Replication of The Morning After: Report from the Nottingham Replication Games*

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July 3, 2023

Abstract

We replicate the analysis provided in Bokobza et al. (2022). They identify a causal effect of failed coup attempts on cabinet minister removals in autocracies on both the country and individual minister level and show that higher-ranking ministers and those holding strategic positions are more likely to be purged than more loyal and veteran ministers using fixed effects panel models. We focus on computational reproducibility and robustness replicability. In addition to reproducing the original results using Stata and R, we replicate analyses using random effects panel models and ordered beta regression models, reproduced analyses performed in R using different packages, replaced the main independent variable, clustered standard errors on a different level, and added independent variables related to coup-proofing. We find that the original findings were reproducible and robust.

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1 Introduction

This paper presents details on a replication of Bokobza et al. (2022), "The Morning After: Cabinet Instability and the Purging of Ministers after Failed Coup Attempts in Autocracies", published in *The Journal of Politics* (JOP) 84(3). The authors introduce a new global data set which provides information for more than 23,000 cabinet ministers in 115 autocracies spanning from 1967 until 2016 and analyze it using country-year fixed effects panel regression models. On the country-year level, they hypothesize that failed coup attempts increase cabinet purges. On the minister-year level, they hypothesize that longer-serving ministers and ministers politically aligned with the ruler are less likely to be purged whereas ministers engaged in defense and diplomacy and highest-ranking ministers are more likely to be purged. Loyalty is expected to outweigh portfolio allocation. The authors find empirical support for all hypotheses.

Ordinary least squares models to analyze the effect of failed coup attempts on cabinet purges were estimated via the following equation:

$$P_{i,t} = \varphi C_{i,t} + \beta \boldsymbol{X_{i,t}} + \alpha_i + \lambda_t + \epsilon_{i,t}$$

where $i = 1, ..., n$ refers to countries and $t = 1, ..., T$ to years. The year-to-year replacement rate of ministers $P_{i,t}$ ranges from 0 to 1, and is calculated by subtracting the retention rate from 1. The variable also captures changes to the size of the cabinet. Failed coup attempt, $\varphi C_{i,t}$, takes on 0 and 1 as values.

Linear probability models to analyze the effect of failed coup attempts on individual minister removals were estimated as follows:

$$F_{i,j,t} = \varphi C_{i,j,t} + \zeta M_{i,j,t} + \gamma(C_{i,j,t} M_{i,j,t}) + \beta \boldsymbol{X_{i,j,t}} + \alpha_i + \lambda_t + \epsilon_{i,j,t}$$

where $j = 1, ..., n$ refers to the individual minister, i and t refer to countries and years, and the outcome variable $F_{i,j,t}$ takes the value 1 if a minister is removed and 0 otherwise. $\gamma(C_{i,j,t} M_{i,j,t})$ is a product term of minister characteristics. The authors use country- and year-fixed effects as well as leader- and year-fixed effects, with standard errors clustered

on the country-level.

We focus on reproducing and replicating the main results, i.e. the plots presented in the paper and the corresponding tables provided in the supplemental material. The country-level analysis was done in Stata using fixed effects panel regression models. We replicate the fixed effects panel regression models in R and also estimate random effects and ordered beta regression models. In addition, we replicate the models in Stata using leader- instead of country-clustered standard errors and alternative independent variables and additional coup-proofing control variables. The original individual-level analysis was done in R using the `lfe` package for linear group fixed effects (Gaure 2013). We replicate these panel regression models while accounting for unbalanced data and using different approaches to clustering standard errors, based on the R packages `plm` (Croissant and Millo 2008) and `fixest` (Berge 2018). We also replicate the individual-level analysis by replacing the linear probability model in the original analysis with a logistic regression model. All reproductions and replications are in line with the original findings in Bokobza et al. (2022).

2 Reproducibility

JOP requires authors to provide data and code to reproduce all research results, which are uploaded on JOP's Dataverse[1]. A JOP replication analyst has successfully reproduced the empirical analysis. In our efforts we focus on computational reproducibility and robustness replicability. We started by re-running analysis files provided in the supplemental material. Analyses on the country-level were done in Stata, analyses on the individual-level in R. The materials produced the exact same results as reported in the paper and appendix. We could not detect any coding errors or other issues and the reproduction was seamless.[2]

[1] https://dataverse.harvard.edu/dataverse/jop.

[2] Given that it has already been confirmed by a JOP replication analyst, we refrain from providing tables and plots of this exercise and instead focus on the stress tests we conducted.

3 Replication: Country-level

We replicated the country-level analysis, which was originally performed in Stata using standard commands, with R and the `plm` package (Croissant and Millo 2008). After several manual data preparation steps that Stata conducted in the background or via command options (removing missing values, filtering by variable values, creating separate dataframes by independent variables chosen, creating lags of independent variables, specifying the fixed effect variables), we obtained the correct number of observations and countries included for each individual regression analysis. Coefficients and significance levels provided in Table 1 remained similar for country- and year-fixed effects models, finding evidence in favor of the hypothesized relationships. Covariates, such as party regime, differ in significance compared to the original Stata analyses, but that does not matter for the hypothesis test (Dworschak 2023). The same is true for leader- and year-fixed effects models as documented in Table 3. Tables 5 and 7 provide the regression results using the alternative independent variables, which are used as placebos. Overall, there are no changes to the conclusions drawn in Bokobza et al. (2022).

3.1 Random instead of fixed effects

Unit fixed effects are used to account for unobserved unit heterogeneity that is correlated with right-hand side variables. In the case of Bokobza et al. (2022), there may be many relevant time invariant confounders. Including country-fixed effects allows to control for these unobserved characteristics (Cunningham 2021, Huntington-Klein 2021). Random effects, on the other hand, do not fully partial out the unit-level heterogeneity (Gelman and Hill 2006). This increases efficiency and retains more data, at the expense of biasedness. To assess the extent to which this choice in estimator matters, we change from a model with country-/leader- and year-fixed effects to country-/leader-random and year-fixed effects. Figure 1 shows the coefficient plots using country- and leader-fixed and random effects. While point estimates are not exactly the same, the findings stay substantially robust to this change. There are some differences in panel B, relating to alternative independent variables that serve as placebo tests. The placebos nonviolent

campaigns and interstate war now exhibit a positive effect, similar to the treatment. This is likely due to unobserved unit-level heterogeneity influencing both placebo and outcome, which is otherwise partialled out. Interestingly, the same confounding does not seem to inflate the respective treatment effects. This provides potential avenues for future research. Tables 2 and 4 list regression results for country- and leader-random effects, respectively. Tables 6 and 8 provide the results for the alternative independent variables using country- and leader-random effects. We find overall support for the conclusions drawn in Bokobza et al. (2022).

3.2 Ordered Beta regression

Kubinec (2022) introduced a new model for continuous dependent variables with upper and lower bounds. The ordered Beta regression model is more efficient than ordinary least squares, zero-and-one-inflated Beta regression, rescaled Beta regression, and fractional logit models, and overcomes limitations of ordinary least squares which assumes an unbounded Normal distribution. It is specifically designed for dependent variables that are continuous and bounded between 0 and 1, such as the minister replacement rate. The model can also include both fixed and random effects. Staggering our stress tests, we opted for models with country-/leader-random and year-fixed effects. All results are in line with the conclusions drawn in Bokobza et al. (2022). Tables 9 and 11 provide regression results for the failed coup attempt and alternative independent variables. Tables 10 and 12 provide results for leader-random effects.

3.3 Alternative explanatory variables

Supplementary to the original country-level analysis using observed coups as explanation for purges, we replicate the models using coup risk. Coup risk is defined as the predicted probability of a country experiencing a coup in a given year. We extend the analysis in this way, because coup attempts are rare and extreme events. Under usual circumstances, leaders engage in preventive action, such as purges, to avoid coup attempts from happening. Therefore, we may observe an increase in effect magnitude compared to the

original results. This extension operates under two assumptions. First, rational leaders have basic information about the level of coup risk they face. Second, they are able to take preventive measures to safeguard leadership survival.

To calculate coup risk, we use a probit model in which the dependent variable is a dummy variable that takes the value of 1 whenever a country experiences at least one coup attempt in a particular year, and 0 otherwise, based on the Reign Dataset[3]. As predictors, we include the number of months since the last coup attempt, along with its squared and cubic terms (Carter and Signorino 2010). We also account for the number of coups in the last five years, along with its squared and cubic terms. We further include a dummy variable indicating if the year is before 1991, a set of dummy variables accounting for the country's colonial history, and year fixed effects. Table 13 presents the estimates based on the probit model.

Figure 12 compares the results to the original country-level main models using coup attempts. Using coup risk rather than coup attempts as main independent variable (IV) does not significantly affect the results when using country-fixed effects. However, when the models are estimated using leader-fixed effects, the results are no longer significant. This invites future research to explore the differences between coup attempts and coup risk as drivers of purges.

3.4 Additional coup-proofing covariates

As an additional robustness check, we include a set of variables that account for the presence of institutional coup-proofing strategies in the country. It may be argued that coup-proofing measures proxy for a heightened awareness of leadership fragility, decreasing the rate of ministers that require purging, and decreasing the risk of coup attempts. We do this for the original baseline, main, and all-controls country-level models. Specifically, these variables capture the level of military fragmentation, the number of counterweights to the army, the number of heavily armed counterweights to the army, and the number of paramilitary units in the country. The data sources for these variables are Böhmelt's

[3]https://oneearthfuture.org/reign-dataset-international-elections-and-leaders

Counterbalancing/Coup-Proofing Data[4] and the State Security Forces Dataset (De Bruin 2021). Figure 13 reports the results for these additional model specifications. The findings are largely in line with the original results. The only exception is the country-level model including all controls, in which the effect of coup attempts is no longer statistically significant.

4 Replication: Individual-level

4.1 Different R packages for group-fixed effects

We replicate the individual-level analyses using two alternative R packages. The aim is to test the robustness of the original analyses to the presence of unbalanced panel data and to different approaches to calculating cluster robust standard errors.[5] To address the unbalanced nature of the panel data used in the individual-level analysis, we use the `plm` package (Croissant and Millo 2008). The `plm` package addresses problems arising from unbalanced data by employing unbalanced one-way and two-way error component models (Baltagi 2021, p.229-257). Estimating standard errors in panel data is not trivial, and different approaches exist with no agreed-upon solution.[6] However, these differences in approaches can have substantial effects on uncertainty estimation. Therefore, we include a re-estimation of the individual-level analysis using the `fixest` package (Berge 2018). It implements standard errors similar to the prominent `reghdfe` Stata package (Correia 2016).

Replicating the main findings of the original individual-level analysis using these two R packages should improve robustness to unbalanced data and to different approaches to calculating clustered standard errors. Figures 2 to 6 replicate Figures 3, 4, and 5 of the original analysis.[7]

[4] Böhmelt, T. (2018). Counterbalancing / Coup-Proofing Data. Harvard Dataverse. https://doi.org/10.7910/DVN/JCVR1H

[5] The panel data is unbalanced, because countries are only included in the dataset if they are considered autocratic. Countries can enter and exit the dataset multiple times, leading to different timespans for different countries.

[6] See Zeileis et al. (2020) for an overview of different software implementations for heteroskedasticity-consistent (HC) standard errors and clustered standard errors.

[7] The full results can be found in Tables 14-18.

