A Online Appendix for "Government Turnover and the Effects of Regime Type: How Requiring Alternation in Power Biases against the Estimated Economic Benefits of Democracy"

This appendix provides additional information about the formal model, the dataset and coding rules, as well as the different robustness tests mentioned in the article. The first section provides detailed calculations for arriving at the expression of the bias from the formal model presented in Section 3.3 of the paper. The second section of this appendix presents information on the construction of the main variables used in the analysis, and the third section gives a more detailed discussion of the "real-time DD" measure. The fourth section provides a list of a selection of previous empirical studies on the economic effects of democracy, and information regarding their choice of democracy measure and results. The fifth section includes tables with descriptive statistics and lists of the samples used in different analyses. The final four sections of this appendix provide a large number of tables with robustness tests.

A.1 Step-by-step calculations for arriving at the expression of the bias from the formal model in Section 3.3

This section provides the detailed calculations behind the expressions presented in the article. Some of the discussion and clarification of the model provided in the paper is also entered here, and only modified slightly:

As described in the article, we consider a measure of democracy $\bar{\phi}$ that is a function not only of actual regime type, ϕ, but also alternation, a. A regime measure, such as DD, where both the existence of democratic institutions ($\phi = 1$) *and* alternation of government ($a = 1$) are *necessary conditions* for being scored democratic ($\bar{\phi} = 1$), can be modeled using a multiplicative expression (see, e.g., Goertz 2005):

$$\bar{\phi} = \phi \cdot a \tag{7}$$

Further, we model growth, η, as a function of (actual) regime type. To keep the model as simple as possible, we parameterize the model using the linear specification

$$\eta = b_0 + b_1\phi \tag{8}$$

Finally, the probability of (post-election) alternation in government is positively associated with being a democracy, but alternation also becomes less likely when economic growth is high. Hence, $a = a(\phi, \eta); \frac{\partial a}{\partial \phi} > 0, \frac{\partial a}{\partial \eta} < 0$. Again, we employ a linear specification and simplify by assuming that alternation happens whenever the probability of it exceeds a critical threshold c.

$$\begin{aligned} a = 1 &\Leftrightarrow \beta_0 + \beta_1\phi - \beta_2\eta \geq c \\ a = 0 &\Leftrightarrow \beta_0 + \beta_1\phi - \beta_2\eta < c \end{aligned} \tag{9}$$

In order to explore how growth is affected by changes in the regime measure – i.e. investigating $\frac{\partial \eta}{\partial \phi}$ – and whether and how this differs from the change in growth stemming

from a change in actual regime type – i.e. $\frac{\partial \eta}{\partial \phi} = b_1$, we first rearrange Equation 8 so that $\phi = \frac{\eta - b_0}{b_1}$ and insert this along with the expression for a from 9 into Equation 7:

$$\bar{\phi} = (\frac{\eta - b_0}{b_1}) \cdot (\beta_0 + \beta_1 \phi - \beta_2 \eta) \tag{10}$$

We insert once again for ϕ, and further manipulate this expression:

$$\begin{aligned}
\bar{\phi} &= (\frac{\eta - b_0}{b_1}) \cdot (\beta_0 + \beta_1 (\frac{\eta - b_0}{b_1}) - \beta_2 \eta) \Rightarrow \\
\bar{\phi} &= (\frac{\eta}{b_1} - \frac{b_0}{b_1}) \cdot (\beta_0 + \frac{\beta_1 \eta}{b_1} - \frac{\beta_1 b_0}{b_1} - \beta_2 \eta) \Rightarrow \\
\bar{\phi} &= \frac{\beta_0 \eta}{b_1} - \frac{\beta_0 b_0}{b_1} + \frac{\beta_1 \eta^2}{b_1^2} - \frac{\beta_1 b_0 \eta}{b_1^2} - \frac{\beta_1 b_0 \eta}{b_1^2} + \frac{\beta_1 b_0^2}{b_1^2} - \frac{\beta_2 \eta^2}{b_1} + \frac{\beta_2 b_0 \eta}{b_1} \Rightarrow \\
b_1^2 \bar{\phi} &= \beta_1 \eta^2 + \beta_2 b_1 \eta^2 + \beta_0 b_1 \eta - 2\beta_1 b_0 \eta + \beta_2 b_0 b_1 \eta - \beta_0 b_0 b_1 + \beta_1 b_0^2 \Rightarrow \\
(\beta_1 + \beta_2 b_1)\eta^2 &+ (\beta_0 b_1 - 2\beta_1 b_0 + \beta_2 b_0 b_1)\eta = b_1^2 \bar{\phi} + \beta_0 b_0 b_1 - \beta_1 b_0^2
\end{aligned} \tag{11}$$

We thereafter apply *implicit derivation* of this function (considering η as a function of $\bar{\phi}$) to find an expression for $\frac{\partial \eta}{\partial \bar{\phi}}$

$$\begin{aligned}
(\beta_1 + \beta_2 b_1) \cdot 2\eta \frac{\partial \eta}{\partial \bar{\phi}} + (\beta_0 b_1 - 2\beta_1 b_0 + \beta_2 b_0 b_1) \cdot \frac{\partial \eta}{\partial \bar{\phi}} &= b_1^2 \Rightarrow \\
\frac{\partial \eta}{\partial \bar{\phi}} &= \frac{b_1^2}{(\beta_1 + \beta_2 b_1) \cdot 2\eta + \beta_0 b_1 - 2\beta_1 b_0 + \beta_2 b_0 b_1)}
\end{aligned} \tag{12}$$

We can now obtain an expression of the alternation-induced bias that we are interested in by subtracting the actual effect of regime type on growth (b_1) from that directly above denoting the anticipated "effect" of our regime measure on growth:

$$bias = \frac{\partial \eta}{\partial \bar{\phi}} - \frac{\partial \eta}{\partial \phi} = \frac{b_1^2}{(\beta_1 + \beta_2 b_1) \cdot 2\eta + \beta_0 b_1 - 2\beta_1 b_0 + \beta_2 b_0 b_1} - b_1 \tag{13}$$

A.2 Construction of regime-type variables

This section lists the main variables used in the analysis, and describes how they are coded. Some regime type variables are taken directly from the original datasets described in the paper – see Section 4.1 and 5 in the paper for the sources for the different control variables and dependent variables – while other regime variables are created by combining information from existing variables. Below we also, for instance, describe in more detail how the real-time DD variable is coded, including how its constituent variables are created.

A.2.1 Regime type variables taken directly from original data

- *DD*: Regime type variable from the online dataset (DD dataset) of Cheibub, Gandhi and Vreeland (2010).
- *Type2*: The Type II variable in the DD dataset
- *BMR*: Regime type variable taken from Boix, Miller and Rosato (2013)

A.2.2 Constructed variables

- *Democracywithouttype2*: This variable is constructed according to the "recipe" given in the Cheibub et al. (2010) codebook, but without the Type II criterion. Thus, using Cheibub et al.'s variable names, this dummy is coded as 1 if:
  - exselec<3 [13]
  - legselec$=2$ and
  - closed$=2$ and
  - dejure$=2$ and
  - defacto2$=2$ and
  - lparty$=2$
- *Alternationproximity*: This variable is coded as years since alternation in power, using the alternation variable from the PIPE dataset by Przeworski (2013).

[13] The original Cheibub et al. codebook rather requires *exselec* < 2, but this is obviously a typo, since *exselec*$=2$ identifies regimes where the executive is indirectly elected.

- *Durationcurrentregimerules*: This variable measures the number of years a country has had the same regime rules (specified as the rules that justify a democracy coding on DD, except for the alternation rule). This is created to ensure that there are no "subjective judgements" regarding what "similar rules" means in the interpretation of "alternation under similar rules". For left-censored observations (i.e., regimes originating from before 1946), we employ the equivalent variables from the PIPE dataset.

- *Real-timePIPE*: This variable codes real time-democracy for all countries using the PIPE dataset, to avoid that countries in the DD dataset are left-censored when we construct the real-time DD variable using the Cheibub et al. data. In other words, this variable codes real-time democracy according to the DD rules, but using information from PIPE (the first observation year in this dataset is 1917). More specifically, it is used to assign a real-time DD score for regimes that enter the DD dataset in 1946 until relevant new information about the regime is registered in the DD dataset.

