Making Electoral Autocracy Work

Instability, Policy Concessions, and Unintended Consequence of Institutions (Online Appendix)

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Abstract

Literature on the political economy of nondemocracies suggests that autocrats use institutions to strategically strengthen political rule, while it downplays the economic cost of such political institutions. If formal institutions can offer leaders political benefits with negligible costs, then why don't authoritarian leaders all adopt formal institutions? Using panel data over the period of 1974–2010, we identify one unintended consequence of autocratic institutions: as a response to domestic instability, leaders in electoral authoritarian regimes are more likely to adopt the more costly, mass-based policy concession compared to leaders in democracies. However, the effect of political instability on mass-based policy concessions in electoral authoritarian regimes is short-run, and weakened when the leader is established. Our findings join the burgeoning literature on authoritarian institutions and electoral authoritarianism, and suggest that while established leaders can use institutions as an instrument for survival, weak leaders might have to pay for the unintended economic cost of such institutions in an electoral authoritarian context.

A Samples

The data set includes 2,655 country-year observations covering 80 countries from 1974-2010.

Table A.1: Country-Year Observations in the Study

| Country | Counts | Country | Counts | Country | Counts |
|--------------------|--------|-------------|--------|----------------|--------|
| Argentina | 36 | Greece | 31 | Poland | 37 |
| Australia | 37 | Hungary | 37 | Portugal | 37 |
| Austria | 37 | Iceland | 33 | Romania | 37 |
| Bangladesh | 35 | India | 36 | Russia | 19 |
| Benin | 35 | Indonesia | 36 | Senegal | 35 |
| Brazil | 36 | Ireland | 37 | Slovakia | 19 |
| Bulgaria | 37 | Israel | 32 | Slovenia | 20 |
| Burkina Faso | 36 | Italy | 37 | South Africa | 36 |
| Cameroon | 35 | Japan | 37 | South Korea | 37 |
| Canada | 37 | Kazakhstan | 17 | Spain | 37 |
| Chad | 35 | Kenya | 36 | Sri Lanka | 36 |
| Chile | 37 | Latvia | 20 | Sudan | 36 |
| China | 36 | Lithuania | 20 | Sweden | 37 |
| Colombia | 36 | Madagascar | 36 | Switzerland | 37 |
| Côte d'Ivoire | 35 | Malaysia | 36 | Taiwan | 37 |
| Cyprus | 7 | Mali | 36 | Tanzania | 36 |
| Czechoslovakia | 17 | Malta | 7 | Thailand | 36 |
| Denmark | 37 | Mexico | 37 | Togo | 36 |
| Dominican Republic | 36 | Morocco | 30 | Turkey | 37 |
| Ecuador | 36 | Mozambique | 36 | Uganda | 37 |
| Egypt | 36 | Netherlands | 37 | Ukraine | 19 |
| Estonia | 20 | New Zealand | 37 | United Kingdom | 37 |
| Ethiopia | 36 | Nicaragua | 36 | United States | 37 |
| Finland | 37 | Nigeria | 36 | Vietnam | 34 |
| France | 37 | Norway | 37 | Zambia | 35 |
| Germany | 22 | Pakistan | 36 | Zimbabwe | 35 |
| Ghana | 36 | Philippines | 36 | | |

B Descriptive statistics

Table B.1 includes descriptive statistics of the variables that we use in the fully specified model (Table 2 in the main text).

Table B.1: Descriptive statistics

| | Minimum | Maximum | Mean | Std. Dev. | Median |
|---------------------------|-----------|--------------|-------------|--------------|------------|
| Mass based concession | -4.32 | 0.87 | -0.21 | 0.61 | -0.05 |
| Electoral authoritarian | 0.00 | 1.00 | 0.27 | 0.45 | 0.00 |
| Autocracy | 0.00 | 1.00 | 0.13 | 0.34 | 0.00 |
| Democracy | 0.00 | 1.00 | 0.60 | 0.49 | 1.00 |
| Instability | 0.00 | 59.00 | 1.50 | 3.75 | 0.00 |
| GDP per capita | 92.07 | 42450.00 | 7690.07 | 10049.81 | 2131.37 |
| Urban population | 199000.00 | 648322000.00 | 28589607.50 | 61483173.11 | 7659000.00 |
| Rural population | 21000.00 | 857109000.00 | 37264592.90 | 122651587.48 | 8453000.00 |
| Import per capita | 1286.00 | 6068952.00 | 471553.36 | 771748.83 | 98132.00 |
| Export per capita | 628.00 | 7170276.00 | 470253.16 | 861258.17 | 86388.00 |
| Proportion of World Trade | 3.00 | 15936.00 | 1136.95 | 2221.63 | 326.50 |
| Exchange rate | 0.00 | 10389.94 | 177.34 | 726.83 | 3.80 |