The findings across all models are in line with the original results. As expected, there are some slight differences with regard to standard errors, and consequently the confidence intervals change slightly. In general, `plm` produces marginally smaller standard errors for our main variables of interest, while the `fixest` approach produces results more closely aligned with the results reported in the original analysis. This results in some coefficients becoming significant using `plm` that were not significant in the original analysis. This is the case for *From the leader's party* in Figure 3, as well as for *Junior ministers* and *Low-ranking ministers* in 5. However, these are minor differences and do not affect the overall conclusions. Finally, there are some differences in the size of the R^2 between the different approaches. As can be seen in Tables 14-18, the R^2 for the `plm` models is significantly smaller than the R^2 reported for `felm` and `fixest`. This is due to the fact that `felm` and `fixest` include R^2 for the full model (including variation explained by the fixed effects), while `plm` only reports within R^2. Overall, the findings in the original analysis are not sensitive to correcting for unbalanced data and alternative approaches to clustering standard errors.

4.2 Fixed effects logit models

The dependent variable of the individual-level analysis is the fate of a minister $F_{i,j,t}$, which is a binary variable. It is 1 if a minister is purged the year after an attempted coup and 0 otherwise. Bokobza et al. (2022) employ a linear probability model that estimates the coefficients using Ordinary Least Squares (OLS). When using OLS for a binary target variable, the regression function can be seen as a conditional probability function. This approach, however, has a potential drawback: the conditional probability function is assumed to be linear. While the results based on a linear probability model are unbiased, the functional form is one reason why many applications rely on a non-linear transformation of the linear conditional probability function, such as a probit or logit model. Originally, the individual-level analysis was done in R using the `lfe` package for linear group fixed effects (Gaure 2013). To account for the non-linearity, we replicated the original analysis with the `alpaca` package (Stammann 2018). `alpaca` estimates generalized

linear models with multiple fixed effects. Keeping all other original model specifications constant, we estimate a logistic regression.

Tables 19-23 report the results of all models of the individual-level analysis for the original model (felm) and the fixed effects logit model (feglm). Figures 9-11 visualize the results. As the logit coefficients cannot be interpreted in the same way as in an OLS, we report average partial effects for all logit models. As expected, coefficient sizes change due to the different estimation technique, however, overall the direction and significance of the results stays the same. For the covariates (*Log of GDP per capita, Log of Population, Experience, Experience*^{2}, *Experience*^{3}) and the coefficients of the main effects (all variables except interaction terms), the coefficients only change marginally. For the interaction effects, the coefficients are smaller in the logit models compared to the OLS estimation. For example, the coefficient for the interaction between *Failed Coup Attempt (FCA)* and *Medium-ranking minister* is -0.286 in the felm model and -0.16 in the feglm model. However, as significance, direction, and order of the effects do not change, this does not affect the conclusions. In summary, we were able to fully replicate the original results using a logistic regression instead of a linear probability model.

5 Conclusion

We reproduced and replicated Bokobza et al. (2022). The authors' supplemental material on the JOP dataverse reproduce without any difficulties. We replicated the main results for the country-year analyses in R and estimated fixed- and random-effects and ordered Beta regression models, used alternative independent variables, and accounted for coup-proofing covariates. On the individual level, we reproduced the analyses conducted by the authors and replicated it using alternative approaches to estimating standard errors, accounted for unbalanced panel data, and estimated fixed effects logit models. The results remained robust to our stress tests and corroborate the conclusions drawn by Bokobza et al. (2022). We commend the authors for providing an accessible replication package and for their important contribution to the field, and hope to have contributed to the growing literature on replicability and reproducibility in the social sciences.

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6 Figures

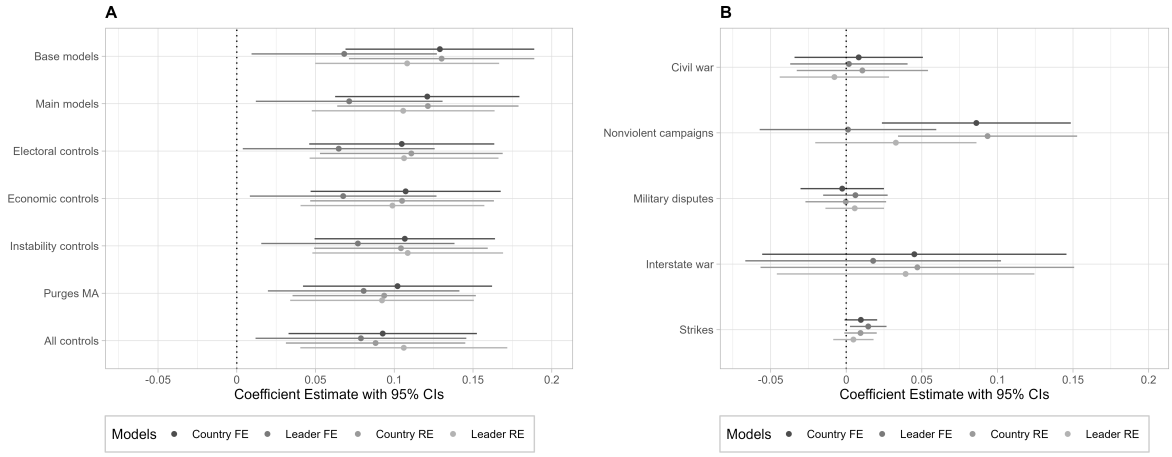

Figure 1: Coefficient plot fixed vs random country and leader effects.

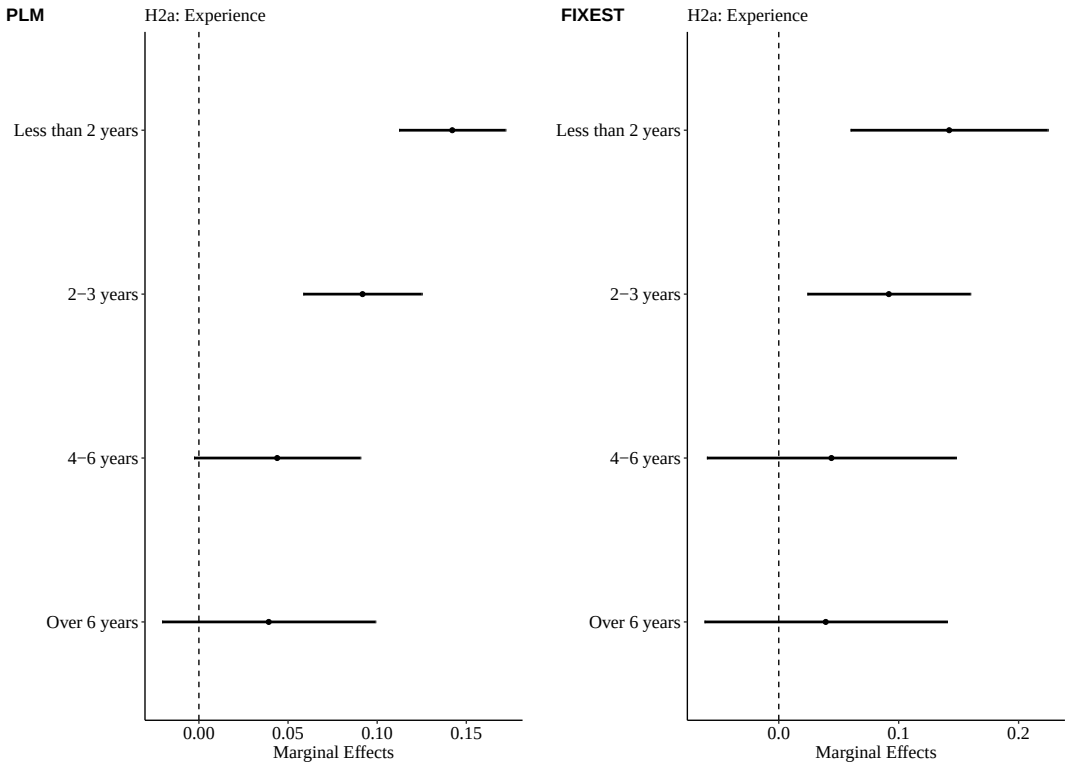

Figure 2: Coefficient plot plm vs fixest - Experience (Figure 3a).

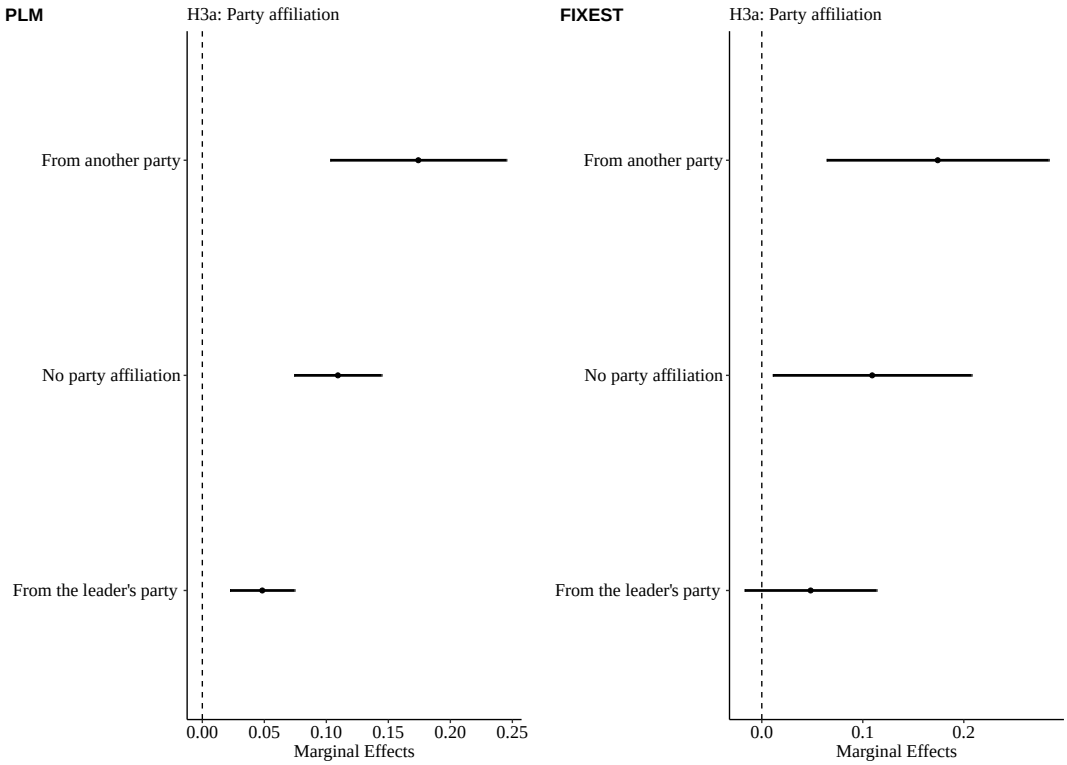

Figure 3: Coefficient plot plm vs fixest - Affiliation (Figure 3b).

