				
… lag Western	–0.0267	0.0169**	–0.0136	0.0211***
	(0.0227)	(0.0082)	(0.0184)	(0.0077)
… lag UN	–0.0282	–0.0142	0.0191	–0.0122
	(0.0748)	(0.0214)	(0.0396)	(0.0238)
Fractionalization	–0.0036	–0.0012	–0.0179	–0.0014
	(0.0259)	(0.0193)	(0.0155)	(0.0132)
Polity2	–0.0037**	-0.0012	–0.0040***	-0.0012
	(0.0018)	(0.0008)	(0.0013)	(0.0007)
Human Rights	–0.0085	–0.0093	0.0030	–0.0080
	(0.0096)	(0.0068)	(0.0074)	(0.0062)
Intrastate Conflict	0.0679***	0.0028	0.0410***	–0.0035
	(0.0186)	(0.0109)	(0.0129)	(0.0096)
Interstate Conflict	0.0357	–0.0097	0.0229	0.0005
	(0.0412)	(0.0280)	(0.0382)	(0.0191)
Previous Coup (10 years)	0.0473	0.0044	0.0091	0.0118
	(0.0140)	(0.0092)	(0.0087)	(0.0100)
Years since last coup	–0.0032***	–0.0007	–0.0010	–0.0003
	(0.0011)	(0.0004)	(0.0007)	(0.0004)
lag Population Growth	–0.0113	0.0194	–0.1028	0.0019
	(0.0959)	(0.0219)	(0.0790)	(0.0261)
lag *log*(GDP pc)	–0.0082	–0.0150***	–0.0092	–0.0095*
	(0.0105)	(0.0052)	(0.0087)	(0.0051)
lag Resources Rents Share	–0.0019**	0.0002	–0.0010	–0.0003
	(0.0008)	(0.0005)	(0.0007)	(0.0004)
Region	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	2,014	2,076	1,836	1,577

Notes: Marginal effects of panel logit models according to Eqs. (2)–(5). The LHS variable indicates whether a coup occurred in country i at year t. Standard errors are clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects, (ii) the exclusion of non-successful coups and (iii) the Cold War sample split.

Regarding the post-Cold War results excluding different regimes type, the effect of Western sanctions on coups (3.6 pp) and successful coups (4.1 pp) is statistically more significant and more pronounced in non-democratic regimes (see Table 5). Additionally, the findings suggest that personalist regimes are particularly vulnerable to coups under the imposition of sanctions, consistent with our theoretical expectations. The significant effect of lagged Western sanctions on coups disappears when personalist regimes are excluded from the dataset. However, the effect does not completely vanish for successful coups in this specification. Considering only successful coups, there is no substantial difference in the effect across the various types of authoritarian regimes. In summary, the post-Cold War results provide strong support for hypotheses 1a, 2 and 3a, but not for hypothesis 4, as the marginal effects of Western sanctions on successful coups become even more pronounced when democratic regimes are excluded.

Notably, according to Table A5 in the appendix, the marginal effects of Western sanctions on coups become more significant and exhibit greater magnitude when cases aimed at improving human rights or countering terrorism in the target country are excluded, leading to an increase in coup probability by 2.9 pp and 2.1 pp, respectively. Conversely, the effects are less pronounced when cases targeting regime destabilization are excluded. This outcome aligns intuitively with expectations, as coups themselves serve as the dependent variable in the analysis. Regarding successful coups, there is less post-Cold War effect heterogeneity for sanction objectives. However, regime destabilization, conflict resolution, and democratization seem to be slightly less pronounced. Compared to all coups as dependent variable, the effect of Western sanctions on successful coups is generally more pronounced and significant for all specifications.

Table 5: Post-Cold War Effect Heterogeneity for Regime Types

		Coups	
	Excl. Military Regimes	**Excl. Personalist Regimes**	**Excl. Single-Party Regimes**
Lag Western	0.0131**	0.0101	0.0146
	(0.0066)	(0.0106)	(0.0093)
Lag UN	0.0008	–0.0505	–0.0164
	(0.0137)	(0.0368)	(0.0225)
Observations	1,869	1,566	1,595
	Excl. Democratic Regimes	**Full Dataset**	
Lag Western	0.0358**	0.0169**	
	(0.0161)	(0.0082)	
Lag UN	0.0016	–0.0142	
	(0.0318)	(0.0214)	
Observations	1,142	2,076	
		Successful Coups	
	Excl. Military Regimes	**Excl. Personalist Regimes**	**Excl. Single-Party Regimes**
Lag Western	0.0266**	0.0167*	0.0239***
	(0.0112)	(0.0094)	(0.0091)
Lag UN	0.0170	–0.0171	
	(0.0207)	(0.0268)	
Observations	733	1,380	1,140
	Excl. Democratic Regimes	**Full Dataset**	
Lag Western	0.0405**	0.0211***	
	(0.0181)	(0.0077)	
Lag UN	–0.0144	–0.0122	
	(0.0459)	(0.0238)	
Observations	778	1,577	

Notes: Marginal effects of panel logit models acc. to Eqs. (2)–(5). LHS variable: (successful) coup in country i at year t. Std. err. are clustered by country. ***/**/* indicates signif. at 1%/5%/10% level. The diff. no. of obs. are due to (i) the absorption of data spells by the FEs, (ii) the excl. of non-successful coups and (iii) the excl. of regime types. Models include all controls, region- and year-FEs. Estimates for "Single-Party Regimes" are absent, as no lag UN sanctions remain.