C Outcome Variable

The outcome variable is mass-based policy concession, which is opposite of the nominal rate of assistance to producers. Nominal rate of assistance is measured as the percentage by which government policies have raised gross returns to producers above what they would receive without government's intervention. Since our outcome variable is opposite of the nominal rate of assistance variable, a large value in the mass-based concession variable indicates government's predisposition to favor the mass. Figure C.1 shows the density of the outcome variable across democracies, autocracies, and electoral authoritarian regimes.

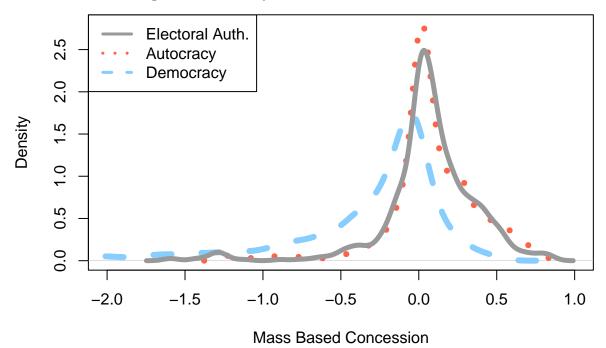


Figure C.1: Density Plot of Mass Based Concession

D Explanatory Variables

D.1 Cross-Sectional Distribution

Figure D.1 shows the cross-sectional distribution of regime types in our sample. Note that 59.7% of the country-years are democracies, 27.4% are electoral authoritarian regimes, and 13.1% are autocracies with no multiparty elections.

Figure D.1: Cross-Sectional Distribution of Regime Types

D.2 Distribution Over Time

Figure D.2 shows the distribution of regime types over time in our sample. Consistent with the literature, we find that democracies have increased over time. Although the number of autocracies has decreased, the number of electoral authoritarian regimes has somewhat stabilized since the late 1990s.

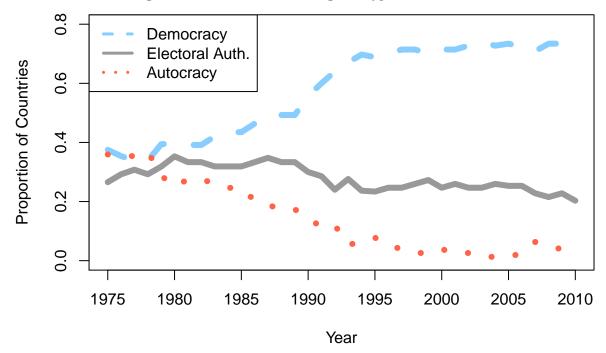


Figure D.2: Distribution of Regime Types Over Time

E Robustness Check: Competing Arguments in Main Texts

In this section, we consider model specifications that consider the following alternative arguments:

- Transition instability might explain domestic policies (measured by "# Coups_t");
- The ratio between urban population and rural population might explain to what extent the regime is willing to distort policies in favor of one group versus the other (measured by "Urban Population_t");
- Democratic can be less efficient by design, and in this case, instability during year (t-1) might not manifest in policies until year t because of checks and balances and the number of veto players in the process in consolidated democracies (measured by "Instability $_{t-1} \times \text{EA}_t$ " and "Instability $_{t-1} \times \text{Autocracy}_t$ ");
- Learning from democracy leaders from countries with longer democratic experiences might behave differently from those from coutries with limited experiences with democracy (measured by "Democracy Duration_t");
- Repression might suppress the extent to which domestic instability can affect politics repressive capacity can potentially be substitute to policy concession, so it is possible that regimes with higher repressive capacity become less likely to pass policies in favor of the mass in face of instability (measured by "Repressive Events_t").

As Table E.1 shows, the coefficient of "Instability_t × EA_t" on mass-based concession is statistically significant and positive, while coefficients of "Instability_t × Autocracy_t" and aforementioned variables are not. In short, Table E.1 shows that estimations in Table 2 in the main text are robust and reliable.