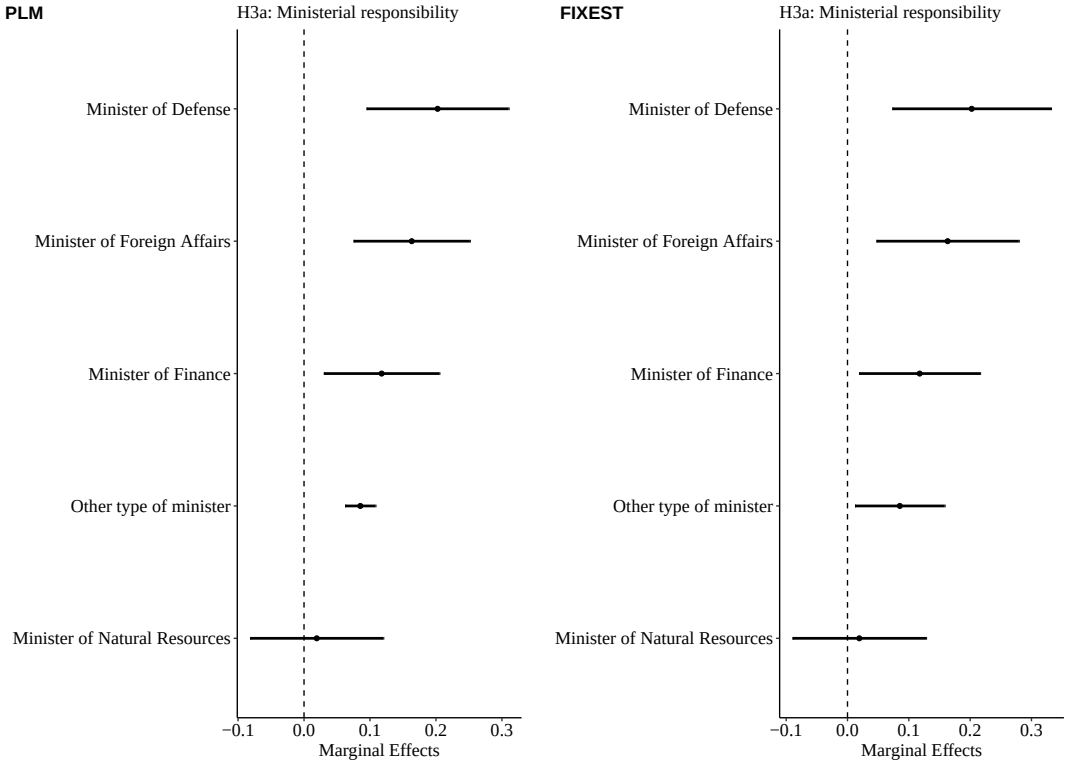

Figure 4: Coefficient plot plm vs fixest - Responsibility (Figure 4a).

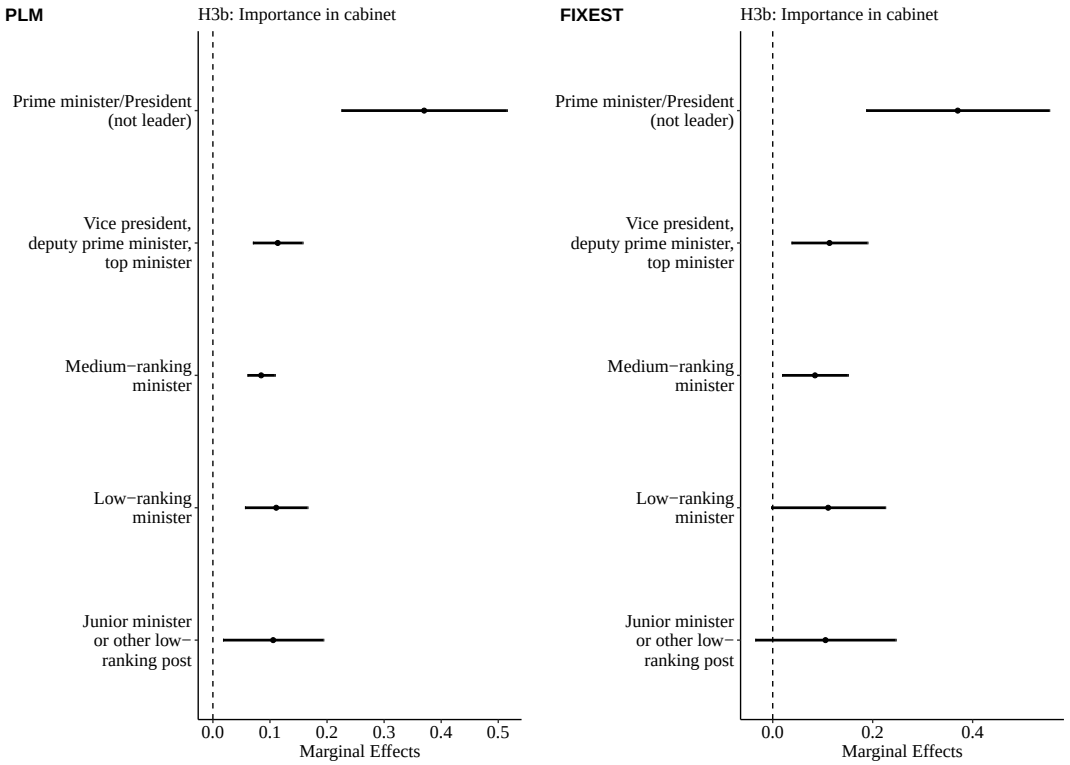

Figure 5: Coefficient plot plm vs fixest - Importance (Figure 4b).

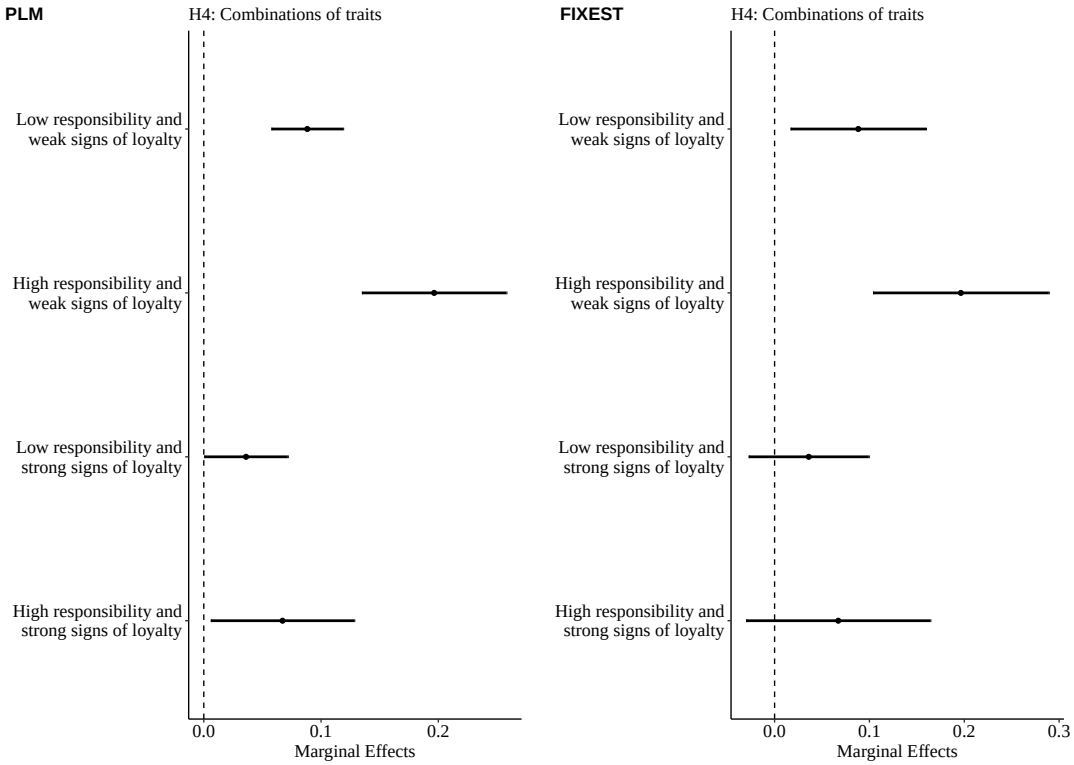

Figure 6: Coefficient plot plm vs fixest - Combination (Figure 5).

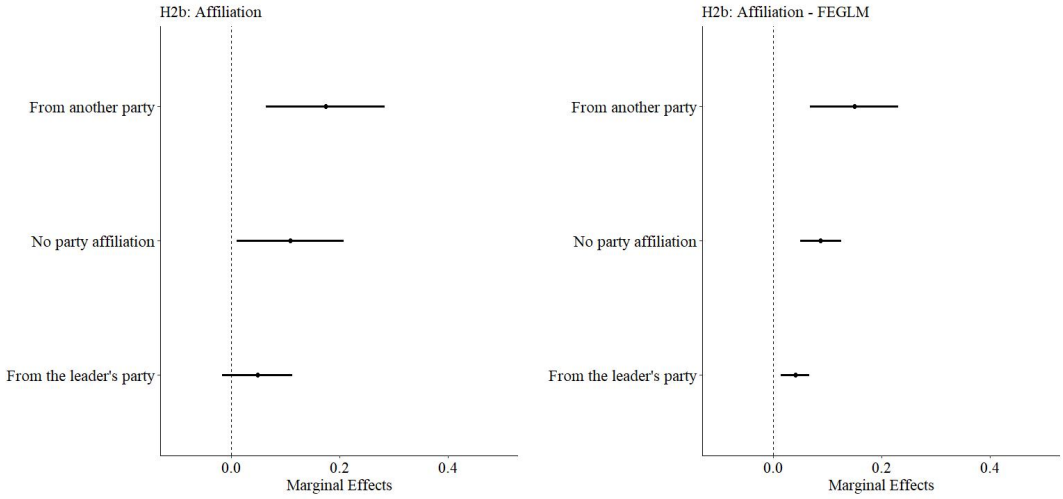

Figure 7: Coefficient plot felm vs feglm - Affiliation (Figure 3).

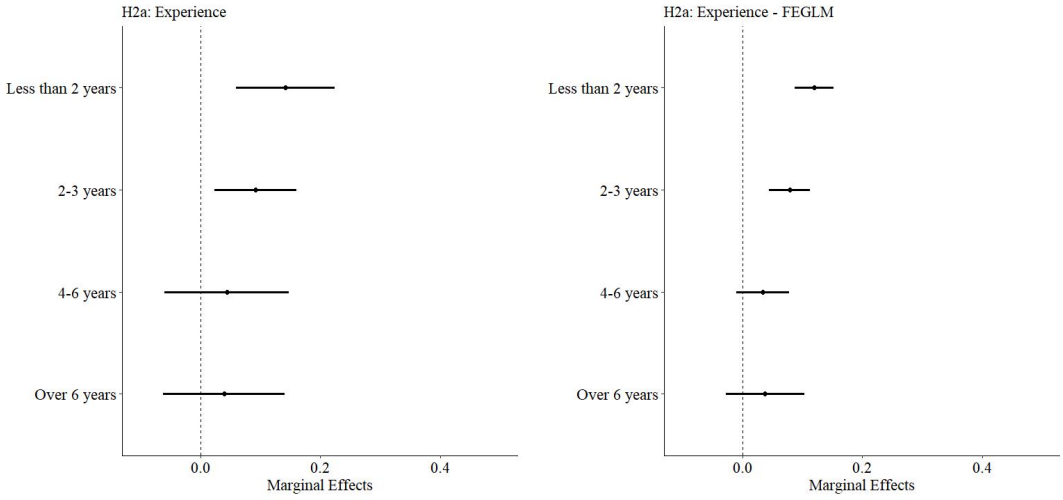

Figure 8: Coefficient plot felm vs feglm - Experience (Figure 3).