Robustness to alternative Estimation Approaches. Apart from performing multiple jackknife tests on regime types, sanction objectives, and the Cold War sample split, robustness of the baseline results was evaluated using advanced estimation methods. On one hand, the incidental parameter problem was addressed through the bias correction method proposed by Fernández-Val (2009). On the other hand, given that coups are rare events with only 183 occurrences in our dataset, Firth's logistic regression was employed (Firth 1993). Table A6 and Table A7 in the appendix demonstrate that both estimation methods corroborate our main logistic regression results.

Robustness to alternative Coup Data. Additionally, to ensure robustness of our findings, Table A8 presents the baseline estimation results using coup data from Bjørnskov and Rode (2020) instead of Eschenauer-Engler and Herre (2023). Under this specification, the marginal effects of lagged Western sanctions appear even more pronounced. Interestingly, the results also indicate that the marginal effects of lagged UN sanctions are negative and statistically significant. However, given that only three coup events in this dataset occurred under lagged UN sanctions, this result cannot be considered to be a statistically reliable finding.

5 Conclusion

In the present paper, a panel logit model is applied in order to estimate the impact of international sanctions on the likelihood of coups, and particularly successful coups, in the target country. The dataset covers 5,219 observations, with 1,057 cases in which sanctions are present and 183 coups occurred in the target countries between 1972 and 2013. 86 coups out of the 183 were successful.

The key findings suggest that Western sanctions have a significantly positive effect on the likelihood of coups d'état in the post-Cold War era. The likelihood of coups increases, on average ceteris paribus, by around 1.7 pp. The post-1991 results are robust to various specifications that control for political conditions that are considered to be main reasons for both, sanctions and coups, i.e. the level of democracy, human rights violations as well as conflicts. Similar, and even more pronounced, results are found for successful coups as dependent variable.

Furthermore, the results for various regime types and sanctions objectives are completely in line with our theoretical considerations. The positive impact of sanctions on coups is more pronounced in non-democratic regimes with an increase of about 3.6 pp, but the effect is insignificant if personalist or single-party regimes are excluded. Regarding the sanctions objectives, the effect is weaker and less significant when the objective regime destabilization is excluded (1.4 pp), but stronger without the objectives human rights improvements (2.9 pp) and counter terrorism (2.1 pp).

Considering the full sample, the results on coups are significant if the controls for political conditions are excluded from the model. Under this specification, an increase of the likelihood of coups due to sanctions of 2.0 pp is found. However, the positive association between Western sanctions and successful coups remains (slightly) significant, even if all controls are included with an average effect size of 1.1 pp. This effect seems to be mainly driven by democratic as well as personalist authoritarian regimes. Although those regimes are not more vulnerable to the frequency of coups, they significantly lack the political instruments to prevent their success. Regarding the temporal impact, Western sanctions initially increase the probability of a coup event by

4.2 pp, with the effect diminishing by 0.7 pp per year. The overall findings are further supported by descriptive evidence, as sanctions are increasingly used as a tool in international affairs since the beginning of the 1990s.

For sanction senders, the results imply that sanctions can indeed be suitable for destabilizing regimes in authoritarian systems or supporting opposition elites, especially if destabilization is the desired goal of the sanctions. However, coups themselves can have considerable negative political effects on the target countries' political conditions as well as international affairs, which are not further examined in the present paper.

References

Afesorgbor, S. K. 2019. "The impact of economic sanctions on international trade: How do threatened sanctions compare with imposed sanctions?" *European Journal of Political Economy* 56:11–26.

Afesorgbor, S. K., and R. Mahadevan. 2016. "The impact of economic sanctions on income inequality of target states." *World Development* 83:1–11.

Attia, H., J. Grauvogel, and C. von Soest. 2020. "The termination of international sanctions: Explaining target compliance AND sender capitulation." *European Economic Review* 129:103565.

Belkin, A., and E. Schofer. 2003. "Toward a Structural Understanding of Coup Risk." *Journal of COnflict Resolution* 47 (5): 594–620.

Bell, C. 2016. "Coup d'État and Democracy." *Comparative Political Studies* 49 (9): 1167–1200.

Berger, D., A. Corvalan, W. Easterly, and S. Satyanath. 2013. "Do superpower interventions have short and long term consequences for democracy?" *Journal of Comparative Politics* 41 (1): 22–34.