- *Real-timeDD (with CGV override rule)*: This variable codes real-time democracy using the DD (and PIPE) dataset. It assigns a democracy score for regimes that have passed all the DD criteria for democracy, including the alternation rule, in "real time" (before or in the observation year in question). That is, this variable does not score democracy retrospectively (when alternation occurs later in time), unlike the original DD variable. This variable is coded 1 in a given year iff:

  - (there has been an alternation within the period a country has had democratic rules (i.e alternation proximity $<$ duration of current regime rules), OR
  - Real-timePIPE scores a country as a democracy when it enters the DD dataset,) AND
  - the country is scored as a democracy in the DD dataset (this is what we call the "CGV override rule", since a dictatorship (0) score by the actual Cheibub, Gandhi and Vreeland (2010) coding will override a democracy (1) score pro-

vided by following the other rules; this criterion is added to incorporate the information about changes to "regime rules", which is, in part, based on subjective assessments in the DD dataset. See further description below.)

- *Real-timeDD (Expansive)*: This variable is coded using the coding criteria listed for the first *Real-timeDD* measure above, but without the CGV override rule.

A.3 A note on different ways of coding *Real-timeDD*

Our real-time democracy variable(-s) codes a country as democratic if and only if it has passed the first three DD rules (elected legislature, elected executive, and there is more than one party), *and* there has been an alternation in power (before or during the relevant year of measurement) *under similar rules*. However, the italicized part of this last requirement leads to a number of difficulties:

It is obvious from Cheibub, Gandhi and Vreeland (2010, 69) that the rules in question are *electoral rules*, but deciding which rules are relevant and important enough to warrant starting a "new" period – within which we must observe alternation in order for DD to score a country as a democracy – necessarily introduces an element of subjectivity into the DD coding. Democracies make minor changes to their electoral laws all the time, and counting each change in the electoral law as ushering in a new period within which alternation is required is neither feasible nor practiced by the authors of DD.

Yet, this makes it very hard to reproduce the DD scores when *only* using information on alternation in power and the other subcomponents used to capture contestation in the DD dataset (described in the coding manual above). One could think of two ways to incorporate the requirement of (alternation taking place under) "similar rules": One is to code this manually, on a case-by-case basis, such that whenever one observes an alternation in power, one back-codes the democracy score to the year where one observes some relevant change in the electoral rules. Another is to use objective data on clearly specified changes in electoral rules, such that whenever one observes an alternation in power we use these data on changes in electoral rules to decide how far back we can code a country as a democracy. Ideally, we would like to follow the second strategy, by using a clearly defined and valid measure capturing changes in electoral rules. Since such a measure is not available, we have opted for two imperfect, but different, ways to account for this issue when coding the real-time DD variable:

The first – used for *Real-timeDD (Expansive)* – codes a change in the relevant electoral rules *only if there has been a coup, auto-coup, foreign occupation OR there has been a change in the subcomponents making up the democracy score in DD* (except, of course,

for the Type II variable). This coding, in practice, means that some countries will be classified as real-time democracies in our data (hence, the term "Expansive") but not as democracies in DD. The reason is that for some countries, the alternation in power that we count as relevant for assigning a democracy score on our real-timeDD measure actually occurred under rules that the coders of DD will count as different electoral rules. Hence, past alternations – and their implications for a country being scored democratic – may be carried over to a new regime operating under very different electoral rules for this "expansive" coding. As a consequence, when we use this coding of real-timeDD, we get 160 observations that are democratic according to Real-time DD, but dictatorial according to DD.[14]

The second strategy – used for *Real-timeDD (with CGV override rule)*, and which is our preferred strategy – is to incorporate the implicit information on changes in electoral rules inherent in each (original) DD democracy coding, by proposing that a country is *not* a real-time democracy if it is a dictatorship according to the DD coding by Cheibub, Gandhi and Vreeland. This is referred to as the "CGV override rule". This real-time measure, which is arguably the more valid alternative, is thus more closely aligned with the original way of coding DD. In practice, this means that the 160 diverging country-years mentioned above are coded dictatorial also on the real-time measure. The variable, then, essentially incorporates both the explicit (coded) information on multiparty competition (found in the DD dataset), the information on alternations using the PIPE data, *and* the tacit information on relevant regime rules that is behind each democracy coding in the DD data.

Even though these differences in coding rules for one type of variable may seem confusing (and perhaps tedious), we describe and present these alternative coding schemes in the interest of transparency. Fortunately, however, choosing one over the other does not dramatically alter our results by much, although the results indicating support of our argument on the alternation rule and the proposed bias for growth are somewhat stronger when using the version *with* the CGV override rule. In the *expansive* real-time

[14]Examples are Apartheid South Africa (where an alternation occurred in 1948), Zambia (where an alternation occurred in 1991), and Guyana (where an alternation occurred in 1992).

DD coding, we include a number of fast-growing countries as real-time democracies that are not democratic according to DD, which means that our growth estimates for real-time DD are slightly more positive than the growth estimates for real-time DD using the CGV override rule, essentially biasing the results in our disfavor (compare, for instance, Figure 2 to Figure A.1).[15] In the paper, Table 3 presents results based on the expansive coding and Figure 2 (and Figure 3 on estimates on coup attempts and civil war onsets) on the CGV override coding, whereas the final section of this appendix includes the equivalent tables and figures for the, respective, alternative coding rules.

Finally, *even when* we apply the CGV override rule, some cases that are scored as democracies in the original DD coding will not be coded as real-time democracies even when extending the year of measurement towards the end of the sample period. These are a handful of observations that fail to register as real-time democracies using the alternation data included in the PIPE dataset. Notable cases are Liberia, Chile and Switzerland. There are two reasons for these discrepancies:

First, the PIPE dataset extends to 2008 while DD extends to 2010, meaning that some alternations occuring in 2009-2010, yielding back-coded DD scores, fail to register in our real-time DD measure.

Second, there are discrepancies in coding between what DD coders seem to have coded (alternations are not explicitly coded in the DD dataset) as alternations in power and the alternations in power coded in the PIPE dataset. We can infer this by observing that some cases are scored as democratic in DD, but do not have observable alternations in PIPE.

Further, we simply do not *know* whether these cases are, in fact, "real-time democracies" (but where the alternations fail to register in PIPE), *or* whether they are simply miscodings in DD. Notable cases include Chile, Liberia and Switzerland. For example,

[15]Figure A.1 also shows that, in the last years where we have data – when we should expect baseline DD and real-time DD to converge, since real-time DD and baseline DD increasingly relies on the same information as time passes – the expansive real-time DD variable actually produces more positive growth estimates than the original DD measure. This can be attributed to the relatively high growth of the handful of regimes where an alternation has occurred in the past, but under regime rules that CGV count as different than those currently operating in the country. When we use the CGV override rule, which we personally find most appropriate, the growth estimates are close to identical in the final years of the period.

we consider it likely that Chile represents a case of error in the PIPE data, since Chile, according to PIPE, does not experience an alternation in office during the entire 2000's, which is not the case. The discrepancy on Liberia, on the other hand, is seemingly due to miscodings in the DD dataset. Liberia is coded as democratic since 2005, but there has been no alternation in power since 2005; Ellen Johnson Sirleaf has been head of government from 2005 until now.

This issue is not raised to put neither DD nor PIPE in a bad light. As anyone who has coded a dataset has experienced – especially where a large team of coders has been involved – errors occur. Such errors only become truly problematic when there is some systematic component to them, which we have no reason to believe in this case. However, for some outcomes that are relatively rare, such as coup attempts and civil wars, even (infrequent) random errors might cause problems. We believe that the discrepancy discussed above might be the explanation for why the estimated probability lines for original DD and real-time DD in the rightmost panel (on coup attempts) of Figure 2 do not converge when we get closer to the end date of the sample. Even a handful of cases, generated by random errors, might impact on the estimated probability, since coups are such rare events. In contrast, for economic growth – a continuous variable with close to a normal distribution – the above issue seems to be more or less irrelevant. This is indicated by the convergence of original and real-time DD growth estimates at the end of the period in Figure 2, and by the fact that conducting robustness checks such as correcting the obvious miscoding of Switzerland (see below) does not affect results.