Table E.1: Robustness Checks in Main Texts

| | | Mass | Based Conce | $\operatorname{ssion_t}$ | |
|---|-----------------|-----------------|-----------------|--------------------------|--------------|
| | (1) | (2) | (3) | (4) | (5) |
| Instability _t × EA_t | 0.0050*** | 0.0050*** | 0.0049*** | 0.0042*** | 0.0057*** |
| | (0.0016) | (0.0015) | (0.0015) | (0.0015) | (0.0021) |
| $Instability_t \times Autocracy_t$ | 0.0034 | 0.0018 | 0.0027 | 0.0008 | 0.0054 |
| | (0.0026) | (0.0024) | (0.0026) | (0.0025) | (0.0039) |
| GDP per capita (log) | -0.0121 | -0.0016 | 0.0084 | 0.0026 | -0.0864 |
| , , | (0.0355) | (0.0357) | (0.0378) | (0.0397) | (0.1545) |
| Urban population (log) | -0.1667^{***} | | | , | |
| | (0.0439) | | | | |
| Rural population (log) | -0.1383**** | | | | |
| 2 2 (9/ | (0.0457) | | | | |
| Import per capita (log) | -0.0745^* | 0.0928*** | 0.1011*** | 0.1019*** | -0.1579 |
| <u> </u> | (0.0451) | (0.0230) | (0.0213) | (0.0212) | (0.1191) |
| Export per capita (log) | 0.0210 | 0.1047*** | 0.1126*** | 0.1124*** | -0.0266 |
| 1 1 (0) | (0.0272) | (0.0308) | (0.0322) | (0.0321) | (0.0625) |
| Proportion of World Trade (log) | -0.0359 | -0.2832^{***} | -0.2996^{***} | -0.2974^{***} | $0.1016^{'}$ |
| 1 | (0.0675) | (0.0576) | (0.0596) | (0.0596) | (0.1710) |
| Exchange rate (log) | -0.0182^{***} | -0.0215*** | -0.0183*** | -0.0181*** | 0.0034 |
| (18) | (0.0035) | (0.0044) | (0.0044) | (0.0043) | (0.0226) |
| $\# \operatorname{Coups}_t$ | 0.0048 | (0100==) | (0.00 = =) | (010020) | (0.0==0) |
| | (0.0189) | | | | |
| Urban Population $_t$ | (0.0100) | 0.0263 | | | |
| Rural Population $_t$ | | | | | |
| D | | (0.0160) | | 0.0004 | |
| Democracy $Duration_t$ | | | | 0.0004 | |
| D | | | | (0.0004) | 0.0175 |
| Repressive Events $_t$ | | | | | -0.0175 |
| T . 149 | | | 0.0010 | | (0.0255) |
| Instability _{t-1} × EA _t | | | -0.0013 | | |
| T | | | (0.0020) | | |
| Instability _{t-1} × Autocracy _t | | | -0.0041* | | |
| | | | (0.0023) | | |
| Mass Based Concession $_{t-1}$ | 0.6845*** | 0.6920*** | 0.7032*** | 0.7027*** | 0.5243*** |
| | (0.0166) | (0.0187) | (0.0193) | (0.0191) | (0.0973) |
| $Instability_t$ | -0.0010 | -0.0011 | -0.0009 | -0.0006 | -0.0026 |
| | (0.0012) | (0.0012) | (0.0011) | (0.0012) | (0.0019) |
| Electoral Authoritarian $_t$ | 0.0103 | 0.0149 | 0.0143 | 0.0020 | -0.0293 |
| | (0.0141) | (0.0140) | (0.0137) | (0.0159) | (0.0312) |
| $Autocracy_t$ | 0.0121 | 0.0362* | 0.0410** | 0.0285 | 0.0058 |
| | (0.0159) | (0.0196) | (0.0205) | (0.0207) | (0.0247) |
| Instability $_{t-1}$ | | | 0.0005 | | |
| | | | (0.0014) | | |
| N | 2,254 | 2,258 | 2,264 | 2,264 | 709 |
| Adjusted R^2 | 0.5869 | 0.5827 | 0.5829 | 0.5832 | 0.2318 |
| F Statistic | 237.4483*** | 272.7970*** | 234.7238*** | 274.0817*** | 24.6349*** |
| | | | | | _ 1.00 10 |
| Country-Year FE | Yes A- | -9 Yes | Yes | Yes | Yes |