Bjørnskov, C., and M. Rode. 2020. "Regime types and regime change: A new dataset on democracy, coups, and political institutions." *The Review of International Organizations* 15:531–551.

Crozet, M., and J. Hinz. 2020. "Friendly fire: The trade impact of the Russia sanctions and counter-sanctions." *Economic Policy* 35 (101): 97–146.

Dai, M., G. J. Felbermayr, A. Kirilakha, C. Syropoulos, E. Yalcin, and Y. V. Yotov. 2021. "Timing the impact of sanctions on trade," 411–437.

Davies, S., T. Pettersson, and M. Öberg. 2022. "Organized violence 1989-2021 and drone warfare." *Journal of Peace Research* 59 (4): 809–825.

Drazanova, L. 2019. "Historical index of ethnic fractionalization dataset." https://datafinder.qog.gu.se/dataset/hief.

Edward, L. 2016. *Coup d'état: A Practical Handbook, Revised*. Harvard University Press.

Eichenberger, R., and D. Stadelmann. 2022. "Sanctions are costly for citizens but beneficial for autocrats: A political-economic perspective." *The Economists' Voice* 19 (2): 109–123.

Eschenauer-Engler and B. Herre. 2023. "Coup leaders: a new comprehensive dataset, 1950-2020." *European Political Science*, 1–13.

Escribà-Folch, A., and J. Wright. 2010. "Dealing with Tyranny: International Sanctions and the Survival of Authoritarian Rulers." *International Studies Quarterly* 54 (2): 335–359.

Fariss, C. J. 2019. "Yes, human rights practices are improving over time." *American Political Science Review* 113 (3): 868–881.

Felbermayr, G., A. Kirilakha, C. Syropoulos, E. Yalcin, and Y. V. Yotov. 2020. "The Global Sanctions Data Base." *European Economic Review* 129:103561.

Fernández-Val, I. 2009. "Fixed effects estimation of structural parameters and marginal effects in panel probit models." *Journal of Econometrics* 150 (1): 71–85.

Finer, S. 1988. *The Man on Horseback: The Role of the Military in Politics.* 2nd. Westview.

Firth, D. 1993. "Bias reduction of maximum likelihood estimates." *Biometrika* 80 (1): 27–38.

Gassebner, M., J. Gutmann, and S. Voigt. 2016. "When to expect a coup d'état? An extreme bounds analysis of coup determinants." *Public Choice* 169:293–313.

Gleditsch, N. P., P. Wallensteen, M. Eriksson, M. Sollenberg, and H. Strand. 2002. "Armed conflict 1946-2001: A new dataset." *Journal of Peace Research* 39 (5): 615–637.

Gold, R., J. Hinz, and M. Valsecchi. 2024. "To Russia with love? The impact of sanctions on regime support." *CESifo Working Paper* 11033.

Grauvogel, J., A. A. Licht, and C. von Soest. 2017. "Sanctions and signals: How international sanction threats trigger domestic protest in targeted regimes." *International Studies Quarterly* 61 (1): 86–97.

Grauvogel, J., and C. von Soest. 2014. "Claims to legitimacy count: Why sanctions fail to instigate democratisation in authoritarian regimes." *European Journal of Political Research* 53 (4): 635–653.

Greene, W. 2004. "The behaviour of the maximum likelihood estimator of limited dependent variable models in the presence of fixed effects." *The Econometrics Journal* 7 (1): 98–119.

Gutmann, J., M. Neuenkirch, and F. Neumeier. 2021. "Sanctioned to death? The impact of economic sanctions on life expectancy and its gender gap." *Journal of Development Studies* 57 (1): 139–162.

———. 2023. "The economic effects of international sanctions: An event study." *Journal of Comparative Economics* 51 (4): 1214–1231.

———. 2024. "Do China and Russia undermine western sanctions? Evidence from DiD and event study estimation." *Review of International Economics* 32 (1): 132–160.

Janowitz, M. 1977. *Military Institutions and Coercion in the Developing Countries*. University of Chicago Press.

Kirikakha, A., G. J. Felbermayr, C. Syropoulos, E. Yalcin, and Y. V. Yotov. 2021. "The Global Sanctions Data Base (GSDB): an update that includes the years of the Trump presidency," 62–106.

Liou, R. Y.-L., A. Murdie, and D. Peksen. 2021. "Revisiting the causal links between economic sanctions and human rights violations." *Political Research Quarterly* 74 (4): 808–821.

Liou, R. Y.-L., A. Murdie, and D. Peksen. 2023. "Pressures from home and abroad: Economic sanctions and target government response to domestic campaigns." *Journal of Conflict Resolution* 67:297–325.

Marinov, N. 2005. "Do economic sanctions destabilize country leaders?" *American Journal of Political Science* 49 (3): 564–576.

Marshall, M., and D. Marshall. 2007. "Coup d'état events, 1960-2006." www.systemicpeace.org/inscrdata.html.