A.4 Studies on democracy and growth, measure used, and results

Table A.1 presents a listing of 7 selected, fairly recent (2000 or later), studies on democracy and growth. The table includes information on whether these studies use the ACLP/DD measure or not, and incorporates short discussions on other specification characteristics and whether or not they indicate positive or negative effects of democracy and growth. The first four studies are listed simply because they are widely cited, and important contributions to the debate on whether or not democracy affects growth. As of September 8 2014, the Przeworski et al. study has 3594 Google Scholar citations, whereas the Baum and Lake articles has 260, the Gerring et al. article has 244, and the Papaioannou and Siourounis article has 226. The last three studies (the articles by Krieckhaus and Cheibub et al., and the Ph.D. dissertation by Knutsen) are included because they systematically compare estimates of regime type on growth based on ACLP/DD with estimates based on alternative democracy measures, holding other model specification characteristics constant.

Author (year)	Measure	Findings
Przeworski, Alvarez, Cheibub and Limongi (2000)	ACLP/DD	The authors run a large number of model specifications, and identify no clear effect of democracy on GDP growth, using a global sample of around 4000 country-year observations with time series from 1950–1990.
Baum and Lake (2003)	Polity	Baum and Lake employ systems of (two) OLS PCSE regressions and report a positive indirect effect of democracy on growth through increased human capital accumulation (as proxied by life expectancy in poorer countries and secondary schooling in richer). They draw on data from 128 countries, measured over the time period 1967-1997. Interestingly, the authors note (footnote 13, p.339) that "results are comparable for the education system, but somewhat weaker, though still correctly signed, for the life expectancy system" when using ACLP/DD. They interpret this as primarily stemming from "the relative lack of variation in this dichotomous indicator, which captures only wholesale regime changes".
Gerring, Bond, Barndt and Moreno (2005)	Polity index and "Democracy stock"	The authors run several fixed effects regressions including more than 6000 country-year observations (up to 180 countries, 1950–2000). Gerring et al. do not identify a clear effect of the standard version of the Polity index in these fixed effects models, but they do find a very robust effect of their "Democracy Stock" measure calculated from historical Polity Index values (from 1900 onwards).
Papaioannou and Siourounis (2008)	Own measure	Using data from 166 countries over the 1960–2003 time period, the authors construct their own measure of transition from autocracy to stable democracy and identify 63 full or partial such democratization episodes. In their coding, they use four criteria related to the existence of i) free and fair elections, ii) respect of civil liberties and political rights, iii) inclusive franchise for majority of the population, and iv) real governing capacity enjoyed by elected officials. The authors employ time- and country-fixed effects regressions (and difference in difference models), and report a robust, positive long-term effect of democratization episodes on growth rates.
Krieckhaus (2004)	1) ACLP/DD; 2) Polity; 3) Freedom House; 4) Bollen	Breaking down the sample (between 63 and 112 countries) after decades (1960s, 70s, 80s, 90s), Krieckhaus performs sensitivity analyses – running 220 alternative specifications for different combinations of control variables – both on the maximum available number of observations for each democracy measure and for identical samples over the four measures. Particularly for the 1980s – the results are less clear-cut for the other decades – Krieckhaus reports that regressions based on ACLP/DD give less evidence of a positive effect of democracy on growth than the other three measures. When using the maximum number of countries, the baseline model t-values for the three other measures range between 1.9 and 3.0, whereas it is 0.0 for ACLP/DD (p.644). When comparing for identical samples, ACLP/DD actually turns negative significant at the 5 percent level, whereas Bollen and Freedom House remain positive significant.
Cheibub, Gandhi and Vreeland (2010)	1) Regime dummies based on ACLP/DD; 2) regime dummies based on Polity	Replicating Rodrik and Wacziarg's (2005) study on regime transitions and growth, Cheibub et al. draw on identical samples (5465 obs. for 154 countries) when estimating structurally similar equations involving sets of regime dummies as independent variables and economic growth as dependent variable. When following Rodrik and Wacziarg in using Polity as basis for their regime dummies, they find that "New Democracy" has a positive and significant (5 percent level) coefficient, and this is the only significant regime-category dummy. When using the DD data as basis, however, they find that the "New Democracy" coefficient is dramatically reduced (and now far from significant), whereas the "Established Autocracy" dummy changes sign and is now positive and significant at the 10 percent level.
Knutsen (2011b)	1) ACLP/DD; 2) Polity; 3) Freedom House	Knutsen (see pp. 290–294) runs four sets of OLS PCSE regressions on about 3300 country-year observations (from 1976–2004). He finds a significant positive effect of democracy in the two most parsimonious model specifications for all three measures. However, the Polity and Freedom House measures remain significant (*at least* at the 10 percent level) for the two most extensive model specifications incorporating additional controls, whereas ACLP/DD turns out to be far from significant when adding these controls (decade dummies are added to the third model, and absolute latitude, urbanization rate and trade as share of GDP are then further added to the fourth model). Although Knutsen reports that small differences in the sample composition account for some of this divergence (at least when comparing DD to Freedom House), he speculates that the difference may be due to Polity and Freedom House capturing other dimensions of democracy in addition to contestation.

Table A.1: Selected empirical studies on democracy and economic growth: democracy measures used and findings.

The first four contributions are widely cited studies on democracy and growth that use different measures. The last three studies are included because they compare estimates of democracy on growth for models using ACLP/DD as well as alternative democracy measures, holding other specification characteristics constant.

A.5 Descriptive statistics and lists of country-year observations

This section provides descriptive statistics for the main regime-type variables used in the paper, as well as lists of which country-years are coded as democracies under the different operationalizations.

	Mean	Median	Std. dev.	N
Autocracy as coded by DD	1.81	1.91	6.53	5134
Indisputable autocracies	1.54	1.71	6.68	3990
Type 2 regimes	2.99	2.77	5.72	1144
Democracy as coded by DD	2.52	2.58	3.64	4003
Democracy + Type 2 regimes	2.63	2.62	4.21	5147
Autocracy, Boix et al.	1.76	1.87	6.48	4891
Democracy, Boix et al.	2.55	2.60	3.71	3659

Table A.2: Summary statistics for GDP per capita growth (in percent) over regime type.

Cuba 1955-58	Mexico 1946-99	El Salvador 1964-78	Nicaragua 1951-78
Peru 1990-2000	Bolivia 1947-50	Bolivia 1956-63	Paraguay 1963-88
Russia 1991-2003	Georgia 1991-2002	Azerbaijan 1992-2003	Guinea-Bissau 1994-98
Eq. Guinea 1993-2003	Gambia 1965-2003	Senegal 1978-99	Mauritania 1992-2003
Niger 1996-99	Cote d'Ivoire 1990-98	Guinea 1995-2003	Burkina Faso 1978-79
Burkina Faso 1991-2003	Liberia 1985-89	Liberia 1997-2000	Togo 1994-2003
Cameroon 1992-2003	Gabon 1990-2003	Chad 1997-2003	Rep. Congo 2002-03
Kenya 1963	Kenya 1992-97	Tanzania 1995-2003	Rwanda 2003
Ethiopia 1994-2003	Mozambique 1994-2003	Zambia 1991-2003	South Africa 1950-2003
Namibia 1990-2003	Lesotho 1993-2003	Botswana 1966-2003	Madagascar 1960-71
Seychelles 1993-2003	Algeria 1997-2003	Tunisia 1994-2003	Turkey 1946-59
Egypt 1976-2003	Syria 1955-57	Arab Rep. Yemen 1990-2003	Tajikistan 1995-2003
Kyrgyztan 1991-2003	Uzbekistan 1991-2003	Kazakhstan 1991-2003	South Korea 1948-87
Pakistan 1965-68	Bangladesh 1979-81	Sri Lanka 1977-88	Cambodia 1998-2003
Malaysia 1971-2003	Singapore 1984-2003	Philippines 1978-85	

Table A.3: List of country-years recoded for Model II in Table 1: Type II regime observations entering the baseline regression models.