^{*}p < .1; **p < .05; ***p < .01

F Robustness Check: Year Trend

In the main text, Table 2 presents a few estimations to account for endogeneity, country-specific shocks, and year-specific shocks. In the third column of Table 2 (in the main text), we also model country specific trends – that is, we model the possibility that each country has a heterogeneous year trend, while there are also common shocks affecting all countries in a given year. In the main text, we show that results from the estimations are robust and reliable. However, it is also possible that the relationship between domestic instability and regime policies is simply based on a time trend. In this section, we consider this possibility and model the less flexible estimation that only picks up time unvarying country characteristics, plus a time trend variable. The first two columns look at the contemporaneous relationship, and the last two columns adopt the ECM model. We present both baseline results and results from the models that account for additional controls in Table F.1. Table F.2 addresses the concerns of quadratic trends by modeling (i) powers to the second and third order (columns 1 and 2), and (ii) country-specific quadratic trends (column 3). In all specifications considered in Tables F.1 and F.2, results are robust and reliable.

F.1 Linear Trend

Table F.1: Robustness Check: Controlling Year Trend

| | Mass Based | l Concession _t | $\Delta { m Mass~Base}$ | ${ m ed}$ Concession _t |
|--|----------------|---------------------------|-------------------------|-----------------------------------|
| | Baseline | w/ Controls | Baseline | w/ Controls |
| | (1) | (2) | (3) | (4) |
| $\Delta \text{Instability}_t \times \text{EA}_t$ | | | 0.0029** | 0.0032^* |
| - | | | (0.0013) | (0.0019) |
| Δ Instability _t × Authoritarian _t | | | 0.0001 | 0.0021 |
| | | | (0.0023) | (0.0024) |
| Instability _t \times EA _t | 0.0025** | 0.0038** | | |
| | (0.0011) | (0.0016) | | |
| Instability _{t-1} × EA _t | , | | 0.0014 | 0.0015 |
| | | | (0.0021) | (0.0023) |
| Instability _t × Authoritarian _t | -0.0016 | 0.0015 | | |
| | (0.0026) | (0.0026) | | |
| $Instability_{t-1} \times Authoritarian_t$ | | | -0.0037 | -0.0004 |
| | | | (0.0028) | (0.0028) |
| $\Delta \text{Instability}_t$ | | | 0.00001 | -0.0008 |
| | | | (0.0009) | (0.0014) |
| Electoral Authoritarian $_t$ | 0.0195 | 0.0145 | 0.0236^* | 0.0214 |
| | (0.0125) | (0.0142) | (0.0131) | (0.0134) |
| $Instability_t$ | -0.0001 | -0.0004 | | |
| | (0.0010) | (0.0014) | | |
| $Authoritarian_t$ | 0.0816^{***} | 0.0212 | 0.0865*** | 0.0259* |
| | (0.0176) | (0.0175) | (0.0183) | (0.0154) |
| Instability $_{t-1}$ | | | -0.0004 | -0.0002 |
| | | | (0.0015) | (0.0018) |
| Mass Based $Concession_{t-1}$ | 0.7799^{***} | 0.6845^{***} | -0.2203*** | -0.3094^{***} |
| | (0.0138) | (0.0171) | (0.0138) | (0.0172) |
| Year Trend | 0.0028^{***} | -0.0043 | 0.0028*** | 0.0010 |
| | (0.0007) | (0.0030) | (0.0007) | (0.0023) |
| N | 2,384 | 2,258 | 2,384 | 2,253 |
| Adjusted \mathbb{R}^2 | 0.6216 | 0.6131 | 0.0845 | 0.1501 |
| F Statistic | 571.4492*** | 261.8580*** | 30.7861*** | 20.7374*** |
| Country FE | Yes | Yes | Yes | Yes |
| Year Trend | Yes | Yes | Yes | Yes |
| Cluster SE | Yes | Yes | Yes | Yes |