Marshall, M. G., and T. R. Gurr. 2020. "Polity5: Political regime characteristics and transitions, 1800-2018." www.systemicpeace.org/inscrdata.html.

McGowan, P. J. 2003. "African military coups d'état, 1956-2001: Frequency, trends and distribution." *Journal of Modern Africa Studies* 41 (3): 339–370.

Moteng, G., C. Raghutla, H. Njangang, and L. N. Nembot. 2023. "International sanctions and energy poverty in target developing countries." *Energy Policy* 179:113629.

Neuenkirch, M., and F. Neumeier. 2015. "The impact of UN and US economic sanctions on GDP growth." *European Journal of Political Economy* 40:110–125.

———. 2016. "The impact of US sanctions on poverty." *Journal of Development Economics* 121:110–119.

O'Kane, R. 1987. *The Likelihood of Coups.* Adelshot.

Powell, J. M. 2012. "Coups and Conflicts: The Paradox of Coup-Proofing," https://uknowledge.uky.edu/polysci_etds/3/.

Powell, J. M., and C. L. Thyne. 2011. "Global Instances of Coups from 1950 to 2010: A New Dataset." *Journal of Peace Research* 48 (2): 249–259.

———. 2016. "Coup d'état or Coup d'Autocracy? How Coups Impact Democratization, 1950-2008." *Foreign Policy Analysis* 12 (2): 192–213.

Seitz, W., and A. Zazzaro. 2020. "Sanctions and public opinion: The case of the Russia-Ukraine gas disputes." *Review of International Organizations* 15 (4): 817–843.

Svolik, M. W. 2009. "Power Sharing and Leadership Dynamics in Authoritarian Regimes." *American Journal of Political Science* 53 (2): 477–494.

Syropoulos, C., G. J. Felbermayr, A. Kirilakha, E. Yalcin, and Y. V. Yotov. 2024. "The global sanctions data base–release 3: Covid-19, Russia, and multilateral sanctions." *Review of International Economics* 32 (1): 12–48.

von Soest, C., and M. Wahman. 2014. "Not all dictators are equal: Coups, fraudulent elections, and the selective targeting of democratic sanctions." *Journal of Peace Research* 52 (1): 17–31.

Welch, C. 1970. *Soldiers and State in Africa*. Northwestern University Press.

World Bank. 2023. "World Development Indicators." https://data.worldbank.org.