BMR democracies and DD dictatorships			
Cuba 1952	Costa Rica 1948	Brazil 1979-84	Russia 1992-98
Belarus 1991-93	Guinea-Bissau 1994-97	Gambia 1972-93	Niger 1999
Mozambique 1994-2003	South Africa 1994-2003	Lesotho 2002-03	Botswana 1966-2003
Lebanon 1975	Indonesia 1955-56		
BMR dictatorships and DD democracies			
Costa Rica 1946-47	Panama 1949	Panama 1989-90	Colombia 1948
Venezuela 1946-47	Ecuador 1946	Ecuador 2002	Peru 1946-47
Paraguay 1989-2002	Argentina 1946-54	Czechoslovakia 1989	Albania 1991
Albania 1996	Croatia 1991-1999	Romania 1990	Latvia 1991-92
Lithuania 1991	Armenia 1991-2003	Cape Verde 1990	Guinea-Bissau 2000-02
Sierra Leone 1996-2001	Ghana 1969	Ghana 1993-96	Nigeria 1999-2003
Rep. Congo 1992-96	Kenya 1998-2001	Comoros 1990-94	Lebanon 1950-70
Japan 1946-51	Sri Lanka 1989-90	Nepal 1990	Thailand 1979-82

Table A.4: List of country-years recoded for Model V in Table 1: Regime observations that differ on DD and BMR entering the baseline regression models.

1970	1980	1990	BMR democracies 2005
Dominican Republic	Trinidad and Tobago	Honduras	Guyana
Trinidad and Tobago	Guatemala	Panama	South Africa
Barbados	Ecuador	Paraguay	Lesotho
Guatemala	Peru	Chile	Botswana
Switzerland	Switzerland	Switzerland	
Italy	Spain	Czechoslovakia	
Ghana	Italy	Italy	
Mauritius	Greece	Bulgaria	
Israel	Ghana	Switzerland	
Japan	Nigeria	Romania	
India	Uganda	Cape Verde	
	Mauritius	Comoros	
	Japan	Mongolia	
	Thailand	South Korea	
		Japan	
		Pakistan	
		Bangladesh	
		Nepal	

Table A.5: The three leftmost columns list democratic countries, as coded by the DD measure in Cheibub et al. (2010), that are coded autocratic on the real-time DD measure in selected years, and that are included in the regressions in Table 3. The rightmost column lists regimes coded democratic by BMR in 2005, but dictatorial by DD for the same year.

A.6 Robustness tests of models in Section 4.1.

This section provides tables showing tests discussed, but not reported in tables, in Section 4.1. Most of these are considered robustness tests of our baseline regression models in Table 1. The sequence of the tables in this section unfolds as follows: First, we report random effects and fixed effects specifications of our baseline models. Second, we show tables applying alternative lag structures to the independent variables (1- and 3-year lags, respectively). Third, we report our baseline models with additional control variables, namely lagged growth (1 and 5-year lags), log regime duration, population growth, plurality religion, and log oil and gas income. Fourth, we show models testing whether our results are robust to restricting the sample by dropping country-year observations that may arguably be considered neither democracies nor autocracies (but, for example, rather as foreign occupied countries or countries experiencing anarchy). Finally, we include a table with the results for an adjusted DD measure, where regimes scored as democratic by GWF but dictatorial by DD are recoded democratic.

A.6.1 Random and fixed effects

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.050	0.599**	0.122	0.084	0.216
	(0.19)	(2.23)	(0.45)	(0.32)	(0.83)
Ln GDP p.c.	-1.438****	-1.509****	-1.450****	-1.321****	-1.338****
	(-4.88)	(-5.18)	(-4.88)	(-4.56)	(-4.57)
Ln population	-0.217	-0.235*	-0.218	-0.180	-0.183
	(-1.59)	(-1.71)	(-1.60)	(-1.35)	(-1.37)
Ethnic fract.	-1.876**	-1.803**	-1.865**	-1.997**	-1.989**
	(-2.21)	(-2.18)	(-2.20)	(-2.42)	(-2.42)
E.Eur.–ex-Soviet	0.310	0.458	0.341	0.324	0.392
	(0.51)	(0.76)	(0.57)	(0.54)	(0.67)
S.S. Africa	-4.415****	-4.293****	-4.392****	-4.005****	-3.946****
	(-4.64)	(-4.43)	(-4.61)	(-4.35)	(-4.31)
Asia	-1.774**	-1.624*	-1.752**	-1.575*	-1.520*
	(-2.07)	(-1.88)	(-2.04)	(-1.88)	(-1.82)
M.East–N.Afr.	-2.101****	-1.794****	-2.056****	-1.893****	-1.799****
	(-3.99)	(-3.37)	(-3.94)	(-3.73)	(-3.68)
Latin America	-2.670****	-2.650****	-2.661****	-2.487****	-2.458****
	(-5.09)	(-4.96)	(-5.09)	(-4.94)	(-4.93)
1940s	-2.611****	-2.520****	-2.608****	-2.486****	-2.458****
	(-4.65)	(-4.45)	(-4.65)	(-4.40)	(-4.35)
1950s	-2.340****	-2.227****	-2.333****	-2.248****	-2.230****
	(-5.66)	(-5.30)	(-5.64)	(-5.29)	(-5.26)
1960s	-1.354****	-1.198***	-1.343***	-1.300***	-1.279***
	(-3.32)	(-2.88)	(-3.28)	(-3.14)	(-3.09)
1970s	-2.916****	-2.716****	-2.899****	-2.911****	-2.883****
	(-8.29)	(-7.54)	(-8.21)	(-8.14)	(-8.08)
1980s	-3.415****	-3.244****	-3.401****	-3.432****	-3.409****
	(-9.38)	(-8.88)	(-9.31)	(-9.31)	(-9.30)
1990s	-1.553****	-1.529****	-1.551****	-1.608****	-1.603****
	(-6.13)	(-5.99)	(-6.12)	(-6.33)	(-6.30)
Constant	22.129****	22.427****	22.179****	20.433****	20.496****
	(5.56)	(5.63)	(5.57)	(5.28)	(5.29)
N	6873	6873	6873	6730	6730

Table A.6: Robustness testing with random effects models.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are random effects models with errors clustered on country. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	-0.031	0.435	-0.031	-0.025	0.063
	(-0.12)	(1.62)	(-0.12)	(-0.10)	(0.26)
Ln GDP p.c.	-3.292****	-3.329****	-3.292****	-3.277****	-3.283****
	(-6.38)	(-6.49)	(-6.38)	(-6.23)	(-6.24)
Ln population	-1.239	-1.303*	-1.239	-1.391*	-1.390*
	(-1.60)	(-1.68)	(-1.60)	(-1.77)	(-1.77)
1940s	-5.524****	-5.480****	-5.524****	-5.686****	-5.666****
	(-4.77)	(-4.73)	(-4.77)	(-4.83)	(-4.83)
1950s	-4.782****	-4.723****	-4.782****	-4.943****	-4.924****
	(-5.47)	(-5.39)	(-5.47)	(-5.59)	(-5.58)
1960s	-2.955****	-2.862****	-2.955****	-3.075****	-3.057****
	(-3.93)	(-3.80)	(-3.93)	(-4.04)	(-4.02)
1970s	-3.855****	-3.721****	-3.855****	-3.966****	-3.943****
	(-7.20)	(-6.93)	(-7.20)	(-7.34)	(-7.34)
1980s	-3.966****	-3.847****	-3.966****	-4.042****	-4.025****
	(-8.63)	(-8.44)	(-8.63)	(-8.75)	(-8.79)
1990s	-1.871****	-1.856****	-1.871****	-1.951****	-1.947****
	(-6.62)	(-6.52)	(-6.62)	(-6.90)	(-6.90)
Constant	50.998****	52.006****	50.998****	53.390****	53.378****
	(3.36)	(3.43)	(3.36)	(3.46)	(3.46)
N	6873	6873	6873	6730	6730