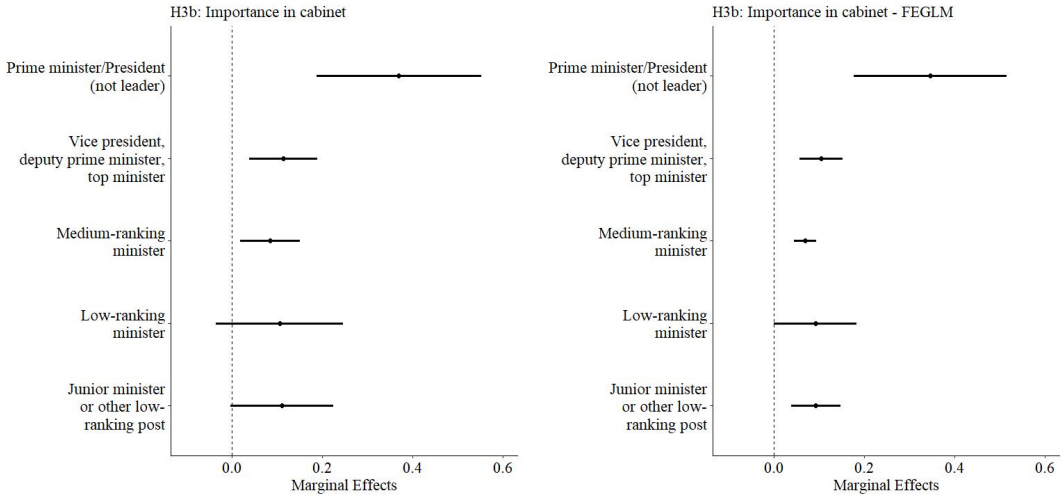

Figure 9: Coefficient plot felm vs feglm - Importance (Figure 4).

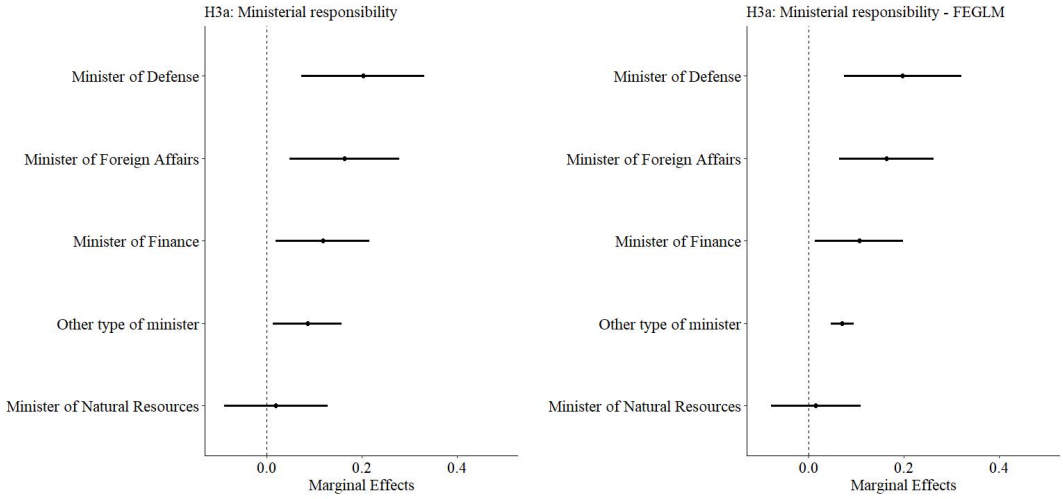

Figure 10: Coefficient plot felm vs feglm - Responsibility (Figure 4).

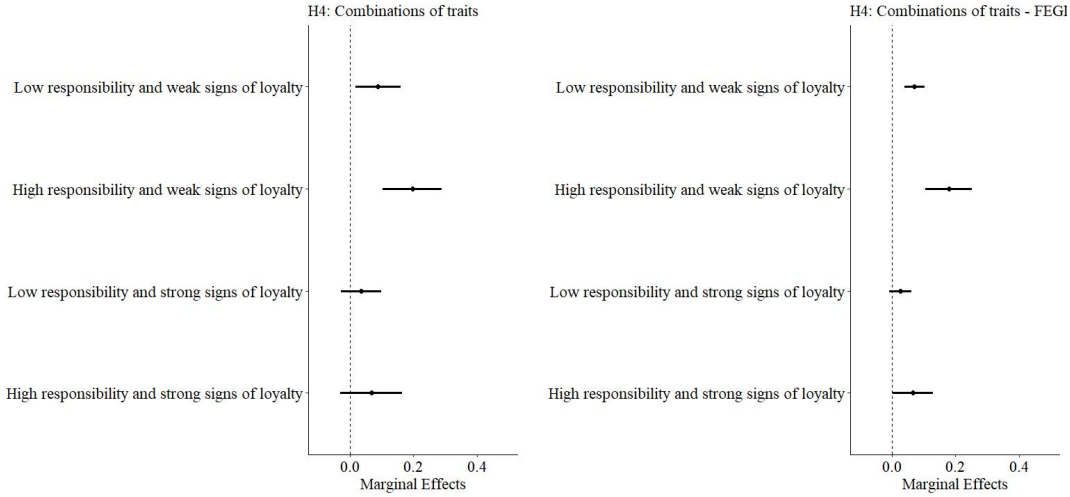

Figure 11: Coefficient plot felm vs feglm - Combination (Figure 5).

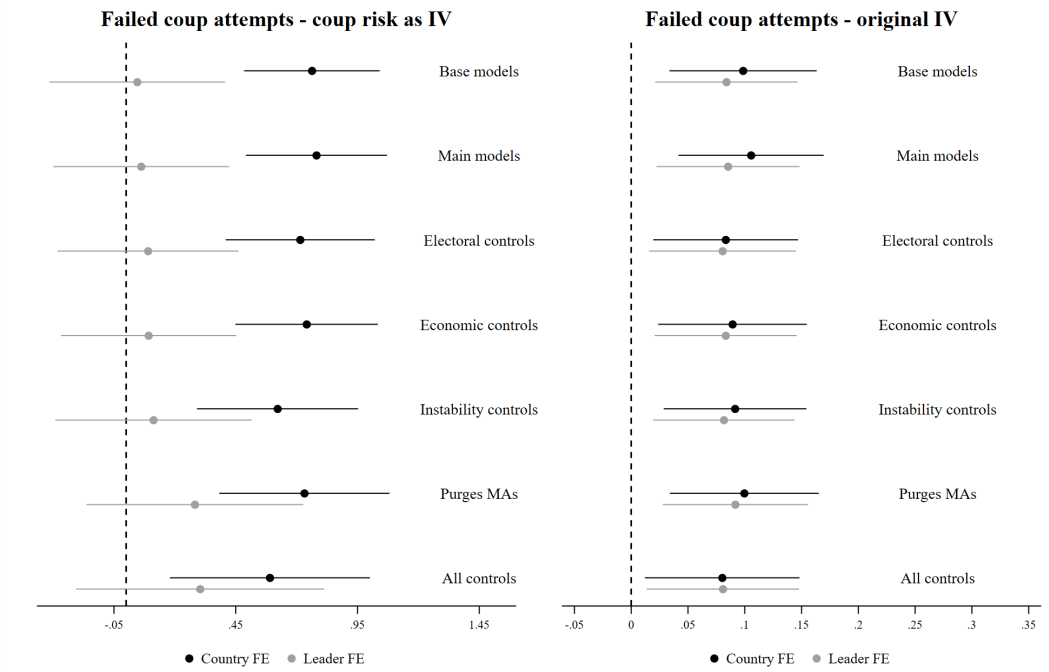

Figure 12: Coefficient plot coup risk as independent variable vs original models

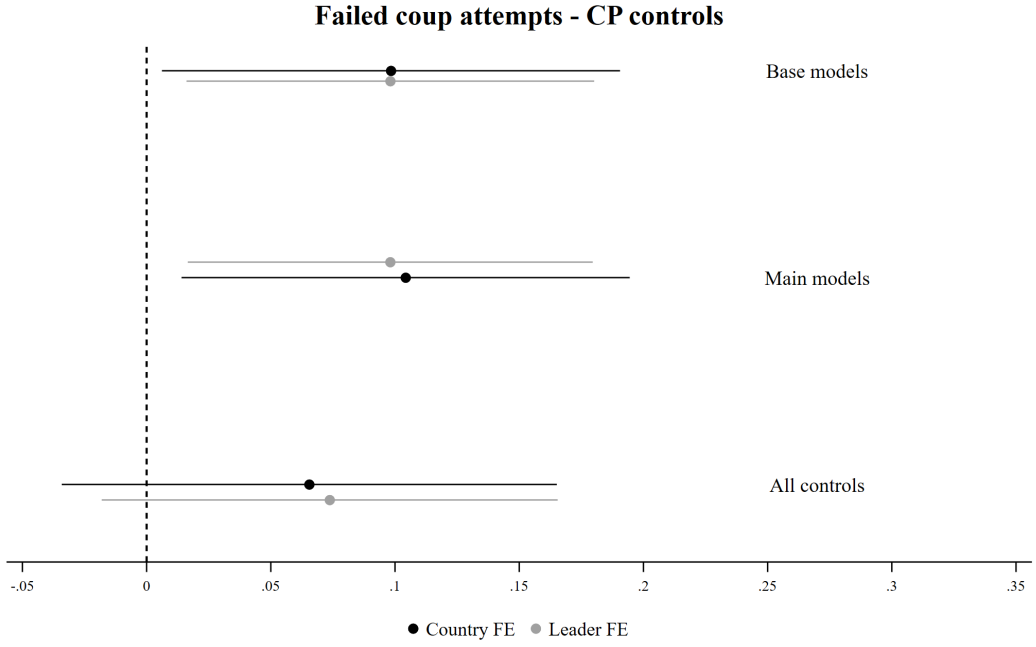

Figure 13: Coefficient plot additional coup-risk controls

7 Tables

Table 1: Country- and year-fixed effects

	Dependent variable: Cabinet replacement rate						
	Base Model	**Main Model**	**Electoral Controls**	**Economic Controls**	**Instability Controls**	**Purges MAs**	**All Controls**
Failed coup attempt	0.129***	0.121***	0.105***	0.107***	0.107***	0.102***	0.093**
	(0.031)	(0.030)	(0.030)	(0.031)	(0.029)	(0.031)	(0.031)
Log of GDP per capita	−0.020	−0.013	−0.017	−0.021	−0.020	−0.009	−0.027
	(0.011)	(0.012)	(0.014)	(0.014)	(0.014)	(0.011)	(0.015)
Log of Population	0.007	0.004	0.007	0.005	−0.002	0.002	−0.010
	(0.012)	(0.010)	(0.014)	(0.011)	(0.011)	(0.009)	(0.017)
Monarchy		−0.095	0.033	−0.059	−0.075	−0.073	0.050
		(0.056)	(0.056)	(0.062)	(0.064)	(0.050)	(0.061)
Military regime		0.017	0.026	0.003	0.010	0.014	0.023
		(0.027)	(0.030)	(0.028)	(0.032)	(0.023)	(0.029)
Party regime		−0.115***	−0.095**	−0.117***	−0.121***	−0.088***	−0.063*
		(0.028)	(0.033)	(0.029)	(0.033)	(0.024)	(0.030)
Election			0.099***				0.096***
			(0.018)				(0.020)
Years since last election			0.001				0.002
			(0.002)				(0.002)
GDP growth				−0.003***			−0.002*
				(0.001)			(0.001)
Log of oil value/population				0.001			0.004
				(0.003)			(0.003)
Civil war onset					0.046		0.046
					(0.024)		(0.025)
Nonviolent campaign					0.183***		0.193***
					(0.041)		(0.037)
Military dispute					−0.011		−0.004
					(0.013)		(0.013)
Interstate war					−0.023		−0.066
					(0.056)		(0.061)
Strike					0.119		0.126
					(0.079)		(0.065)
N	3715	3676	3016	3448	3052	3585	2539
R-squared	0.010	0.035	0.044	0.039	0.058	0.046	0.088
Adj. R-squared	−0.029	−0.004	−0.004	−0.004	0.010	0.005	0.029
F Statistic	12.481***	21.528***	16.612***	16.704***	16.317***	18.431***	12.804***