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

F.2 Quadratic Trend

Table F.2: Robustness Check: Quadratic Trend

| | | Mass Base | ed Concession _t |
|---|--------------------|--------------------|-------------------------------|
| | Trend^2 | Trend^3 | Unit-Specific Quadratic Trend |
| | (1) | (2) | (3) |
| Instability _t × EA _t | 0.0039** | 0.0038** | 0.0053*** |
| | (0.0016) | (0.0016) | (0.0015) |
| Instability _t × Authoritarian _t | 0.0018 | 0.0018 | 0.0020 |
| | (0.0026) | (0.0025) | (0.0033) |
| Electoral Authoritarian $_t$ | 0.0111 | 0.0138 | 0.0054 |
| | (0.0140) | (0.0145) | (0.0184) |
| Instability $_t$ | -0.0005 | -0.0004 | -0.0006 |
| · · | (0.0014) | (0.0014) | (0.0012) |
| $Autocracy_t$ | 0.0148 | 0.0171 | 0.0204 |
| | (0.0172) | (0.0178) | (0.0186) |
| GDP per capita (log) | -0.0154 | -0.0206 | -0.0509 |
| 1 (0) | (0.0349) | (0.0350) | (0.0962) |
| Urban population (log) | -0.0897**** | -0.0911^{***} | -0.0883 |
| 1 1 (6, | (0.0319) | (0.0326) | (0.1293) |
| Rural population (log) | -0.0827^{**} | -0.0818** | 0.0793 |
| 1 1 (0) | (0.0352) | (0.0354) | (0.0949) |
| Import per capita (log) | 0.0684*** | 0.0669*** | 0.0876*** |
| 1 1 1 (3) | (0.0181) | (0.0186) | (0.0274) |
| Export per capita (log) | 0.0956*** | 0.0978*** | 0.1244*** |
| 1 1 1 (0) | (0.0289) | (0.0298) | (0.0323) |
| Proportion of World Trade (log) | -0.2602^{***} | -0.2556^{***} | -0.3356^{***} |
| 1 | (0.0595) | (0.0586) | (0.0797) |
| Exchange rate (log) | -0.0171^{***} | -0.0180^{***} | -0.0201*** |
| | (0.0036) | (0.0037) | (0.0076) |
| Mass Based Concession $_{t-1}$ | 0.6745*** | 0.6732*** | 0.4169*** |
| | (0.0165) | (0.0167) | (0.0384) |
| Year Trend | -0.0082** | -0.0171*** | -0.0026 |
| | (0.0039) | (0.0062) | (0.0067) |
| Year Trend ² | 0.0001*** | 0.0007** | 0.0001 |
| | (0.0001) | (0.0003) | (0.0001) |
| Year Trend ³ | (0.0001) | -0.00001^{**} | (0.0001) |
| 1001 | | (0.000004) | |
| N | 2,258 | 2,258 | 2,258 |
| Adjusted R^2 | 0.6143 | 0.6149 | 0.6625 |
| F Statistic | 245.7081*** | 230.9519*** | 27.9858*** |
| Country FE | Yes | Yes | Yes |
| Year Trend | Yes | Yes | Yes |
| Cluster SE | Yes | Yes | Yes |

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

G Robustness Check: Extra Lags

In the main text, we include a lagged dependent variable throughout specifications to address serial correlation in the mass-based concession variable. In this section, we add additional lagged terms of the dependent variable in order to purge any potential serial correlation that remain in the data. Table G.1 shows that the effect of domestic instability on mass-based policy concession in electoral authoritarian regimes remains statistically significant and positive.

Table G.1: Robustness Check: Extra Lags for Fully Specified Model

| | $Mass\ Based\ Concession_t$ | | |
|--|-----------------------------|-------------|-----------------|
| | (1) | (2) | (3) |
| Instability _t \times EA _t | 0.0052*** | 0.0066*** | 0.0069*** |
| - | (0.0016) | (0.0014) | (0.0014) |
| Instability _t \times Autocracy _t | 0.0033 | 0.0036 | 0.0036 |
| | (0.0028) | (0.0031) | (0.0032) |
| Instability $_t$ | -0.0011 | -0.0017 | -0.0018* |
| | (0.0013) | (0.0011) | (0.0011) |
| Electoral Authoritarian $_t$ | 0.0087 | 0.0058 | 0.0012 |
| | (0.0141) | (0.0151) | (0.0144) |
| $Autocracy_t$ | 0.0046 | 0.0067 | 0.0054 |
| • | (0.0156) | (0.0176) | (0.0173) |
| GDP per capita (log) | -0.0120 | -0.0064 | -0.0148 |
| | (0.0332) | (0.0337) | (0.0351) |
| Urban population (log) | -0.1588*** | -0.1644*** | -0.1590*** |
| | (0.0424) | (0.0441) | (0.0428) |
| Rural population (log) | -0.1343^{***} | -0.1473*** | -0.1399**** |
| 1 1 (5) | (0.0449) | (0.0486) | (0.0478) |
| Import per capita (log) | -0.0745^{*} | -0.0927^* | -0.0912^* |
| 1 1 (9) | (0.0434) | (0.0478) | (0.0477) |
| Export per capita (log) | 0.0143 | 0.0108 | 0.0109 |
| , _, | (0.0258) | (0.0246) | (0.0250) |
| Proportion of World Trade (log) | -0.0236 | 0.0012 | 0.0020 |
| _ | (0.0607) | (0.0621) | (0.0602) |
| Exchange rate (log) | -0.0196^{***} | -0.0188**** | -0.0195^{***} |
| | (0.0034) | (0.0032) | (0.0035) |
| Mass Based Concession $_{t-1}$ | 0.6596*** | 0.6492*** | 0.6548*** |
| | (0.0348) | (0.0426) | (0.0401) |
| Mass Based Concession $_{t-2}$ | 0.0544 | -0.0451 | -0.0521 |
| ŭ <u>-</u> | (0.0405) | (0.0554) | (0.0551) |
| Mass Based Concession $_{t-3}$ | , | 0.1548*** | 0.1690*** |
| | | (0.0456) | (0.0585) |
| Mass Based Concession $_{t-4}$ | | , , | -0.0116 |
| | | | (0.0424) |
| N | 2,184 | 2,109 | 2,034 |
| Adjusted R^2 | 0.5901 | 0.5996 | 0.5985 |
| F Statistic | 233.2301*** | 218.6055*** | 197.0744*** |
| Country-Year FE | Yes | Yes | Yes |
| Cluster SE | Yes | Yes | Yes |