Appendix

Data Description

Table A1: List of Countries

Target Countries (Number of total observations; sanctions; coups; successful coups)
Albania (29; 0; 0; 0), Algeria (42; 11; 1; 1), Angola (28; 14; 0; 0), Argentina (40; 12; 2; 1), Armenia (21; 0; 0; 0), Australia (42; 0; 0; 0), Austria (42; 1; 0; 0), Azerbaijan (19; 8; 1; 0), Bahrain (32; 0; 0; 0), Bangladesh (40; 0; 5; 2), Belarus (21; 13; 0; 0), Belgium (42; 0; 0; 0), Benin (42; 7; 2; 0), Bhutan (32; 0; 0; 0), Bolivia (42; 7; 6; 2), Botswana (42; 0; 0; 0), Brazil (42; 4; 0; 0), Bulgaria (32; 4; 0; 0), Burkina Faso (42; 0; 5; 5), Burundi (42; 7; 5; 3), Cambodia (19; 11; 1; 1), Cameroon (42; 7; 1; 0), Canada (15; 10; 0; 0), Cape Verde (26; 0; 0; 0), Central African Republic (42; 8; 4; 2), Chad (40; 0; 6; 1), Chile (42; 20; 1; 0), China (42; 32; 0; 0), Colombia (42; 14; 0; 0), Comoros (32; 0; 7; 2), Costa Rica (42; 12; 0; 0), Croatia (17; 6; 0; 0), Cuba (42; 41; 0; 0), Cyprus (37; 26; 0; 0), Czech Republic (19; 0; 0; 0), Denmark (42; 0; 0; 0), Dominican Republic (42; 2; 0; 0), Ecuador (42; 5, 5; 2), Egypt (42; 11; 2; 2), El Salvador (42; 8; 2; 1), Equatorial Guinea (28; 9; 0; 0), Eritrea (16; 6; 0; 0), Estonia (17; 2; 0; 0), Ethiopia (29; 13; 1; 0), Fiji (42; 19; 3; 3), Finland (42; 0; 0; 0), France (42; 22; 0; 0), Gabon (42; 0; 0; 0), Gambia (42; 9; 2; 0), Georgia (21; 7; 0; 0), Germany (41; 1; 0; 0), Ghana (42; 0; 7; 3), Greece (42; 1; 1; 1), Guatemala (42; 28; 4; 2), Guinea (26; 10; 3; 1), Guinea-Bissau (38; 3; 8; 4), Guyana (42; 0; 0; 0), Haiti (41; 27; 4; 2), Honduras (40; 1; 6; 4), Hungary (21; 0; 0; 0), India (41; 36; 0; 0), Indonesia (38; 19; 0; 0), Iran (38; 28; 0; 0), Iraq (28; 20; 3; 0), Ireland (42; 15; 0; 0), Israel (16; 0; 0; 0), Italy (42; 0; 0; 0), Jamaica (42; 2; 0; 0), Japan (41; 0; 0; 0), Jordan (34; 4; 0; 0), Kazakhstan (21; 2; 0; 0), Kenya (42; 5; 1; 0), Kosovo (4; 0; 0; 0), Kuwait (20; 0; 0; 0), Kyrgyzstan (21; 0; 0; 0), Laos (28; 10; 0; 0), Latvia (17; 2; 0; 0), Lebanon (9; 8; 0; 0), Lesotho (41; 4; 3; 3), Liberia (12; 11; 0; 0), Libya (13; 12; 0; 0), Lithuania (17; 0; 0; 0), Luxembourg (42; 0; 0; 0), Madagascar (42; 7; 4; 1), Malawi (42; 5; 0; 0), Malaysia (42; 0; 0; 0), Mali (40; 0; 3; 0), Mauritania (42; 4; 7; 5), Mauritius (36; 0; 0; 0), Mexico (42; 0; 0; 0), Moldova (17; 10; 0; 0), Mongolia (31; 0; 0; 0), Montenegro (6; 0; 0; 0), Morocco (42; 0; 1; 0), Mozambique (22; 0; 0; 0), Myanmar (38; 21; 2; 1), Namibia (22; 0; 0; 0), Nepal (42; 1; 0; 0), Netherlands (42; 0; 0; 0), New Zealand (35; 0; 0; 0), Nicaragua (42; 17; 0; 0), Niger (42; 8; 6; 4), Nigeria (41; 16; 6; 4), North Macedonia (21; 0; 0; 0), Norway (42; 3; 0; 0), Oman (42; 0; 0; 0), Pakistan (38; 17; 2; 2), Panama (41; 5; 2; 0), Papua New Guinea (37; 0; 2; 0), Paraguay (41; 5; 2; 1), Peru (41; 9; 3; 1), Philippines (39; 11; 4; 0), Poland (22; 0; 0; 0), Portugal (42; 3; 2; 1), Qatar (12; 0; 0; 0), Romania (22; 5; 0; 0), Russia (24; 1; 1; 0), Rwanda (41; 16; 2; 2), Saudi Arabia (42; 0; 0; 0), Senegal (42; 0; 0; 0), Serbia (18; 17; 0; 0), Sierra Leone (42; 14; 5; 3), Singapore (42; 0; 0; 0), Slovakia (19; 0; 0; 0), Slovenia (17; 0; 0; 0), Solomon Islands (31; 0; 0; 0), South Africa (40; 25; 0; 0), South Korea (42; 5; 0; 0), South Sudan (1; 0; 0; 0), Spain (42; 0; 1; 0), Sri Lanka (40; 0; 0; 0), Sudan (40; 23; 6; 2), Suriname (37; 7; 1; 1), Swaziland (42; 0; 1; 1), Sweden (42; 0; 0; 0), Switzerland (32; 0; 0; 0), Syria (42; 18; 1; 0), Tajikistan (21; 0; 0; 0), Tanzania (24; 0; 0; 0), Thailand (40; 5; 6; 3), Timor-Leste (1; 0; 0; 0), Togo (42; 16; 2; 1), Tunisia (42; 2; 1; 1), Turkey (39; 11; 1; 1), Turkmenistan (21; 3; 0; 0), Uganda (30; 0; 1; 1), Ukraine (21; 6; 0; 0), United Arab Emirates (37; 0; 1; 0), United Kingdom (41; 0; 0; 0), United States (40; 0; 0; 0), Uruguay (41; 5; 2; 2), Uzbekistan (21; 10; 0; 0), Vietnam (28; 19; 0; 0), Yemen (22; 1; 0; 0), Zambia (42; 3; 3; 0), Zimbabwe (32; 16; 0; 0).