***p < .001; **p < .01; *p < .05

Table 2: Country-random and year-fixed effects

	Dependent variable: Cabinet replacement rate						
	Base Model	**Main Model**	**Electoral Controls**	**Economic Controls**	**Instability Controls**	**Purges MAs**	**All Controls**
Failed coup attempt	0.130***	0.121***	0.111***	0.105***	0.104***	0.094**	0.088**
	(0.030)	(0.029)	(0.030)	(0.030)	(0.028)	(0.030)	(0.029)
Log of GDP per capita	−0.022**	−0.014	−0.016	−0.017	−0.018	−0.011	−0.013
	(0.008)	(0.010)	(0.011)	(0.011)	(0.012)	(0.007)	(0.010)
Log of Population	0.006	0.005	0.003	0.006	−0.002	0.004	−0.008
	(0.010)	(0.008)	(0.011)	(0.009)	(0.009)	(0.006)	(0.009)
Monarchy		−0.084	0.024	−0.060	−0.080	−0.046	0.025
		(0.050)	(0.055)	(0.053)	(0.055)	(0.038)	(0.048)
Military regime		0.018	0.029	0.007	0.012	0.017	0.012
		(0.024)	(0.027)	(0.025)	(0.028)	(0.019)	(0.021)
Party regime		−0.114***	−0.099***	−0.118***	−0.119***	−0.074***	−0.070***
		(0.024)	(0.028)	(0.026)	(0.028)	(0.018)	(0.021)
Election			0.100***				0.098***
			(0.018)				(0.021)
Years since last election			0.001				0.002
			(0.002)				(0.002)
GDP growth				−0.003***			−0.002*
				(0.001)			(0.001)
Log of oil value/population				0.00002			0.0001
				(0.002)			(0.002)
Civil war onset					0.049*		0.048*
					(0.023)		(0.023)
Nonviolent campaign					0.190***		0.194***
					(0.039)		(0.036)
Military dispute					−0.012		−0.010
					(0.013)		(0.013)
Interstate war					−0.025		−0.089
					(0.055)		(0.057)
Strike					0.128		0.159*
					(0.077)		(0.065)
Constant	0.448***	0.421***	0.401***	0.454***	0.461***	0.305***	0.305***
	(0.077)	(0.085)	(0.092)	(0.088)	(0.092)	(0.064)	(0.081)
N	3715	3676	3016	3448	3052	3585	2539
R-squared	0.017	0.044	0.058	0.050	0.071	0.083	0.132
Adj. R-squared	0.016	0.043	0.055	0.048	0.067	0.080	0.126
F Statistic	47.526***	153.945***	161.756***	163.152***	216.228***	306.564***	360.832***

***p < .001; **p < .01; *p < .05

Table 3: Leader- and year-fixed effects

	Dependent variable: Cabinet replacement rate						
	Base Model	**Main Model**	**Electoral Controls**	**Economic Controls**	**Instability Controls**	**Purges MAs**	**All Controls**
Failed coup attempt	0.068*	0.071*	0.065*	0.068*	0.077*	0.081**	0.079*
	(0.030)	(0.030)	(0.031)	(0.030)	(0.031)	(0.031)	(0.034)
Log of GDP per capita	0.004	0.013	0.014	−0.002	0.011	0.011	0.003
	(0.010)	(0.012)	(0.020)	(0.019)	(0.021)	(0.014)	(0.035)
Log of Population	−0.008	−0.011	−0.006	−0.013	−0.010	−0.013	−0.027
	(0.013)	(0.012)	(0.022)	(0.015)	(0.018)	(0.013)	(0.032)
Monarchy		−0.097*	−0.046	−0.081	−0.165**	−0.108*	−0.185**
		(0.044)	(0.065)	(0.048)	(0.063)	(0.049)	(0.062)
Military regime		0.021	0.043	0.0001	−0.018	0.022	−0.002
		(0.033)	(0.042)	(0.034)	(0.048)	(0.036)	(0.061)
Party regime		−0.087**	−0.071	−0.091**	−0.121*	−0.097**	−0.136*
		(0.033)	(0.039)	(0.035)	(0.055)	(0.037)	(0.066)
Election			0.065***				0.061***
			(0.014)				(0.015)
Years since last election			−0.0005				−0.002
			(0.002)				(0.003)
GDP growth				−0.002			−0.002
				(0.001)			(0.001)
Log of oil value/population				0.004			0.003
				(0.003)			(0.005)
Civil war onset					0.033		0.040
					(0.022)		(0.023)
Nonviolent campaign					0.014		0.015
					(0.035)		(0.040)
Military dispute					0.007		0.013
					(0.012)		(0.013)
Interstate war					−0.079		−0.090
					(0.047)		(0.054)
Strike					0.072		0.040
					(0.087)		(0.094)
N	3332	3307	2703	3098	2757	3227	2284
R-squared	0.003	0.014	0.026	0.016	0.018	0.023	0.049
Adj. R-squared	−0.268	−0.255	−0.265	−0.259	−0.270	−0.250	−0.256
F Statistic	2.450	6.134***	7.059***	4.970***	3.569***	6.474***	4.910***

***p < .001; **p < .01; *p < .05

Table 4: Leader-random and year-fixed effects

	Dependent variable: Cabinet replacement rate						
	Base Model	**Main Model**	**Electoral Controls**	**Economic Controls**	**Instability Controls**	**Purges MAs**	**All Controls**
Failed coup attempt	0.108***	0.106***	0.106***	0.099***	0.109***	0.092**	0.106**
	(0.030)	(0.030)	(0.031)	(0.030)	(0.031)	(0.030)	(0.034)
Log of GDP per capita	−0.015***	−0.016**	−0.014*	−0.021**	−0.016*	−0.013**	−0.015*
	(0.004)	(0.005)	(0.006)	(0.007)	(0.006)	(0.005)	(0.008)
Log of Population	0.002	0.004	0.001	−0.00000	0.001	0.004	−0.006
	(0.005)	(0.005)	(0.007)	(0.006)	(0.006)	(0.004)	(0.006)
Monarchy		−0.007	0.084*	0.010	−0.015	0.009	0.057
		(0.025)	(0.034)	(0.027)	(0.029)	(0.021)	(0.030)
Military regime		0.014	0.013	−0.00000	0.011	0.011	0.004
		(0.016)	(0.018)	(0.016)	(0.018)	(0.013)	(0.016)
Party regime		−0.087***	−0.081***	−0.096***	−0.086***	−0.053***	−0.054***
		(0.015)	(0.016)	(0.016)	(0.018)	(0.012)	(0.015)
Election			0.071***				0.072***
			(0.013)				(0.014)
Years since last election			0.001				0.002
			(0.002)				(0.002)
GDP growth				−0.002*			−0.001
				(0.001)			(0.001)
Log of oil value/population				0.0003			0.001
				(0.001)			(0.001)
Civil war onset					0.019		0.015
					(0.020)		(0.021)
Nonviolent campaign					0.055		0.061
					(0.033)		(0.034)
Military dispute					0.009		0.003
					(0.011)		(0.011)
Interstate war					−0.057		−0.064
					(0.044)		(0.051)
Strike					0.085		0.093
					(0.085)		(0.076)
Constant	0.348***	0.368***	0.343***	0.430***	0.377***	0.268***	0.292***
	(0.040)	(0.049)	(0.058)	(0.061)	(0.055)	(0.041)	(0.066)
N	3332	3307	2703	3098	2757	3227	2284
R-squared	0.045	0.064	0.088	0.074	0.074	0.091	0.118
Adj. R-squared	0.044	0.062	0.085	0.071	0.070	0.088	0.111
F Statistic	32.795***	104.597***	134.099***	118.963***	102.823***	257.330***	235.432***

***p < .001; **p < .01; *p < .05

Table 5: Country- and year-fixed effects

	Dependent variable: Cabinet replacement rate				
Alternative event: Civil war	0.008				
	(0.022)				
Alternative event: Nonviolent campaigns		0.086**			
		(0.032)			
Alternative event: Military disputes			−0.003		
			(0.014)		
Alternative event: Interstate war				0.045	
				(0.051)	
Alternative event: Strikes					0.010
					(0.006)
Log of GDP per capita	−0.015	−0.015	−0.012	−0.012	−0.018
	(0.012)	(0.016)	(0.015)	(0.015)	(0.012)
Log of Population	0.002	0.002	0.003	0.002	0.002
	(0.010)	(0.011)	(0.011)	(0.011)	(0.010)
Monarchy	−0.096	−0.113	−0.104	−0.104	−0.078
	(0.057)	(0.073)	(0.067)	(0.067)	(0.053)
Military regime	0.020	0.017	0.026	0.026	0.019
	(0.027)	(0.033)	(0.031)	(0.031)	(0.027)
Party regime	−0.117***	−0.116***	−0.118***	−0.118***	−0.117***
	(0.028)	(0.032)	(0.032)	(0.032)	(0.028)
N	3676	3042	3297	3297	3641
R-squared	0.031	0.035	0.032	0.033	0.030
Adj. R-squared	−0.009	−0.012	−0.012	−0.012	−0.010
F Statistic	18.552***	17.677***	17.621***	17.790***	18.304***

***p < .001; **p < .01; *p < .05

Table 6: Country-random and year-fixed effects

	Dependent variable: Cabinet replacement rate				
Alternative event: Civil war	0.011				
	(0.022)				
Alternative event: Nonviolent campaigns		0.094**			
		(0.030)			
Alternative event: Military disputes			−0.0003		
			(0.014)		
Alternative event: Interstate war				0.047	
				(0.053)	
Alternative event: Strikes					0.009
					(0.005)
Log of GDP per capita	−0.016	−0.015	−0.013	−0.013	−0.017
	(0.011)	(0.012)	(0.012)	(0.012)	(0.010)
Log of Population	0.003	0.001	0.003	0.003	0.004
	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
Monarchy	−0.085	−0.096	−0.093	−0.093	−0.080
	(0.050)	(0.059)	(0.056)	(0.056)	(0.048)
Military regime	0.021	0.019	0.026	0.026	0.021
	(0.025)	(0.029)	(0.027)	(0.028)	(0.025)
Party regime	−0.116***	−0.116***	−0.118***	−0.118***	−0.115***
	(0.025)	(0.027)	(0.028)	(0.028)	(0.025)
Constant	0.435***	0.440***	0.420***	0.421***	0.444***
	(0.087)	(0.098)	(0.096)	(0.095)	(0.086)
N	3676	3042	3297	3297	3641
R-squared	0.039	0.048	0.043	0.043	0.039
Adj. R-squared	0.038	0.046	0.041	0.041	0.038
F Statistic	135.453***	133.772***	131.626***	132.880***	134.958***