^{*}p < .1; **p < .05; ***p < .01

H Robustness Check: Multiple Imputation

One concern of the empirical results in this paper can be that missing data might not have occurred at random. That is, it is possible that one country could have more missing data than others because of its particular characterisites. To account for this possibility, we impute the missing values using the Amelia library in R, and report the results in Table H.1. Note that the coefficient of "Instability × EA" remains positive ($\hat{\beta}$ (Instability × EA) = 0.0048) and statistically significant at 95% confidence level ($\hat{s.e.}$ (Instability × EA) = 0.0023). This is consistent with our hypothesis that electoral authoritarian regimes are *more* likely to make mass-based policy concessions and be responsive to citizens' demands in the presence of domestic instability.

Table H.1: Robustness Check: Multiple Imputation for Fully Specified Model

| | Estimate | Std. Error |
|--|----------|------------|
| $\overline{\text{Instability} \times \text{EA}}$ | 0.0048 | 0.0023 |
| Instability \times Autocracy | 0.0015 | 0.0039 |
| Instability | -0.0011 | 0.0015 |
| Electoral Authoritarian | 0.0109 | 0.0165 |
| Autocracy | 0.0379 | 0.0209 |
| GDP pc (log) | -0.0074 | 0.0167 |
| Urban Population (log) | -0.0427 | 0.0268 |
| Rural Population (log) | 0.0061 | 0.0235 |
| Import per capita | 0.0657 | 0.0327 |
| Export per capita | 0.0918 | 0.0210 |
| Proportion of World Trade | -0.2364 | 0.0498 |
| Exchange rate | -0.0163 | 0.0033 |
| Mass Based Concession $_{t-1}$ | 0.7096 | 0.0152 |

I Robustness Check: Different Operationalizatione

I.1 Different Operationalization of Domestic Instability

Now, we conduct a series robustness checks by recoding some of the variables in the fully specified estimations. First, we recode instability as the aggregate of domestic warfare, government crises, riots, revolutions, and anti-government demonstrations. Compared to the instability variable that we use in the main text, the re-coded variable measures instability as a concept more broadly, and we may think that the two estimates provide the upper and lower bound for the true effect of domestic instability on policy. As Table I.1 shows, estimations in Table 2 in the main text are robust and reliable.