Table A.7: Robustness testing with fixed effects models.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are fixed effects models with errors clustered on country. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

A.6.2 Alternative lag structures

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.119	0.627***	0.206	0.156	0.404**
	(0.57)	(3.03)	(1.00)	(0.74)	(2.08)
Ln GDP p.c.	-0.179	-0.240	-0.187	-0.171	-0.195
	(-0.73)	(-0.99)	(-0.77)	(-0.70)	(-0.81)
Ln population	0.064	0.043	0.060	0.076	0.068
	(1.07)	(0.70)	(1.00)	(1.22)	(1.10)
Ethnic fract.	-1.919****	-1.870****	-1.907****	-1.958****	-1.952****
	(-4.99)	(-4.80)	(-4.96)	(-5.09)	(-5.06)
E.Eur–ex-Soviet	0.144	0.366	0.191	0.135	0.281
	(0.21)	(0.52)	(0.28)	(0.20)	(0.43)
S.S. Africa	-1.069*	-0.971	-1.020	-0.995	-0.858
	(-1.67)	(-1.54)	(-1.60)	(-1.56)	(-1.35)
Asia	0.274	0.414	0.311	0.318	0.428
	(0.46)	(0.71)	(0.53)	(0.54)	(0.73)
M.East–N.Afr.	-0.222	0.060	-0.160	-0.156	0.028
	(-0.50)	(0.14)	(-0.36)	(-0.35)	(0.06)
Latin America	-1.024**	-1.017**	-1.008**	-1.011**	-0.947**
	(-2.31)	(-2.31)	(-2.28)	(-2.29)	(-2.15)
1940s	0.789	0.893	0.806	0.923	0.987
	(1.02)	(1.17)	(1.04)	(1.18)	(1.26)
1950s	-0.356	-0.219	-0.336	-0.263	-0.213
	(-0.59)	(-0.37)	(-0.56)	(-0.43)	(-0.35)
1960s	-0.125	0.064	-0.105	-0.119	-0.068
	(-0.23)	(0.12)	(-0.20)	(-0.22)	(-0.13)
1970s	-0.771	-0.533	-0.745	-0.733	-0.676
	(-1.45)	(-1.02)	(-1.40)	(-1.38)	(-1.28)
1980s	-2.732****	-2.519****	-2.711****	-2.731****	-2.688****
	(-5.17)	(-4.85)	(-5.13)	(-5.21)	(-5.13)
1990s	-1.845***	-1.800***	-1.840***	-1.856****	-1.844****
	(-3.23)	(-3.19)	(-3.22)	(-3.31)	(-3.29)
Constant	4.587*	4.850*	4.618*	4.288*	4.363*
	(1.79)	(1.89)	(1.80)	(1.68)	(1.72)
N	7491	7491	7491	7324	7324

Table A.8: Robustness testing with alternative lag structure (1 year).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 1 year. Maximum length of time series is 1947–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.241	0.684****	0.342*	0.276	0.410**
	(1.17)	(3.57)	(1.68)	(1.35)	(2.15)
Ln GDP p.c.	-0.315	-0.370	-0.325	-0.286	-0.299
	(-1.31)	(-1.57)	(-1.35)	(-1.19)	(-1.26)
Ln population	0.045	0.026	0.039	0.067	0.063
	(0.82)	(0.45)	(0.72)	(1.19)	(1.11)
Ethnic fract.	-1.792****	-1.743****	-1.775****	-1.855****	-1.859****
	(-4.96)	(-4.84)	(-4.92)	(-5.11)	(-5.11)
E.Eur.–ex-Soviet	0.509	0.694	0.566	0.475	0.559
	(0.92)	(1.25)	(1.04)	(0.88)	(1.03)
S.S. Africa	-1.401**	-1.343**	-1.349**	-1.256**	-1.179*
	(-2.28)	(-2.27)	(-2.20)	(-2.04)	(-1.92)
Asia	0.050	0.176	0.095	0.106	0.172
	(0.08)	(0.29)	(0.15)	(0.17)	(0.28)
M.East–N.Africa	-0.395	-0.147	-0.324	-0.303	-0.194
	(-0.90)	(-0.35)	(-0.74)	(-0.69)	(-0.44)
Latin America	-1.165***	-1.176***	-1.150***	-1.115**	-1.073**
	(-2.67)	(-2.74)	(-2.64)	(-2.56)	(-2.46)
1940s	-1.274*	-1.143	-1.253*	-1.158	-1.105
	(-1.68)	(-1.53)	(-1.65)	(-1.51)	(-1.44)
1950s	-0.914	-0.777	-0.891	-0.869	-0.837
	(-1.49)	(-1.29)	(-1.46)	(-1.43)	(-1.38)
1960s	-0.743	-0.557	-0.721	-0.742	-0.713
	(-1.34)	(-1.03)	(-1.30)	(-1.35)	(-1.30)
1970s	-1.695***	-1.473***	-1.667***	-1.688***	-1.662***
	(-3.06)	(-2.72)	(-3.01)	(-3.07)	(-3.04)
1980s	-3.149****	-2.957****	-3.128****	-3.147****	-3.132****
	(-5.72)	(-5.48)	(-5.68)	(-5.77)	(-5.77)
1990s	-1.844****	-1.808***	-1.837***	-1.894****	-1.890****
	(-3.30)	(-3.28)	(-3.29)	(-3.45)	(-3.45)
Constant	6.507***	6.763***	6.569***	5.881**	5.909**
	(2.65)	(2.79)	(2.67)	(2.41)	(2.43)
N	7180	7180	7180	7025	7025

Table A.9: Robustness testing with alternative lag structure (3 years).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 3 years. Maximum length of time series is 1949–2008 on dependent variable, GDP per capita growth (in percentage).

A.6.3 Additional controls

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.147	0.669***	0.263	0.190	0.417**
	(0.70)	(3.29)	(1.28)	(0.91)	(2.11)
Lag GDP p.c. growth	0.034	0.034	0.034	0.039	0.039
	(1.39)	(1.39)	(1.39)	(1.62)	(1.61)
Ln GDP p.c.	-0.356	-0.425*	-0.370	-0.343	-0.367
	(-1.51)	(-1.86)	(-1.57)	(-1.45)	(-1.57)
Ln population	0.025	0.002	0.020	0.037	0.030
	(0.45)	(0.03)	(0.34)	(0.62)	(0.50)
Ethnic fraction.	-1.628****	-1.569****	-1.606****	-1.673****	-1.661****
	(-4.02)	(-3.88)	(-3.98)	(-4.05)	(-4.02)
E.Eur–ex-Soviet	1.080**	1.257***	1.139**	0.968**	1.099**
	(2.27)	(2.69)	(2.41)	(2.02)	(2.29)
S.S. Africa	-1.555**	-1.449**	-1.500**	-1.470**	-1.348**
	(-2.55)	(-2.45)	(-2.47)	(-2.41)	(-2.21)
Asia	-0.032	0.115	0.014	-0.002	0.104
	(-0.05)	(0.19)	(0.02)	(-0.00)	(0.17)
M.East–N.Africa	-0.461	-0.164	-0.381	-0.410	-0.237
	(-1.03)	(-0.38)	(-0.86)	(-0.92)	(-0.53)
Latin America	-1.136***	-1.137***	-1.120***	-1.113***	-1.057**
	(-2.65)	(-2.69)	(-2.62)	(-2.60)	(-2.48)
1940s	-0.933	-0.825	-0.917	-0.901	-0.833
	(-1.20)	(-1.07)	(-1.18)	(-1.14)	(-1.05)
1950s	-0.908	-0.770	-0.887	-0.892	-0.843
	(-1.45)	(-1.24)	(-1.42)	(-1.41)	(-1.33)
1960s	-0.686	-0.493	-0.662	-0.669	-0.622
	(-1.18)	(-0.86)	(-1.14)	(-1.14)	(-1.06)
1970s	-2.303****	-2.074****	-2.274****	-2.303****	-2.254****
	(-4.02)	(-3.64)	(-3.97)	(-3.97)	(-3.88)
1980s	-2.980****	-2.786****	-2.957****	-2.972****	-2.938****
	(-5.21)	(-4.89)	(-5.18)	(-5.14)	(-5.08)
1990s	-1.029*	-0.994*	-1.022*	-1.064*	-1.053*
	(-1.82)	(-1.77)	(-1.81)	(-1.86)	(-1.84)
Constant	7.058***	7.419****	7.139***	6.734***	6.802***
	(3.09)	(3.34)	(3.13)	(2.97)	(3.01)
N	6841	6841	6841	6700	6700