Table A2: Definitions of Variables and Data Sources

Variable	Definition & Source
Coups	Binary indicator for country-years in which coups have occurred. *Source:* Coup Leaders Dataset (Eschenauer-Engler and Herre 2023).
Successful Coups	Binary indicator for country-years in which successful coups have occurred. *Source:* Coup Leaders Dataset (Eschenauer-Engler and Herre 2023).
lag Sanctions	Binary indicators for country-years with sanctions in place, lagged by one year. *Source:* GSDB (Felbermayr et al. 2020; Kirikakha et al. 2021; Syropoulos et al. 2024).
Fractionalization	Degree of ethnic fractionalization based on the annual percentage of ethnic groups in a country-year. *Source:* Quality of Government Institute (Drazanova 2019).
Polity2	Democracy indicator that ranges from strongly democratic (+10) to strongly autocratic (–10). *Source:* Polity5 dataset (Marshall and Gurr 2020).
Human Rights	Latent human rights variable with higher values indicating a better protection of human rights. *Source:* Human Rights Protection Scores (Fariss 2019).
Intrastate Conflict / Interstate Conflict	Armed conflict with at least 25 battle-related deaths between a government and one or more rebel groups / between two states. *Source:* UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002; Davies et al. 2022).
Previous Coups (10 years)	Binary indicator for a country in which a coup has occurred in the last 10 years. *Source:* Coup Leader Data (Eschenauer-Engler and Herre 2023).
Years since last coup	Number of years elapsed since the most recent coup in the sanctioned country. *Source:* Coup Leader Data (Eschenauer-Engler and Herre 2023).
lag Population Growth	Annual growth of de facto population, regardless of legal status or citizenship, lagged by one year. *Source:* World Development Indicators (World Bank 2023).
lag *log*(GDP pc)	Natural logarithm of real GDP per capita in 2015 USD, lagged by one year. *Source:* World Development Indicators (World Bank 2023).
lag Resources Rents Share	Total natural resources rents as percentage of GDP by year, lagged by one year. Total natural resources rents are the sum of oil, natural gas, coal, mineral, and forest rents. *Source:* World Development Indicators (World Bank 2023).

Table A3: Descriptive Statistics

	All Observations		**No Sanctions**		**Sanctions**	
	Mean	*N*	Mean	*N*	Mean	*N*
Fractionalization	0.41	5,219	0.40	4,212	0.44	1,007
Polity2	1.84	5,219	2.22	4,212	0.26	1,007
Human Rights	0.23	5,219	0.43	4,212	–0.62	1,007
lag Population Growth	0.11	5,219	0.12	4,212	0.11	1,007
lag *log*(GDP pc)	8.15	5,219	8.25	4,212	7.74	1,007
lag Resources Rents Share	7.87	5,219	7.73	4,212	8.46	1,007
Years since last coup	8.21	5,219	7.55	4,212	11.01	1,007
	$X = 1$	*N*	$X = 1$	*N*	$X = 1$	*N*
Coups	183	5,219	150	4,212	33	1,007
Successful Coups	86	5,219	69	4,212	17	1,007
Previous Coups (10 years)	1,167	5,219	886	4,212	281	1,007
Intrastate Conflict	850	5,219	559	4,212	291	1,007
Interstate Conflict	53	5,219	33	4,212	20	1,007

Notes: Mean values and non-zero observations ($X = 1$) for the LHS variable and all control variables. Columns '*N*' show the number of observations in the full dataset, without sanctions in place, and with sanctions in place.

Table A4: Effect Heterogeneity for Sanction Objectives

			Coups		
	Excl. Democracy	**Excl. Human Rights**	**Excl. Destab. Regime**	**Excl. Policy Change**	**Excl. Prevent War**
Lag Western	–0.0111	0.0124	0.0024	0.0084	0.0055
	(0.0107)	(0.0102)	(0.0088)	(0.0098)	(0.0093)
Lag UN	–0.0175	–0.0113	–0.0214	–0.0130	–0.0208
	(0.0243)	(0.0289)	(0.0250)	(0.0272)	(0.0241)
Observations	4,521	4,434	4,638	4,579	4,651
	Excl. End War	**Excl. Territ. Conflict**	**Excl. Terrorism**	**Excl. Other Objectives**	**Full Dataset**
Lag Western	0.0030	0.0045	0.0063	0.0020	0.0042
	(0.0093)	(0.0092)	(0.0094)	(0.0102)	(0.0091)
Lag UN	–0.0318	–0.0213	–0.0099	–0.0193	–0.0211
	(0.0347)	(0.0255)	(0.0242)	(0.0273)	(0.0254)
Observations	4,633	4,693	4,648	4,484	4,721
			Successful Coups		
	Excl. Democracy	**Excl. Human Rights**	**Excl. Destab. Regime**	**Excl. Policy Change**	**Excl. Prevent War**
Lag Western	0.0035	0.0173**	0.0108*	0.0135*	0.0115*
	(0.0087)	(0.0069)	(0.0062)	(0.0071)	(0.0067)
Lag UN	–0.0093	0.0042	–0.0106	–0.0208	–0.0059
	(0.0233)	(0.0181)	(0.0206)	(0.0288)	(0.0218)
Observations	3,437	3,525	3,875	3,822	4,030
	Excl. End War	**Excl. Territ. Conflict**	**Excl. Terrorism**	**Excl. Other Objectives**	**Full Dataset**
Lag Western	0.0104	0.0109*	0.0119*	0.0104	0.0108*
	(0.0070)	(0.0064)	(0.0065)	(0.0070)	(0.0064)
Lag UN	–0.0049	–0.0103	–0.0078	–0.0086	–0.0101
	(0.0249)	(0.0211)	(0.0213)	(0.0219)	(0.0210)
Observations	3,904	4,070	4,030	3,867	4,093

Notes: Marginal effects of panel logit models acc. (Eqs. (2)–(5)). LHS variable: (successful) coup in country i at year t. Std. errors are clustered by country. ***/**/* indicates signif. at 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects, (ii) the exclusion of non-successful coups and (iii) the exclusion of sanctions with specific objectives. Models include all controls, region- and year-fixed effects.