***p < .001; **p < .01; *p < .05

Table 7: Leader- and year-fixed effects

	Dependent variable: Cabinet replacement rate				
Alternative event: Civil war	0.002				
	(0.020)				
Alternative event: Nonviolent campaigns		0.001			
		(0.030)			
Alternative event: Military disputes			0.006		
			(0.011)		
Alternative event: Interstate war				0.018	
				(0.043)	
Alternative event: Strikes					0.015*
					(0.006)
Log of GDP per capita	0.012	0.019	0.016	0.016	0.010
	(0.012)	(0.020)	(0.018)	(0.018)	(0.013)
Log of Population	−0.011	−0.008	−0.006	−0.005	−0.012
	(0.012)	(0.019)	(0.016)	(0.017)	(0.013)
Monarchy	−0.096*	−0.183**	−0.143*	−0.143*	−0.094*
	(0.044)	(0.063)	(0.059)	(0.058)	(0.046)
Military regime	0.023	−0.010	0.005	0.005	0.023
	(0.033)	(0.050)	(0.041)	(0.041)	(0.034)
Party regime	−0.087**	−0.117*	−0.113*	−0.113*	−0.089**
	(0.033)	(0.055)	(0.044)	(0.044)	(0.034)
N	3307	2738	2967	2967	3282
R-squared	0.011	0.012	0.012	0.012	0.013
Adj. R-squared	−0.258	−0.273	−0.269	−0.269	−0.258
F Statistic	5.026***	4.126***	4.624***	4.609***	5.775***

***p < .001; **p < .01; *p < .05

Table 8: Leader-random and year-fixed effects

	Dependent variable: Cabinet replacement rate				
Alternative event: Civil war	−0.008				
	(0.018)				
Alternative event: Nonviolent campaigns		0.033			
		(0.027)			
Alternative event: Military disputes			0.006		
			(0.010)		
Alternative event: Interstate war				0.039	
				(0.043)	
Alternative event: Strikes					0.005
					(0.007)
Log of GDP per capita	−0.016**	−0.014*	−0.014*	−0.014*	−0.017**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Log of Population	0.003	0.003	0.005	0.005	0.003
	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)
Monarchy	−0.007	−0.019	−0.018	−0.018	−0.007
	(0.025)	(0.029)	(0.028)	(0.028)	(0.026)
Military regime	0.017	0.014	0.013	0.013	0.018
	(0.016)	(0.019)	(0.018)	(0.018)	(0.016)
Party regime	−0.088***	−0.087***	−0.093***	−0.093***	−0.088***
	(0.015)	(0.018)	(0.017)	(0.017)	(0.016)
Constant	0.379***	0.360***	0.365***	0.364***	0.383***
	(0.050)	(0.057)	(0.054)	(0.054)	(0.050)
N	3307	2738	2967	2967	3282
R-squared	0.059	0.063	0.065	0.065	0.061
Adj. R-squared	0.057	0.061	0.063	0.063	0.059
F Statistic	86.685***	69.672***	79.892***	80.855***	89.174***

***p < .001; **p < .01; *p < .05

	Dependent variable: Cabinet replacement rate						
	Base Model	Main Model	Electoral Controls	Economic Controls	Instability Controls	Purges MAs	All Controls
Intercept	−0.251427	−0.325635	−0.424736	−0.460264	−0.304947	−0.553190*	−0.730637*
	[−0.798432; 0.246277]	[−0.840355; 0.197703]	[−0.991141; 0.168731]	[−1.004170; 0.149196]	[−0.904946; 0.241441]	[−1.055620; −0.094929]	[−1.334240; −0.101661]
Failed coup attempt	0.425708*	0.422638*	0.358857*	0.372912*	0.386985*	0.353974*	0.331416*
	[0.268006; 0.583644]	[0.260352; 0.587400]	[0.198142; 0.541108]	[0.216420; 0.547916]	[0.218039; 0.565471]	[0.190537; 0.519657]	[0.149021; 0.500458]
Log of GDP per capita	−0.087194*	−0.062717*	−0.057253	−0.041595	−0.065229*	−0.049549*	−0.035552
	[−0.143756; −0.034112]	[−0.115169; −0.001460]	[−0.120225; 0.007014]	[−0.106705; 0.020904]	[−0.124294; −0.004097]	[−0.097878; −0.000879]	[−0.106936; 0.033743]
Log of Population	0.011616	0.014743	−0.000098	0.018113	−0.016563	0.009377	−0.048243
	[−0.046377; 0.070046]	[−0.041464; 0.064490]	[−0.067724; 0.062849]	[−0.041387; 0.080280]	[−0.073789; 0.040882]	[−0.032312; 0.057541]	[−0.112137; 0.010588]
Monarchy		−0.225266*	0.149031	−0.178858	−0.278142*	−0.206422*	0.103814
		[−0.440407; −0.000762]	[−0.076941; 0.421029]	[−0.412492; 0.058854]	[−0.512576; −0.051563]	[−0.404407; −0.014097]	[−0.132403; 0.344791]
Military regime		0.009036	0.115530	−0.001518	0.037307	0.029546	0.110482
		[−0.106252; 0.116705]	[−0.019805; 0.222845]	[−0.113141; 0.115237]	[−0.082904; 0.163063]	[−0.077039; 0.132884]	[−0.017615; 0.234988]
Party regime		−0.340363*	−0.243459*	−0.358411*	−0.291474*	−0.273841*	−0.212524*
		[−0.468636; −0.217480]	[−0.394362; −0.106788]	[−0.494196; −0.236073]	[−0.419681; −0.132997]	[−0.398647; −0.156535]	[−0.344351; −0.068665]
Election			0.375125*				0.380562*
			[0.299876; 0.461352]				[0.298438; 0.463248]
Years since last election			0.001742				0.005196
			[−0.007595; 0.012023]				[−0.004997; 0.014862]
GDP growth				−0.011396*			−0.008485*
				[−0.015464; −0.007215]			[−0.013476; −0.003798]
Log of oil value/population				−0.009382			−0.002300
				[−0.021077; 0.002235]			[−0.014147; 0.009606]
Civil war onset					0.188545*		0.179439*
					[0.071249; 0.323104]		[0.043531; 0.330646]
Nonviolent campaign					0.519577*		0.526637*
					[0.368957; 0.679551]		[0.358375; 0.690084]
Military dispute					−0.000863		0.002233
					[−0.074418; 0.077045]		[−0.083834; 0.080391]
Interstate war					−0.151834		−0.358804*
					[−0.443986; 0.109318]		[−0.634037; −0.026537]
Strike					0.499032*		0.444831
					[0.063605; 0.909809]		[−0.043451; 0.850019]
Rate100						0.788556*	0.799417*
						[0.501410; 1.149060]	[0.470440; 1.164210]
Rate200						−0.024907	−0.239179
						[−0.337324; 0.299552]	[−0.597779; 0.094138]
Rate300						−0.104625	−0.009699
						[−0.259107; 0.062722]	[−0.181985; 0.195876]
SD: COUNTRY_ID	0.447277	0.395874	0.400516	0.386789	0.403521	0.311419	0.322900
R^2	0.161087	0.163819	0.181321	0.167989	0.192868	0.163746	0.204518
Num. obs.	3715	3676	3016	3448	3052	3585	2539
loo IC	3620.709357	3534.643006	2739.452888	3149.135278	2660.943269	3434.308589	2085.732982
WAIC	3619.612235	3533.654359	2738.331745	3148.051984	2659.612363	3433.410372	2084.516784

* Null hypothesis value outside the confidence interval.

Table 9: Ordered Beta Regression Models: Country-random and year-fixed effects

	Dependent variable: Cabinet replacement rate						
	Base Model	Main Model	Electoral Controls	Economic Controls	Instability Controls	Purges MAs	All Controls
Intercept	−0.600852*	−0.587788*	−0.620192*	−0.306851	−0.656911*	−0.605742*	−0.635270*
	[−1.025900; −0.150681]	[−1.055020; −0.152614]	[−1.150300; −0.091656]	[−0.891830; 0.203678]	[−1.141290; −0.130886]	[−1.028930; −0.143129]	[−1.228670; −0.043287]
Failed coup attempt	0.392346*	0.390121*	0.380018*	0.363317*	0.388334*	0.354258*	0.373017*
	[0.227935; 0.565328]	[0.215944; 0.547034]	[0.201914; 0.546550]	[0.196771; 0.532499]	[0.202773; 0.558081]	[0.165477; 0.526988]	[0.189051; 0.550491]
Log of GDP per capita	−0.060741*	−0.047724	−0.042937	−0.073212*	−0.043293	−0.043255*	−0.044784
	[−0.105523; −0.016127]	[−0.092923; 0.001572]	[−0.100951; 0.010237]	[−0.135332; −0.011692]	[−0.096734; 0.005890]	[−0.088571; −0.000898]	[−0.112168; 0.019707]
Log of Population	−0.014151	−0.009064	−0.026340	−0.027466	−0.023933	−0.009880	−0.060430*
	[−0.056299; 0.026504]	[−0.045841; 0.029665]	[−0.078359; 0.020387]	[−0.071695; 0.017447]	[−0.065585; 0.023954]	[−0.045410; 0.027623]	[−0.110712; −0.001256]
Monarchy		−0.274344*	0.164203	−0.250068*	−0.297846*	−0.193854	0.094421
		[−0.482619; −0.055066]	[−0.073332; 0.461216]	[−0.475137; −0.018952]	[−0.512117; −0.063272]	[−0.387060; 0.003690]	[−0.142081; 0.375356]
Military regime		0.051540	0.074821	−0.016637	0.058439	0.042474	0.068571
		[−0.082641; 0.182121]	[−0.068976; 0.227671]	[−0.166600; 0.111692]	[−0.080700; 0.217150]	[−0.072299; 0.168182]	[−0.057265; 0.232781]
Party regime		−0.448181*	−0.417345*	−0.486442*	−0.428438*	−0.354512*	−0.329038*
		[−0.579020; −0.300912]	[−0.564559; −0.252012]	[−0.630682; −0.340328]	[−0.580786; −0.264586]	[−0.473462; −0.203718]	[−0.485478; −0.177849]
Election			0.323907*				0.329962*
			[0.243801; 0.403818]				[0.235910; 0.405885]
Years since last election			0.002306				0.005086
			[−0.007228; 0.014032]				[−0.005305; 0.016582]
GDP growth				−0.006846*			−0.003920
				[−0.010806; −0.002580]			[−0.008458; 0.000835]
Log of oil value/population				0.003620			0.004784
				[−0.006912; 0.014715]			[−0.007226; 0.015351]
Civil war onset					0.076962		0.082953
					[−0.046255; 0.210454]		[−0.053844; 0.227172]
Nonviolent campaign					0.145620		0.098503
					[−0.041000; 0.332928]		[−0.085326; 0.289670]
Military dispute					0.033057		0.044007
					[−0.040944; 0.111992]		[−0.037040; 0.127752]
Interstate war					−0.194866		−0.279486
					[−0.471369; 0.070310]		[−0.581804; 0.011307]
Strike					0.258138		0.212581
					[−0.217669; 0.665984]		[−0.251471; 0.648330]
Rate100						0.708834*	0.855518*
						[0.394982; 1.061390]	[0.460872; 1.260620]
Rate200						−0.118859	−0.329733
						[−0.451857; 0.208353]	[−0.724294; 0.037680]
Rate300						−0.142413	−0.075501
						[−0.294199; 0.033787]	[−0.264754; 0.116650]
SD: leader_cab_id	0.485189	0.442714	0.443359	0.431218	0.447005	0.372507	0.375952
R^2	0.217999	0.220707	0.235139	0.220929	0.238261	0.206734	0.236621
Num. obs.	3332	3307	2703	3098	2757	3227	2284
loo IC	2075.681709	2009.656679	1487.106884	1738.238014	1453.016809	1975.892286	1074.088727
WAIC	2069.423641	2004.320900	1482.110458	1733.286193	1447.462833	1972.392732	1069.575189

* Null hypothesis value outside the confidence interval.