Table A.10: Robustness testing when controlling for lagged growth (5-year lags).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.099	0.521***	0.194	0.120	0.279*
	(0.63)	(3.22)	(1.25)	(0.76)	(1.88)
Lag GDP p.c. growth	0.287****	0.286****	0.287****	0.278****	0.277****
	(10.40)	(10.39)	(10.40)	(10.26)	(10.25)
Ln GDP p.c.	-0.095	-0.153	-0.105	-0.081	-0.098
	(-0.53)	(-0.85)	(-0.59)	(-0.45)	(-0.55)
Ln population	0.024	0.006	0.020	0.037	0.031
	(0.55)	(0.12)	(0.47)	(0.81)	(0.69)
Ethnic fraction.	-1.370****	-1.324****	-1.358****	-1.436****	-1.433****
	(-4.63)	(-4.42)	(-4.59)	(-4.86)	(-4.84)
E.Europe-ex-Soviet	0.111	0.286	0.161	0.114	0.207
	(0.23)	(0.57)	(0.33)	(0.24)	(0.44)
S.S. Africa	-0.673	-0.612	-0.626	-0.604	-0.521
	(-1.42)	(-1.33)	(-1.33)	(-1.28)	(-1.11)
Asia	0.350	0.454	0.390	0.391	0.463
	(0.81)	(1.07)	(0.91)	(0.91)	(1.08)
M.East–N.Africa	-0.157	0.070	-0.092	-0.098	0.019
	(-0.46)	(0.21)	(-0.27)	(-0.29)	(0.06)
Latin America	-0.681**	-0.678**	-0.664**	-0.667**	-0.627*
	(-2.08)	(-2.09)	(-2.03)	(-2.04)	(-1.92)
1940s	-0.414	-0.329	-0.400	-0.299	-0.255
	(-0.70)	(-0.56)	(-0.68)	(-0.50)	(-0.42)
1950s	-0.425	-0.321	-0.407	-0.362	-0.331
	(-0.94)	(-0.72)	(-0.90)	(-0.79)	(-0.73)
1960s	-0.151	-0.003	-0.132	-0.140	-0.108
	(-0.37)	(-0.01)	(-0.33)	(-0.34)	(-0.27)
1970s	-0.701*	-0.512	-0.675*	-0.673*	-0.636
	(-1.74)	(-1.30)	(-1.68)	(-1.66)	(-1.57)
1980s	-2.140****	-1.971****	-2.119****	-2.154****	-2.126****
	(-5.37)	(-5.05)	(-5.32)	(-5.39)	(-5.32)
1990s	-1.364***	-1.335***	-1.360***	-1.385***	-1.379***
	(-3.15)	(-3.12)	(-3.14)	(-3.23)	(-3.22)
Constant	3.434*	3.748**	3.478*	3.114	3.184*
	(1.81)	(1.98)	(1.83)	(1.64)	(1.68)
N	7460	7460	7460	7295	7295

Table A.11: Robustness testing when controlling for lagged growth (1-year lags).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 1 year. Maximum length of time series is 1947–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.159	0.710****	0.273	0.202	0.427**
	(0.74)	(3.49)	(1.30)	(0.94)	(2.10)
Ln regime duration	-0.045	-0.043	-0.043	-0.034	-0.034
	(-0.51)	(-0.49)	(-0.50)	(-0.39)	(-0.38)
Ln GDP p.c.	-0.313	-0.385	-0.327	-0.302	-0.326
	(-1.25)	(-1.59)	(-1.30)	(-1.20)	(-1.31)
Ln population	0.034	0.010	0.028	0.036	0.030
	(0.54)	(0.15)	(0.44)	(0.58)	(0.47)
Ethnic fraction.	-1.659****	-1.589****	-1.633****	-1.676****	-1.660****
	(-4.04)	(-3.87)	(-3.99)	(-4.01)	(-3.96)
E.Eur–ex-Soviet	0.966*	1.174**	1.024**	0.912*	1.044**
	(1.95)	(2.41)	(2.08)	(1.84)	(2.10)
S.S. Africa	-1.553**	-1.440**	-1.501**	-1.465**	-1.346**
	(-2.49)	(-2.38)	(-2.41)	(-2.33)	(-2.14)
Asia	0.091	0.256	0.139	0.170	0.274
	(0.15)	(0.42)	(0.23)	(0.28)	(0.44)
M.East–N.Afr.	-0.507	-0.187	-0.429	-0.437	-0.265
	(-1.12)	(-0.42)	(-0.95)	(-0.96)	(-0.58)
Latin America	-1.157***	-1.153***	-1.141***	-1.115**	-1.059**
	(-2.66)	(-2.70)	(-2.63)	(-2.54)	(-2.43)
1940s	-0.845	-0.727	-0.826	-0.809	-0.739
	(-1.08)	(-0.94)	(-1.06)	(-1.02)	(-0.93)
1950s	-0.900	-0.758	-0.878	-0.869	-0.817
	(-1.42)	(-1.21)	(-1.39)	(-1.34)	(-1.26)
1960s	-0.655	-0.455	-0.631	-0.622	-0.573
	(-1.13)	(-0.79)	(-1.09)	(-1.05)	(-0.97)
1970s	-2.268****	-2.029****	-2.239****	-2.256****	-2.207****
	(-3.97)	(-3.58)	(-3.92)	(-3.87)	(-3.79)
1980s	-3.029****	-2.828****	-3.007****	-3.023****	-2.989****
	(-5.32)	(-4.99)	(-5.28)	(-5.21)	(-5.15)
1990s	-1.062*	-1.027*	-1.054*	-1.094*	-1.082*
	(-1.89)	(-1.84)	(-1.88)	(-1.91)	(-1.89)
Constant	6.760***	7.111***	6.844***	6.530***	6.595***
	(2.87)	(3.10)	(2.90)	(2.79)	(2.83)
N	6729	6729	6729	6593	6593

Table A.12: Robustness testing additional control variable (log regime duration).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.194	0.706****	0.344	0.219	0.494**
	(0.89)	(3.51)	(1.60)	(1.00)	(2.41)
Population growth	-5.004	-5.209	-4.996	-4.375	-4.418
	(-0.61)	(-0.64)	(-0.61)	(-0.53)	(-0.54)
Ln GDP p.c.	-0.312	-0.380	-0.329	-0.285	-0.313
	(-1.29)	(-1.64)	(-1.36)	(-1.18)	(-1.31)
Ln population	0.044	0.019	0.037	0.061	0.052
	(0.73)	(0.31)	(0.61)	(1.00)	(0.85)
Ethnic fraction.	-1.450****	-1.391****	-1.423****	-1.515****	-1.498****
	(-3.50)	(-3.36)	(-3.44)	(-3.60)	(-3.56)
E.Europe–ex-Soviet	1.140**	1.327***	1.215***	1.087**	1.240***
	(2.41)	(2.81)	(2.59)	(2.28)	(2.58)
S.S. Africa	-1.405**	-1.313**	-1.332**	-1.312**	-1.165*
	(-2.25)	(-2.15)	(-2.14)	(-2.08)	(-1.85)
Asia	0.048	0.195	0.108	0.068	0.193
	(0.08)	(0.31)	(0.17)	(0.11)	(0.30)
M.East–N.Africa	-0.328	-0.040	-0.225	-0.292	-0.085
	(-0.69)	(-0.09)	(-0.48)	(-0.62)	(-0.18)
Latin America	-0.998**	-1.004**	-0.975**	-0.975**	-0.908**
	(-2.22)	(-2.26)	(-2.18)	(-2.17)	(-2.02)
1940s	-0.989	-0.884	-0.965	-0.965	-0.887
	(-1.20)	(-1.09)	(-1.18)	(-1.15)	(-1.05)
1950s	-0.733	-0.599	-0.705	-0.712	-0.651
	(-1.16)	(-0.96)	(-1.12)	(-1.10)	(-1.01)
1960s	-0.579	-0.392	-0.550	-0.559	-0.502
	(-0.99)	(-0.67)	(-0.94)	(-0.93)	(-0.84)
1970s	-2.272****	-2.046****	-2.234****	-2.273****	-2.213****
	(-3.92)	(-3.55)	(-3.86)	(-3.85)	(-3.74)
1980s	-2.978****	-2.787****	-2.949****	-2.979****	-2.936****
	(-5.17)	(-4.85)	(-5.12)	(-5.07)	(-4.99)
1990s	-1.017*	-0.983*	-1.007*	-1.046*	-1.032*
	(-1.79)	(-1.74)	(-1.78)	(-1.81)	(-1.79)
Constant	6.287***	6.672***	6.384***	5.779***	5.871***
	(2.78)	(3.03)	(2.82)	(2.58)	(2.64)
N	6728	6728	6728	6590	6590