Table A5: Post-Cold War Effect Heterogeneity for Sanction Objectives

			Coups		
	Excl. Democracy	**Excl. Human Rights**	**Excl. Destab. Regime**	**Excl. Policy Change**	**Excl. Prevent War**
Lag Western	0.0155*	0.0289***	0.0143*	0.0172**	0.0170**
	(0.0089)	(0.0086)	(0.0073)	(0.0087)	(0.0081)
Lag UN	–0.0138	–0.0100	–0.0141	–0.0110	–0.0187
	(0.0214)	(0.0221)	(0.0215)	(0.0231)	(0.0255)
Observations	1,934	1,895	2,045	2,013	2,036
	Excl. End War	**Excl. Territ. Conflict**	**Excl. Terrorism**	**Excl. Other Objectives**	**Full Dataset**
Lag Western	0.0149*	0.0171**	0.0206**	0.0177*	0.0169**
	(0.0083)	(0.0081)	(0.0087)	(0.0094)	(0.0082)
Lag UN	–0.0103	–0.0142	–0.0133	–0.0118	–0.0142
	(0.0212)	(0.0212)	(0.0225)	(0.0234)	(0.0214)
Observations	1,834	2,075	2,016	1,921	2,076
			Successful Coups		
	Excl. Democracy	**Excl. Human Rights**	**Excl. Destab. Regime**	**Excl. Policy Change**	**Excl. Prevent War**
Lag Western	0.0199*	0.0294***	0.0177**	0.0231***	0.0220***
	(0.0103)	(0.0075)	(0.0078)	(0.0083)	(0.0081)
Lag UN	–0.0189	0.0025	–0.0142	–0.0096	–0.0099
	(0.0292)	(0.0245)	(0.0258)	(0.0257)	(0.0267)
Observations	1,134	1,342	1,451	1,430	1,456
	Excl. End War	**Excl. Territ. Conflict**	**Excl. Terrorism**	**Excl. Other Objectives**	**Full Dataset**
Lag Western	0.0206**	0.0212***	0.0261***	0.0239***	0.0211***
	(0.0082)	(0.0077)	(0.0085)	(0.0082)	(0.0077)
Lag UN		–0.0101	–0.0103	–0.0092	–0.0122
		(0.0233)	(0.0247)	(0.0256)	(0.0238)
Observations	1,439	1,576	1,525	1,441	1,577

Notes: Marginal eff. of panel logit models acc. to Eqs. (2)–(5). LHS variable: (successful) coup in country i at year t. Std. err. are clustered by country. ***/**/* indicates signif. at 1%/5%/10% level. The diff. no. of obs. are due to (i) the absorption of data spells by FEs, (ii) the excl. of non-successful coups and (iii) the excl. of sanctions with specific objectives. Models include controls, region- and year-FEs. Estimates for "End War" are absent, as no lag UN sanctions remain.

Table A6: Baseline Results - Incidental Parameter Bias Correction

	Coups	Successful Coups	Coups	Successful Coups
	(1)	(2)	(3)	(4)
Sanctions				
… lag Western	0.0197***	0.0188***	0.0041	0.0102*
	(0.0072)	(0.0053)	(0.0075)	(0.0057)
… lag UN	0.0056	-0.0003	-0.0205	-0.0089
	(0.0168)	(0.0147)	(0.0173)	(0.0152)
Fractionalization	0.0067	-0.0058	-0.0069	-0.0104
	(0.0107)	(0.0082)	(0.0106)	(0.0081)
Polity2			-0.0014**	-0.0017***
			(0.0006)	(0.0005)
Human Rights			-0.0099***	-0.0036
			(0.0038)	(0.0030)
Intrastate Conflict			0.0290***	0.0119*
			(0.0077)	(0.0063)
Interstate Conflict			0.0166	0.0112
			(0.0217)	(0.0151)
Previous Coup (10 years)	0.0102*	0.0120***	0.0058	0.0101**
	(0.0058)	(0.0046)	(0.0057)	(0.0045)
Years since last coup	-0.0011***	-0.0004	-0.0014***	-0.0005
	(0.0004)	(0.0003)	(0.0004)	(0.0003)
lag Population Growth	0.0166	-0.0192	0.0277	-0.0102
	(0.0353)	(0.0259)	(0.0345)	(0.0245)
lag *log*(GDP pc)	-0.0145***	-0.0083***	-0.0078**	-0.0051*
	(0.0036)	(0.0030)	(0.0036)	(0.0030)
lag Resources Rents Share	-0.0002	-0.0004	-0.0004	-0.0004
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Region	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	4,768	4,222	4,768	4,222

Notes: Marginal effects of bias corrected panel logit models according to Fernández-Val (2009). The LHS variable indicates whether a coup occurred in country i at year t. Due to technical reasons, standard errors are not clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects, (ii) the exclusion of non-successful coups and (iii) the bias correction's aim to reduce the need to drop groups due to separation.