Table I.1: Robustness Check: Different Operationalization of Instability

| | $Mass\ Based\ Concession_t$ | | |
|--|-----------------------------|--------------------------|--|
| | Fully Specified | plus Unit Specific Trend | |
| | (1) | (2) | |
| $\overline{\text{Instability}_t \times \text{EA}_t}$ | 0.0044*** | 0.0059*** | |
| | (0.0016) | (0.0016) | |
| Instability _t \times Autocracy _t | 0.0049* | 0.0054 | |
| | (0.0028) | (0.0035) | |
| Instability $_t$ | -0.0007 | -0.0012 | |
| | (0.0012) | (0.0012) | |
| Electoral Authoritarian $_t$ | 0.0091 | 0.0021 | |
| | (0.0143) | (0.0220) | |
| $Autocracy_t$ | 0.0072 | 0.0118 | |
| • | (0.0158) | (0.0222) | |
| GDP per capita (log) | -0.0118 | -0.0655 | |
| , -, | (0.0354) | (0.0772) | |
| Urban population (log) | -0.1678*** | -0.0393 | |
| | (0.0434) | (0.0811) | |
| Rural population (log) | -0.1378*** | 0.0163 | |
| | (0.0455) | (0.0623) | |
| Import per capita (log) | -0.0749^* | -0.1105^* | |
| | (0.0447) | (0.0567) | |
| Export per capita (log) | 0.0213 | -0.0001 | |
| | (0.0267) | (0.0202) | |
| Proportion of World Trade (log) | -0.0357 | 0.0031 | |
| | (0.0663) | (0.0807) | |
| Exchange rate (log) | -0.0183^{***} | -0.0149** | |
| | (0.0035) | (0.0075) | |
| Mass Based Concession $_{t-1}$ | 0.6842*** | 0.5307*** | |
| | (0.0167) | (0.0348) | |
| N | 2,258 | $2,\!258$ | |
| Adjusted R^2 | 0.5870 | 0.6190 | |
| F Statistic | 256.2225*** | 43.4448*** | |
| Country-Year FE | Yes | Yes | |
| Cluster SE | Yes | Yes | |

^{*}p < .1; **p < .05; ***p < .01

I.2 Different Operationalization of Leader Strength

Another concern can be that using economic strength to proxy leader strength might be too crude. To address this concern, we operationalize leader strength in the two following ways:

• Relative change in vote margin. Formally, the relative change from time (t - k) to t is calculated as

$$\frac{\Delta \text{Vote Share}_t}{\text{Vote Share}_{t-k}} = \frac{\text{Vote Share}_t - \text{Vote Share}_{t-k}}{\text{Vote Share}_{t-k}}.$$

• Change in seat proportion. Formally, the elative change from time (t-k) to t is calculated as

$$\Delta \text{Seat Proportion}_t = \frac{\text{incumbent seat}_t}{\text{incumbent seat}_t + \text{opposition seat}_t + \text{non-aligned seat}_t} \\ - \frac{\text{incumbent seat}_{t-k}}{\text{incumbent seat}_{t-k} + \text{opposition seat}_{t-k} + \text{non-aligned seat}_{t-k}}$$

Table I.2 reports results from estimations using different variables to measure leader strength. The first specification uses the relative change in vote share to proxy leader strength, and the second specification uses the change in seat proportion to proxy leader strength. In the main text, we find a heterogeneous treatment effect of domestic instability – stronger leaders in electoral authoritarian regimes are less likely to pass mass-based concessions as domestic instability rises (Table 4). This result stays robust in the first alternative specification, but not in the second. It is possible that drastic change in seat proportion changes dynamics of power within the government, hence leading to change in policy priorities. Future research should investigate into to this possibility.