Table A.13: Robustness testing with additional control variable (population growth).
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.134	0.641***	0.261	0.175	0.355*
	(0.59)	(3.00)	(1.18)	(0.80)	(1.68)
Ln oil+gas income	-0.030	-0.012	-0.026	-0.020	-0.014
	(-0.56)	(-0.24)	(-0.49)	(-0.37)	(-0.26)
Ln GDP p.c.	-0.310	-0.402	-0.332	-0.303	-0.331
	(-1.15)	(-1.56)	(-1.23)	(-1.14)	(-1.26)
Ln population	0.033	0.006	0.026	0.048	0.042
	(0.50)	(0.09)	(0.39)	(0.70)	(0.60)
Ethnic fraction.	-2.163****	-2.163****	-2.144****	-2.281****	-2.276****
	(-4.93)	(-5.02)	(-4.90)	(-5.04)	(-5.04)
E.Europe–ex-Soviet	1.006**	1.128**	1.057**	0.862*	0.950*
	(2.11)	(2.38)	(2.23)	(1.78)	(1.95)
S.S. Africa	-1.289**	-1.195*	-1.238*	-1.177*	-1.092*
	(-1.96)	(-1.88)	(-1.89)	(-1.78)	(-1.66)
Asia	0.287	0.434	0.328	0.291	0.360
	(0.44)	(0.68)	(0.50)	(0.45)	(0.55)
M.East–N.Africa	-0.332	-0.087	-0.258	-0.314	-0.196
	(-0.71)	(-0.19)	(-0.56)	(-0.67)	(-0.42)
Latin America	-0.811*	-0.832*	-0.802*	-0.794*	-0.760*
	(-1.76)	(-1.84)	(-1.75)	(-1.73)	(-1.66)
1940s	-1.443*	-1.337	-1.429	-1.377	-1.307
	(-1.66)	(-1.55)	(-1.64)	(-1.52)	(-1.44)
1950s	-1.003	-0.847	-0.977	-0.986	-0.947
	(-1.39)	(-1.19)	(-1.36)	(-1.35)	(-1.30)
1960s	-0.663	-0.467	-0.635	-0.629	-0.586
	(-1.11)	(-0.79)	(-1.06)	(-1.03)	(-0.96)
1970s	-2.333****	-2.114****	-2.301****	-2.327****	-2.288****
	(-3.97)	(-3.63)	(-3.92)	(-3.89)	(-3.82)
1980s	-3.064****	-2.877****	-3.038****	-3.064****	-3.036****
	(-5.23)	(-4.95)	(-5.19)	(-5.13)	(-5.09)
1990s	-1.050*	-1.012*	-1.041*	-1.077*	-1.065*
	(-1.83)	(-1.78)	(-1.81)	(-1.84)	(-1.82)
Constant	6.781**	7.399***	6.943***	6.465**	6.610**
	(2.55)	(2.86)	(2.61)	(2.48)	(2.56)
N	6260	6260	6260	6149	6149

Table A.14: Robustness testing with additional control variable (log oil and gas income).
Notes:**** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.284	0.763****	0.398*	0.323	0.517**
	(1.28)	(3.76)	(1.82)	(1.48)	(2.56)
Sunni	-1.221*	-0.902	-1.124*	-1.162*	-0.998
	(-1.91)	(-1.47)	(-1.77)	(-1.82)	(-1.57)
Shia	-2.113**	-1.759**	-2.027**	-2.088**	-1.888**
	(-2.48)	(-2.05)	(-2.38)	(-2.45)	(-2.17)
Catholic	-0.324	0.120	-0.225	-0.182	0.011
	(-0.44)	(0.17)	(-0.31)	(-0.24)	(0.01)
Protestant	-0.898	-0.501	-0.804	-0.763	-0.581
	(-1.38)	(-0.78)	(-1.23)	(-1.14)	(-0.88)
Orthodox	-0.021	0.447	0.084	0.323	0.500
	(-0.03)	(0.56)	(0.10)	(0.40)	(0.62)
Hindu	-0.376	-0.167	-0.328	-0.253	-0.154
	(-0.45)	(-0.20)	(-0.40)	(-0.30)	(-0.18)
Buddhist+	1.160	1.500*	1.279	1.235	1.440*
	(1.41)	(1.86)	(1.56)	(1.46)	(1.69)
Indigenous	-2.230****	-1.859***	-2.146****	-2.111****	-1.935***
	(-3.57)	(-3.00)	(-3.45)	(-3.34)	(-3.06)
Ln GDP p.c.	-0.517**	-0.586**	-0.530**	-0.503**	-0.524**
	(-2.05)	(-2.39)	(-2.11)	(-2.01)	(-2.11)
Ln population	0.015	-0.007	0.010	0.027	0.023
	(0.24)	(-0.11)	(0.16)	(0.43)	(0.36)
Ethnic fract.	-0.912**	-0.834**	-0.885**	-1.011***	-0.994***
	(-2.44)	(-2.24)	(-2.39)	(-2.71)	(-2.65)
E.Eur–ex-Soviet	0.615	0.767*	0.668	0.473	0.596
	(1.37)	(1.72)	(1.49)	(1.04)	(1.30)
S.S. Africa	-1.628**	-1.535**	-1.576**	-1.467**	-1.358**
	(-2.53)	(-2.43)	(-2.45)	(-2.24)	(-2.08)
Asia	-1.051	-0.855	-1.010	-0.980	-0.879
	(-1.38)	(-1.11)	(-1.32)	(-1.23)	(-1.10)
M.East–N.Africa	0.048	0.395	0.128	0.210	0.380
	(0.09)	(0.78)	(0.25)	(0.40)	(0.72)
Latin America	-1.708****	-1.763****	-1.696****	-1.662****	-1.620****
	(-3.60)	(-3.80)	(-3.58)	(-3.53)	(-3.44)
1940s	-1.057	-0.952	-1.039	-1.006	-0.936
	(-1.37)	(-1.25)	(-1.35)	(-1.28)	(-1.19)
1950s	-1.038*	-0.905	-1.017	-1.011	-0.965
	(-1.67)	(-1.47)	(-1.64)	(-1.60)	(-1.53)
1960s	-0.721	-0.531	-0.698	-0.697	-0.654
	(-1.25)	(-0.93)	(-1.21)	(-1.19)	(-1.12)
1970s	-2.301****	-2.069****	-2.271****	-2.292****	-2.252****
	(-4.05)	(-3.67)	(-4.00)	(-3.98)	(-3.91)
1980s	-3.031****	-2.829****	-3.006****	-3.025****	-2.996****
	(-5.36)	(-5.04)	(-5.32)	(-5.28)	(-5.23)
1990s	-1.069*	-1.034*	-1.062*	-1.101*	-1.092*
	(-1.92)	(-1.87)	(-1.91)	(-1.96)	(-1.94)
Constant	9.157****	9.108****	9.130****	8.672****	8.528****
	(3.57)	(3.63)	(3.57)	(3.40)	(3.35)
N	6873	6873	6873	6730	6730

Table A.15: Robustness testing with additional control variables (plurality religion dummies).