Table 10: Ordered Beta Regression Models: Leader-random and year-fixed effects

	Dependent variable: Cabinet replacement rate				
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−0.277448	−0.337103	−0.291897	−0.297614	−0.322937
	[−0.779284; 0.228393]	[−0.838122; 0.241923]	[−0.834833; 0.239900]	[−0.794462; 0.312157]	[−0.837104; 0.213680]
Alternative event: Civil war	0.049735				
	[−0.070585; 0.161987]				
Log of GDP per capita	−0.067369*	−0.062972*	−0.067429*	−0.067228*	−0.065104*
	[−0.118426; −0.011412]	[−0.119762; −0.001799]	[−0.124287; −0.008656]	[−0.124872; −0.005982]	[−0.117794; −0.007251]
Log of Population	0.007562	−0.008598	0.004061	0.005229	0.012469
	[−0.042498; 0.064910]	[−0.062057; 0.047332]	[−0.044397; 0.065020]	[−0.049434; 0.062523]	[−0.041125; 0.067974]
Monarchy	−0.228578	−0.310548*	−0.254992*	−0.240431*	−0.233828*
	[−0.432974; 0.017254]	[−0.522677; −0.080952]	[−0.474679; −0.019415]	[−0.471444; −0.027753]	[−0.456852; −0.025993]
Military regime	0.023342	0.077978	0.058623	0.060665	0.015461
	[−0.078312; 0.134875]	[−0.055204; 0.191540]	[−0.059113; 0.176639]	[−0.051231; 0.180695]	[−0.093931; 0.134393]
Party regime	−0.336614*	−0.289167*	−0.307555*	−0.302792*	−0.340159*
	[−0.462021; −0.209855]	[−0.433262; −0.152670]	[−0.455051; −0.172694]	[−0.428672; −0.167690]	[−0.465907; −0.195336]
Alternative event: Nonviolent campaigns		0.261806*			
		[0.124332; 0.394408]			
Alternative event: Military disputes			−0.005752		
			[−0.082034; 0.065592]		
Alternative event: Interstate war				0.209383	
				[−0.095660; 0.468386]	
Alternative event: Strikes					0.037700
					[−0.011507; 0.089730]
SD: COUNTRY_ID	0.398862	0.388954	0.405210	0.407989	0.404715
R^2	0.160451	0.170339	0.171630	0.172210	0.164497
Num. obs.	3676	3042	3297	3297	3641
loo IC	3552.247989	2731.628902	3020.688658	3016.135626	3454.045448
WAIC	3551.238255	2730.604956	3019.631408	3015.033497	3452.747438

* Null hypothesis value outside the confidence interval.

Table 11: Ordered Beta Regression Models: Country-random and year-fixed effects

	Dependent variable: Cabinet replacement rate				
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	−0.527925*	−0.722469*	−0.557501*	−0.593770*	−0.589399*
	[−1.004900; −0.070368]	[−1.249080; −0.230819]	[−1.047570; −0.051380]	[−1.080430; −0.125158]	[−1.066900; −0.111888]
Alternative event: Civil war	−0.036114				
	[−0.151646; 0.095042]				
Log of GDP per capita	−0.053483*	−0.036072	−0.048531	−0.049306	−0.053507*
	[−0.101564; −0.000385]	[−0.091483; 0.019456]	[−0.096853; 0.007761]	[−0.100278; 0.001293]	[−0.106213; −0.006080]
Log of Population	−0.010751	−0.018947	−0.005997	−0.006703	−0.011643
	[−0.046870; 0.029964]	[−0.060642; 0.023988]	[−0.045402; 0.038668]	[−0.048985; 0.036937]	[−0.049626; 0.030323]
Monarchy	−0.268854*	−0.320008*	−0.304501*	−0.296553*	−0.275329*
	[−0.476533; −0.050346]	[−0.574416; −0.086374]	[−0.525432; −0.082240]	[−0.522977; −0.078292]	[−0.487535; −0.058420]
Military regime	0.054377	0.088177	0.045848	0.052718	0.054566
	[−0.076294; 0.192360]	[−0.051138; 0.234228]	[−0.097218; 0.191966]	[−0.079724; 0.218265]	[−0.083612; 0.179216]
Party regime	−0.455943*	−0.410789*	−0.469812*	−0.465189*	−0.453513*
	[−0.597181; −0.310861]	[−0.559781; −0.253239]	[−0.614065; −0.315630]	[−0.629698; −0.323306]	[−0.599870; −0.309647]
Alternative event: Nonviolent campaigns		0.051255			
		[−0.111372; 0.203163]			
Alternative event: Military disputes			0.004333		
			[−0.067225; 0.069866]		
Alternative event: Interstate war				0.136833	
				[−0.134790; 0.416721]	
Alternative event: Strikes					0.011696
					[−0.041104; 0.066519]
SD: leader_cab_id	0.442320	0.444390	0.454769	0.452631	0.447352
R^2	0.216926	0.230070	0.228933	0.228705	0.220111
Num. obs.	3307	2738	2967	2967	3282
loo IC	2023.972092	1435.609068	1648.649593	1650.003447	1977.444552
WAIC	2018.618142	1431.077973	1642.682963	1644.631641	1971.864985

* Null hypothesis value outside the confidence interval.

Table 12: Ordered Beta Regression Models: Leader-random and year-fixed effects

	(1) Model 1 Coup Probit
Months since coup	-0.003**
	(0.001)
Months since coup (sq)	0.000
	(0.000)
Months since coup (cu)	-0.000
	(0.000)
N. coups 5 years (cu)	0.291**
	(0.122)
N. coups 5 years (cu)	-0.043
	(0.056)
N. coups 5 years (cu)	0.002
	(0.006)
Constant	-1.814***
	(0.251)
Observations	9,631
Year FE	YES
Cluster SE	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 13: Independent variable: coup risk

	Responsibility		
	FELM	PLM	FIXEST
Minister of Finance (Ref: D)	0.028511**	0.028511**	0.028511**
	(0.010597)	(0.010613)	(0.010601)
Minister of Foreign Affairs (Ref: D)	−0.006348	−0.006348	−0.006348
	(0.009761)	(0.010580)	(0.009764)
Minister of Natural Resources (Ref: D)	0.035193**	0.035193**	0.035193**
	(0.011044)	(0.010797)	(0.011048)
Other type of minister (Ref: D)	0.053773***	0.053773***	0.053773***
	(0.008448)	(0.008190)	(0.008451)
Log of GDP per capita	−0.030626	−0.030626***	−0.030626
	(0.018656)	(0.005301)	(0.018662)
Log of Population	−0.153342*	−0.153342***	−0.153342*
	(0.062290)	(0.016854)	(0.062311)
Experience	0.003730	0.003730*	0.003730
	(0.002930)	(0.001466)	(0.002931)
Experience^2	−0.000287	−0.000287*	−0.000287
	(0.000209)	(0.000129)	(0.000209)
Experience^3	0.000007	0.000007*	0.000007
	(0.000004)	(0.000003)	(0.000004)
FCA*Minister of Defense	0.202499**	0.202499***	0.202499**
	(0.065968)	(0.054938)	(0.065990)
FCA*Minister of Finance	0.117644*	0.117644**	0.117644*
	(0.050296)	(0.044691)	(0.050312)
FCA*Minister of Foreign Affairs	0.163300**	0.163300***	0.163300**
	(0.059189)	(0.044954)	(0.059208)
FCA*Minister of Natural Resources	0.019294	0.019294	0.019294
	(0.055524)	(0.051472)	(0.055542)
FCA*Other type of minister	0.085329*	0.085329***	0.085329*
	(0.037282)	(0.011734)	(0.037294)
Country fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	76530	76530	76530
R^2	0.131846	0.003793	0.131846
No. countries	115	115	115

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year.
All models include country and year fixed effects. Country-clustered standard errors in parentheses.
FCA = Failed coup attempt, D = Minister of Defense.

Table 14: FELM vs PLM vs FIXEST: Responsibility

	Affiliation		
	FELM	PLM	FIXEST
From the leader's party (Ref: Other party)	−0.008501	−0.008501	−0.008501
	(0.013892)	(0.005565)	(0.013896)
No party affiliation (Ref: Other party)	0.034934*	0.034934***	0.034934*
	(0.014198)	(0.006244)	(0.014202)
Log of GDP per capita	−0.021015	−0.021015***	−0.021015
	(0.018876)	(0.005007)	(0.018882)
Log of Population	−0.140817*	−0.140817***	−0.140817*
	(0.062578)	(0.016037)	(0.062596)
Experience	0.001812	0.001812	0.001812
	(0.002540)	(0.001296)	(0.002540)
Experience^2	−0.000118	−0.000118	−0.000118
	(0.000181)	(0.000109)	(0.000181)
Experience^3	0.000002	0.000002	0.000002
	(0.000003)	(0.000002)	(0.000003)
FCA*From another party	0.174175**	0.174175***	0.174175**
	(0.056053)	(0.036218)	(0.056069)
FCA*From the leader's party	0.048344	0.048344***	0.048344
	(0.033291)	(0.013265)	(0.033301)
FCA*No party affiliation	0.109311*	0.109311***	0.109311*
	(0.050181)	(0.017960)	(0.050195)
Country fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	86057	86057	86057
R^2	0.125118	0.002995	0.125118
No. countries	115	115	115

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year.
All models include country and year fixed effects. Country-clustered standard errors in parentheses.
FCA = Failed coup attempt.