Table I.2: Robustness Check: Different Operationalization of Leader Strength

| | ${\bf Mass\ Based\ Concession_t}$ | | | |
|--|-----------------------------------|-----------------|-----------------|-----------------|
| | Electoral Auth. | Democracy | Electoral Auth. | Democracy |
| | (1) | (2) | (3) | (4) |
| Instability _t $\times \frac{\Delta \text{Vote Share}_t}{\text{Vote Share}_{t-1}}$ | -0.0279** | -0.0010 | | |
| vote share _{t=1} | (0.0121) | (0.0026) | | |
| Instability _t $\times \Delta \text{Seat Proportion}_t$ | , | , | -0.0069 | -0.0088 |
| | | | (0.0116) | (0.0087) |
| $Instability_t$ | 0.0033** | -0.0044** | 0.0042*** | -0.0033** |
| - 0 | (0.0013) | (0.0022) | (0.0014) | (0.0013) |
| $\frac{\Delta \text{Vote Share}_t}{\text{Vote Share}_{t-1}}$ | 0.0303 | 0.0235^{*} | , | , |
| vote share _{t-1} | (0.0913) | (0.0134) | | |
| $\Delta \text{Seat Proportion}_t$ | , | , | -0.0077 | 0.0112 |
| | | | (0.0479) | (0.0298) |
| GDP per capita (log) | 0.3771*** | 0.1956** | 0.0536 | 0.0069 |
| , -/ | (0.1295) | (0.0911) | (0.0802) | (0.0830) |
| Urban population (log) | -0.1747 | -0.3757**** | 0.0441 | -0.2897^{***} |
| (-, | (0.2329) | (0.1411) | (0.1026) | (0.1003) |
| Rural population (log) | 0.2418 | -0.2132^{***} | 0.0210 | -0.2058*** |
| | (0.4427) | (0.0812) | (0.1389) | (0.0729) |
| Import per capita (log) | -0.1854 | -0.2508 | -0.1303 | -0.1955^* |
| | (0.1730) | (0.1567) | (0.0820) | (0.1187) |
| Export per capita (log) | 0.1201 | 0.0024 | 0.0700^* | 0.0255 |
| | (0.1203) | (0.0529) | (0.0376) | (0.0431) |
| Proportion of World Trade (log) | -0.1329 | -0.0073 | -0.0653 | 0.0147 |
| | (0.2955) | (0.1731) | (0.1100) | (0.1337) |
| Exchange rate (log) | 0.0357 | -0.0056 | -0.0027 | -0.0167^{***} |
| | (0.0343) | (0.0079) | (0.0238) | (0.0050) |
| Mass Based Concession $_{t-1}$ | 0.5004*** | 0.6608*** | 0.5040*** | 0.6797^{***} |
| | (0.0510) | (0.0306) | (0.0505) | (0.0214) |
| N | 211 | 1,018 | 404 | 1,296 |
| Adjusted R^2 | 0.1536 | 0.5335 | 0.1992 | 0.5823 |
| F Statistic | 9.2833*** | 114.5435*** | 16.0215*** | 173.7242*** |
| Country-Year FE | Yes | Yes | Yes | Yes |
| Cluster SE | Yes | Yes | Yes | Yes |

^{*}p < .1; **p < .05; ***p < .01

I.3 Different Operationalization of Regime Type

Another concern of the empirical analysis is that coding for regime types can be subject to coders' subjectivity. As a result, we recode regime types using the data from Cheibub, Gandhi, and Vreeland (2009). An electoral authoritarian regime is defined as an autocracy that allows *de facto* existence of multiple parties in the political arena. The operationalization of regime types in this section is conceptually similar to, but empirically different from, the measure that we adopt in the main text. Replicating Table 2 in the main text using the new data, Table I.3 reports that the results are robust.

 ${\it Table I.3: Robustness\ Check:\ Different\ Operationalization\ of\ Regime\ Type}$

| | $Mass\ Based\ Concession_t$ | | |
|--|-----------------------------|--------------------------|--|
| | Fully Specified | plus Unit Specific Trend | |
| | (1) | (2) | |
| $\overline{\text{Instability}_t \times \text{EA}_t}$ | 0.0055*** | 0.0068*** | |
| | (0.0017) | (0.0016) | |
| Instability _t \times Autocracy _t | 0.0037 | 0.0041 | |
| | (0.0033) | (0.0033) | |
| Instability $_t$ | -0.0008 | -0.0019 | |
| | (0.0013) | (0.0013) | |
| Electoral Authoritarian $_t$ | 0.0105 | 0.0050 | |
| | (0.0176) | (0.0218) | |
| $Autocracy_t$ | 0.0413* | 0.0168 | |
| | (0.0218) | (0.0215) | |
| GDP per capita (log) | -0.0090 | -0.0668 | |
| / | (0.0403) | (0.0766) | |
| Urban population (log) | -0.1669**** | -0.0434 | |
| | (0.0445) | (0.0807) | |
| Rural population (log) | -0.1456*** | 0.0146 | |
| | (0.0544) | (0.0621) | |
| Import per capita (log) | -0.0922* | -0.1108* | |
| | (0.0539) | (0.0576) | |
| Export per capita (log) | 0.0147 | -0.0003 | |
| | (0.0281) | (0.0203) | |
| Proportion of World Trade (log) | -0.0247 | 0.0037 | |
| | (0.0775) | (0.0821) | |
| Exchange rate (log) | -0.0198*** | -0.0147^* | |
| | (0.0039) | (0.0075) | |
| Mass Based $Concession_{t-1}$ | 0.6579^{***} | 0.5310*** | |
| | (0.0176) | (0.0347) | |
| N | 2,042 | 2,258 | |
| Adjusted R^2 | 0.5501 | 0.6190 | |
| F Statistic | 201.0122*** | 43.4374*** | |
| Country-Year FE | Yes | Yes | |
| Cluster SE | Yes | Yes | |

^{*}p < .1; **p < .05; ***p < .01