Table A7: Baseline Results - Firth's Logit Model

	Coups	Successful Coups	Coups	Successful Coups
	(1)	(2)	(3)	(4)
Sanctions				
… lag Western	0.0204***	0.0195***	0.0045	0.0108**
	(0.0068)	(0.0048)	(0.0072)	(0.0052)
… lag UN	0.0094	0.0043	-0.0174	-0.0044
	(0.0152)	(0.0118)	(0.0158)	(0.0122)
Fractionalization	0.0064	-0.0064	-0.0074	-0.0112
	(0.0104)	(0.0075)	(0.0102)	(0.0074)
Polity2			-0.0015**	-0.0018***
			(0.0006)	(0.0005)
Human Rights			-0.0101***	-0.0037
			(0.0036)	(0.0028)
Intrastate Conflict			0.0298***	0.0125**
			(0.0074)	(0.0057)
Interstate Conflict			0.0212	0.0149
			(0.0197)	(0.0128)
Previous Coup (10 years)	0.0104*	0.0123***	0.0059	0.0103**
	(0.0056)	(0.0042)	(0.0055)	(0.0042)
Years since last coup	-0.0012***	-0.0004	-0.0014***	-0.0005*
	(0.0004)	(0.0003)	(0.0004)	(0.0003)
lag Population Growth	0.0175	-0.0208	0.0280	-0.0103
	(0.0327)	(0.0214)	(0.0318)	(0.0204)
lag *log*(GDP pc)	-0.0148***	-0.0084***	-0.0078**	-0.0050*
	(0.0034)	(0.0027)	(0.0035)	(0.0027)
lag Resources Rents Share	-0.0002	-0.0001	-0.0004	-0.0003
	(0.0003)	(0.0002)	(0.0003)	(0.0003)
Region	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	5,219	5,122	5,219	5,122

Notes: Marginal effects of penalized panel logit models according to Firth (1993). The LHS variable indicates whether a coup occurred in country i at year t. Due to technical reasons, standard errors are not clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to the exclusion of non-successful coups. As penalization is used to adjust for separation issues, no observations are removed in the estimation process.

Table A8: Baseline Results - Coup Data from Bjørnskov and Rode (2020)

	Coups	Successful Coups	Coups	Successful Coups
	(1)	(2)	(3)	(4)
Sanctions				
… lag Western	0.0258**	0.0292***	0.0014	0.0176**
	(0.0121)	(0.0086)	(0.0119)	(0.0084)
… lag UN	–0.0263	–0.0072	–0.0619**	–0.0190
	(0.0261)	(0.0199)	(0.0251)	(0.0194)
Fractionalization	0.0089	0.0035	–0.0061	–0.0024
	(0.0286)	(0.0157)	(0.0276)	(0.0148)
Polity2			–0.0010	–0.0020***
			(0.0008)	(0.0006)
Human Rights			–0.0177***	–0.0058
			(0.0053)	(0.0036)
Intrastate Conflict			0.0241*	0.0144
			(0.0130)	(0.0099)
Interstate Conflict			0.0058	–0.0165
			(0.0318)	(0.0198)
Previous Coup (10 years)	–0.0848***	–0.0575***	–0.0874***	–0.0586***
	(0.0143)	(0.0108)	(0.0139)	(0.0106)
Years since last coup	–0.0109***	–0.0059***	–0.0104***	–0.0057***
	(0.0015)	(0.0012)	(0.0014)	(0.0011)
lag Population Growth	–0.0242	–0.0750***	–0.0025	–0.0608**
	(0.0600)	(0.0276)	(0.0552)	(0.0263)
lag log(GDP pc)	–0.0283***	–0.0158***	–0.0181**	–0.0104**
	(0.0096)	(0.0053)	(0.0087)	(0.0053)
lag Resources Rents Share	–0.0004	–0.0003	–0.0003	–0.0004
	(0.0005)	(0.0004)	(0.0005)	(0.0004)
Region	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Observations	5,160	4,097	5,160	4,097

Notes: Marginal effects of panel logit models according to Eqs. (2)–(5). The LHS variable indicates whether a coup occurred in country i at year t. Standard errors are clustered at the country level. ***/**/* indicates significance at the 1%/5%/10% level. The differences in the number of observations are due to (i) the absorption of data spells by the fixed effects, (ii) the exclusion of non-successful coups and (iii) small differences between the two coup datasets.