Table 15: FELM vs PLM vs FIXEST: Affiliation

	Importance		
	FELM	PLM	FEOLS
VP, DP, top minister (Ref: PMP)	−0.020187	−0.020187	−0.020187
	(0.012679)	(0.010841)	(0.012682)
Medium-ranking minister (Ref: PMP)	0.012713	0.012713	0.012713
	(0.013205)	(0.010531)	(0.013209)
Junior minister (Ref: PMP)	−0.005096	−0.005096	−0.005096
	(0.014764)	(0.011267)	(0.014768)
Low-ranking minister (Ref: PMP)	0.027408	0.027408*	0.027408
	(0.014209)	(0.011778)	(0.014213)
Log of GDP per capita	−0.025194	−0.025194***	−0.025194
	(0.018748)	(0.004885)	(0.018753)
Log of Population	−0.141961*	−0.141961***	−0.141961*
	(0.062728)	(0.015675)	(0.062745)
Experience	−0.000351	−0.000351	−0.000351
	(0.002564)	(0.001293)	(0.002564)
Experience^2	−0.000018	−0.000018	−0.000018
	(0.000183)	(0.000110)	(0.000183)
experience^3	0.000001	0.000001	0.000001
	(0.000004)	(0.000002)	(0.000004)
FCA*Prime minister/President (not leader)	0.370185***	0.370185***	0.370185***
	(0.093390)	(0.073928)	(0.093416)
FCA*VP, DP, top minister	0.113611**	0.113611***	0.113611**
	(0.038768)	(0.022223)	(0.038779)
FCA*Medium-ranking minister	0.084583*	0.084583***	0.084583*
	(0.033566)	(0.012224)	(0.033576)
FCA*Junior minister	0.110949	0.110949***	0.110949
	(0.058223)	(0.027954)	(0.058239)
FCA*Low-ranking minister	0.105584	0.105584*	0.105584
	(0.071668)	(0.044853)	(0.071688)
Observations	90014	90014	90014
R^2	0.126263	0.003468	0.126263
No. countries	115	115	115

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year.
All models include country and year fixed effects. Country-clustered standard errors in parentheses.
FCA = Failed coup attempt, PMP = Prime minister or President.

Table 16: FELM vs PLM vs FIXEST: Importance

	Experience		
	FELM	PLM	FIXEST
2-3 years of experience (Ref: <2 y)	0.002805	0.002805	0.002805
	(0.007300)	(0.003952)	(0.007302)
4-6 years of experience (Ref: <2 y)	0.012597	0.012597**	0.012597
	(0.009129)	(0.004235)	(0.009132)
Over 6 years of experience (Ref: <2 y)	−0.009663	−0.009663*	−0.009663
	(0.009495)	(0.004380)	(0.009498)
Log of GDP per capita	−0.024617	−0.024617***	−0.024617
	(0.018681)	(0.004879)	(0.018686)
Log of Population	−0.139836*	−0.139836***	−0.139836*
	(0.062559)	(0.015666)	(0.062576)
FCA*less than 2 years of experience	0.142112***	0.142112***	0.142112***
	(0.041926)	(0.015209)	(0.041937)
FCA*2-3 years of experience	0.091789**	0.091789***	0.091789**
	(0.034636)	(0.016955)	(0.034646)
FCA*4-6 years of experience	0.043907	0.043907	0.043907
	(0.052961)	(0.023799)	(0.052976)
FCA*Over 6 years of experience	0.039173	0.039173	0.039173
	(0.051558)	(0.030504)	(0.051572)
Country fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	90020	90020	90020
R^2	0.125600	0.002694	0.125600
No. countries	115	115	115

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year.
All models include country and year fixed effects. Country-clustered standard errors in parentheses.
FCA = Failed coup attempt.

Table 17: FELM vs PLM vs FIXEST: Experience

	Combination		
	FELM	PLM	FIXEST
Low responsibility and weak signs of loyalty (Ref: HW)	−0.025526***	−0.025526***	−0.025526***
	(0.007014)	(0.004941)	(0.007016)
Low responsibility and strong signs of loyalty (Ref: HW)	−0.005050	−0.005050	−0.005050
	(0.007657)	(0.003711)	(0.007660)
High responsibility and strong signs of loyalty (Ref: HW)	−0.045903***	−0.045903***	−0.045903***
	(0.007704)	(0.005358)	(0.007706)
Log of GDP per capita	−0.027013	−0.027013***	−0.027013
	(0.018986)	(0.005073)	(0.018992)
Log of Population	−0.154212*	−0.154212***	−0.154212*
	(0.063305)	(0.016471)	(0.063325)
FCA*Low responsibility and weak signs of loyalty	0.088253*	0.088253***	0.088253*
	(0.036394)	(0.015612)	(0.036405)
FCA*High responsibility and weak signs of loyalty	0.196439***	0.196439***	0.196439***
	(0.047278)	(0.031443)	(0.047293)
FCA*Low responsibility and strong signs of loyalty	0.036025	0.036025*	0.036025
	(0.032295)	(0.018169)	(0.032305)
FCA*High responsibility and strong signs of loyalty	0.067139	0.067139*	0.067139
	(0.049534)	(0.031207)	(0.049550)
Country fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	80657	80657	80657
R^2	0.126633	0.003321	0.126633
No. countries	115	115	115

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year.
All models include country and year fixed effects. Country-clustered standard errors in parentheses.
FCA = Failed coup attempt, HW = High responsibility and weak signs of loyalty.

Table 18: FELM vs PLM vs FIXEST: Combination

Table 19: Table for Figure 3

	H2a: Experience - FELM	H2a: Experience - FEGLM
2-3 years of experience (Ref: <2 y)	0.003 (0.007)	0.003 (0.004)
4-6 years of experience (Ref: <2 y)	0.013 (0.009)**	0.013 (0.004)**
Over 6 years of experience (Ref: <2 y)	−0.010 (0.009)*	−0.011 (0.004)*
Failed coup attempt	0.142 (0.042)***	0.119 (0.016)***
FCA*2-3 years of experience (Ref: <2 y)	−0.050 (0.042)*	−0.033 (0.018)
FCA*4-6 years of experience (Ref: <2 y)	−0.098 (0.062)***	−0.067 (0.020)***
FCA*Over 6 years of experience (Ref: <2 y)	−0.103 (0.052)**	−0.064 (0.027)*
Log of GDP per capita	−0.025 (0.019)***	−0.024 (0.005)***
Log of Population	−0.140 (0.063)***	−0.156 (0.017)***
Num. obs.	90020	90020
R^2 (full model)	0.126	
R^2 (proj model)	0.003	
Num. groups: country_isocode	115	115
Num. groups: year	51	51
Deviance		92998.252

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt

Table 20: Table for Figure 3

	H2b: Affiliation - FELM	H2b: Affiliation - FEGLM
No party affiliation (Ref: Other party)	0.035 (0.014)***	0.031 (0.006)***
From the leader's party (Ref: Other party)	−0.009 (0.014)	−0.010 (0.006)
Failed coup attempt	0.174 (0.056)***	0.149 (0.041)***
FCA*No party affiliation (Ref: Other party)	−0.065 (0.073)	−0.047 (0.031)
FCA*From the leader's party (Ref: Other party)	−0.126 (0.061)**	−0.080 (0.026)**
Log of GDP per capita	−0.021 (0.019)***	−0.020 (0.005)***
Log of Population	−0.141 (0.063)***	−0.159 (0.018)***
Experience	0.002 (0.003)	0.002 (0.001)
Experience^2	−0.000 (0.000)	−0.000 (0.000)
Experience^3	0.000 (0.000)	0.000 (0.000)
Num. obs.	86057	86057
R^2 (full model)	0.125	
R^2 (proj model)	0.003	
Num. groups: country_isocode	115	115
Num. groups: year	51	51
Deviance		87790.387

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt

Table 21: Table for Figure 4

	H3b: Importance - FELM	H3b: Importance - FEGLM
VP, DP, top minister (Ref: PMP)	−0.020 (0.013)	−0.022 (0.011)*
Medium-ranking minister (Ref: PMP)	0.013 (0.013)	0.012 (0.011)
Low-ranking minister (Ref: PMP)	−0.005 (0.015)	−0.006 (0.011)
Junior minister (Ref: PMP)	0.027 (0.014)*	0.027 (0.013)*
Failed coup attempt	0.370 (0.093)*	0.345 (0.086)*
FCA*VP, DP, top minister (Ref: PMP)	−0.257 (0.095)*	−0.144 (0.038)*
FCA*Medium-ranking minister (Ref: PMP)	−0.286 (0.095)*	−0.160 (0.033)*
FCA*Low-ranking minister (Ref: PMP)	−0.259 (0.087)*	−0.149 (0.037)*
FCA*Junior minister (Ref: PMP)	−0.265 (0.120)*	−0.150 (0.040)*
Log of GDP per capita	−0.025 (0.019)*	−0.025 (0.005)*
Log of Population	−0.142 (0.063)*	−0.158 (0.017)*
Experience	−0.000 (0.003)	−0.000 (0.001)
Experience^2	−0.000 (0.000)	−0.000 (0.000)
Experience^3	0.000 (0.000)	0.000 (0.000)
Num. obs.	90014	90014
R^2 (full model)	0.126	
R^2 (proj model)	0.003	
Num. groups: country_isocode	115	115
Num. groups: year	51	51
Deviance		92917.476

$^{*}p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt, PMP = Prime minister or President.

Table 22: Table for Figure 4

	H3a: Responsibility - FELM	H3a: Responsibility - FEGLM
Minister of Foreign Affairs (Ref: D)	−0.006 (0.010)	−0.008 (0.011)
Minister of Finance (Ref: D)	0.029 (0.011)*	0.032 (0.012)*
Other type of minister (Ref: D)	0.054 (0.008)*	0.054 (0.008)*
Minister of Natural Resources (Ref: D)	0.035 (0.011)*	0.039 (0.012)*
Failed coup attempt	0.202 (0.066)*	0.197 (0.063)*
FCA: Minister of Foreign Affairs (Ref: D)	−0.039 (0.069)	−0.026 (0.059)
FCA*Minister of Finance (Ref: D)	−0.085 (0.066)	−0.067 (0.051)
FCA*Other type of minister (Ref: D)	−0.117 (0.058)*	−0.090 (0.037)*
FCA*Minister of Natural Resources (Ref: D)	−0.183 (0.083)*	−0.125 (0.041)*
Log of GDP per capita	−0.031 (0.019)*	−0.030 (0.006)*
Log of Population	−0.153 (0.062)*	−0.171 (0.019)*
Experience	0.004 (0.003)*	0.004 (0.002)*
Experience^2	−0.000 (0.000)*	−0.000 (0.000)*
Experience^3	0.000 (0.000)*	0.000 (0.000)*
Num. obs.	76530	76530
R^2 (full model)	0.132	
R^2 (proj model)	0.004	
Num. groups: country_isocode	115	115
Num. groups: year	51	51
Deviance		78824.813

*$p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt, D = Defense.

Table 23: Table for Figure 5

	Combination - FELM	Combination - FEGLM
Low responsibility and weak signs of loyalty (Ref: HW)	0.026 (0.007)*	0.026 (0.005)*
Low responsibility and strong signs of loyalty (Ref: HW)	0.020 (0.009)*	0.021 (0.006)*
High responsibility and strong signs of loyalty (Ref: HW)	−0.020 (0.009)*	−0.022 (0.007)*
Failed coup attempt	0.196 (0.047)*	0.178 (0.037)*
FCA*High responsibility and weak signs of loyalt (Ref: HW)	−0.108 (0.038)*	−0.077 (0.024)*
FCA*Low responsibility and strong signs of loyalty (Ref: HW)	−0.160 (0.046)*	−0.106 (0.022)*
FCA*High responsibility and strong signs of loyalty (Ref: HW)	−0.129 (0.061)*	−0.081 (0.031)*
Log of Population	−0.154 (0.063)*	−0.174 (0.018)*
Log of GDP per capita	−0.027 (0.019)*	−0.026 (0.005)*
Num. obs.	80657	80657
R^2 (full model)	0.127	
R^2 (proj model)	0.003	
Num. groups: country_isocode	115	115
Num. groups: year	51	51
Deviance		82303.979

*$p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt, LW = High responsibility and weak signs of loyalty.