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

A.6.4 Restricting the sample by excluding "non-regimes", as identified from the GWF data

	Model I Baseline DD *b/(t)*	Model II Re-coded DD: Type 2 democratic *b/(t)*	Model III Re-coded DD: Botswana democratic *b/(t)*	Model IV Baseline DD on BMR sample *b/(t)*	Model V BMR regime measure *b/(t)*
Democracy	0.072	0.591***	0.188	0.121	0.390*
	(0.33)	(2.73)	(0.88)	(0.57)	(1.88)
Ln GDP p.c.	-0.345	-0.406*	-0.358	-0.324	-0.351
	(-1.44)	(-1.75)	(-1.50)	(-1.35)	(-1.48)
Ln population	0.027	0.006	0.021	0.046	0.038
	(0.48)	(0.09)	(0.37)	(0.77)	(0.63)
Ethnic fractional.	-1.616****	-1.553****	-1.593****	-1.698****	-1.676****
	(-3.75)	(-3.61)	(-3.71)	(-3.86)	(-3.80)
E.Eur–ex-Soviet	0.993**	1.193***	1.051**	0.870*	1.024**
	(2.15)	(2.64)	(2.29)	(1.85)	(2.17)
S.S. Africa	-1.636***	-1.500**	-1.579**	-1.505**	-1.360**
	(-2.62)	(-2.47)	(-2.53)	(-2.40)	(-2.17)
Asia	0.046	0.217	0.095	0.113	0.239
	(0.08)	(0.36)	(0.16)	(0.19)	(0.39)
M.East–N.Africa	-0.542	-0.232	-0.461	-0.465	-0.264
	(-1.22)	(-0.53)	(-1.05)	(-1.05)	(-0.59)
Latin America	-1.186***	-1.168***	-1.169***	-1.142***	-1.079**
	(-2.75)	(-2.75)	(-2.71)	(-2.66)	(-2.52)
1940s	-0.916	-0.785	-0.894	-0.844	-0.769
	(-1.18)	(-1.02)	(-1.15)	(-1.07)	(-0.97)
1950s	-0.996	-0.837	-0.970	-0.962	-0.900
	(-1.58)	(-1.34)	(-1.54)	(-1.50)	(-1.41)
1960s	-0.633	-0.443	-0.609	-0.607	-0.549
	(-1.08)	(-0.76)	(-1.04)	(-1.02)	(-0.92)
1970s	-2.270****	-2.044****	-2.240****	-2.265****	-2.204****
	(-3.92)	(-3.55)	(-3.87)	(-3.86)	(-3.75)
1980s	-3.048****	-2.857****	-3.025****	-3.050****	-3.003****
	(-5.29)	(-4.97)	(-5.25)	(-5.21)	(-5.13)
1990s	-1.004*	-0.967*	-0.996*	-1.059*	-1.044*
	(-1.77)	(-1.72)	(-1.76)	(-1.84)	(-1.81)
Constant	7.080***	7.336***	7.158***	6.567***	6.638***
	(2.97)	(3.16)	(3.01)	(2.79)	(2.83)
N	6748	6748	6748	6618	6618

Table A.16: Robustness testing when excluding "non-regimes" from the sample, using Geddes, Wright and Frantz (2014*a*) data.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage). 125 observations are excluded from Models I-III, and 112 from Models IV-V.

A.6.5 Recoding observations (on DD) that are coded as ditatorships by DD, but as democracies by GWF

	Model I Baseline DD	Model II Re-coded DD: GWF-democracies coded democratic	Model III Baseline DD	Model IV Re-coded DD: GWF-democracies coded democratic
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	0.175	0.220	0.072	0.126
	(0.81)	(1.03)	(0.33)	(0.58)
Ln GDP p.c.	-0.343	-0.348	-0.345	-0.352
	(-1.43)	(-1.46)	(-1.44)	(-1.47)
Ln population	0.035	0.032	0.027	0.025
	(0.61)	(0.56)	(0.48)	(0.44)
Ethnic fraction.	-1.742****	-1.731****	-1.616****	-1.605****
	(-4.36)	(-4.33)	(-3.75)	(-3.73)
E.Eur.–ex-Soviet	1.057**	1.077**	0.993**	1.019**
	(2.29)	(2.35)	(2.15)	(2.23)
S.S. Africa	-1.508**	-1.497**	-1.636***	-1.615***
	(-2.42)	(-2.41)	(-2.62)	(-2.58)
Asia	0.027	0.041	0.046	0.066
	(0.04)	(0.07)	(0.08)	(0.11)
M.East–N.Africa	-0.464	-0.441	-0.542	-0.510
	(-1.03)	(-0.98)	(-1.22)	(-1.15)
Latin America	-1.115***	-1.115***	-1.186***	-1.180***
	(-2.58)	(-2.58)	(-2.75)	(-2.73)
1940s	-0.855	-0.865	-0.916	-0.918
	(-1.11)	(-1.12)	(-1.18)	(-1.19)
1950s	-0.911	-0.910	-0.996	-0.991
	(-1.46)	(-1.46)	(-1.58)	(-1.57)
1960s	-0.636	-0.632	-0.633	-0.627
	(-1.10)	(-1.09)	(-1.08)	(-1.07)
1970s	-2.250****	-2.237****	-2.270****	-2.256****
	(-3.91)	(-3.90)	(-3.92)	(-3.91)
1980s	-3.017****	-3.004****	-3.048****	-3.035****
	(-5.27)	(-5.26)	(-5.29)	(-5.27)
1990s	-1.056*	-1.055*	-1.004*	-1.002*
	(-1.88)	(-1.87)	(-1.77)	(-1.77)
Constant	6.858***	6.900***	7.080***	7.112***
	(2.96)	(2.98)	(2.97)	(2.99)
N	6873	6873	6748	6748
Countries	156	156	156	156
Recoded obs.	132	132	132	132
Recoded countries	43	43	43	43

Table A.17: What happens when DD is recoded so that all GWF-coded democracies are considered democratic?

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged with 5 years. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage). "Non-regimes" are excluded from the sample, using Geddes, Wright and Frantz (2014*a*) data, in Models III and IV.

A.7 Robustness tests for Section 4.2

This section presents the first-stage estimates of our Heckman models presented in Table 2 in the article, as well as the second-stage estimates for various robustness tests mentioned in the article. The latter are models including additional controls, models run on restricted samples (1946–1990), and models experimenting with 1- and 3-year lags on the independent variables.

Dependent variable:	Model I Baseline DD *b/(t)*	Model II Re-coded DD: Type 2 democratic *b/(t)*	Model III Re-coded DD: Botswana democratic *b/(t)*	Model IV Baseline DD on BMR sample *b/(t)*	Model V BMR regime measure *b/(t)*
WAVE	-0.881****	-0.922****	-0.863****	-0.880****	-0.799***
	(-3.86)	(-5.58)	(-4.71)	(-3.83)	(-3.21)
Ln GDP p.c.	0.539****	0.662****	0.543****	0.534****	0.554****
	(3.92)	(5.37)	(3.96)	(3.86)	(4.24)
Ln population	0.029	0.061	-0.002	0.030	0.018
	(0.33)	(0.81)	(-0.02)	(0.34)	(0.21)
Ethnic fractional.	-0.274	-0.405	-0.446	-0.315	-0.212
	(-0.73)	(-1.01)	(-1.18)	(-0.84)	(-0.56)
E.Eur.–ex-Soviet	-1.976****	-1.608****	-1.953****	-1.967****	-2.044****
	(-5.86)	(-4.50)	(-5.79)	(-5.80)	(-6.26)
S.S. Africa	-1.518***	-0.417	-1.331**	-1.513***	-1.368***
	(-2.90)	(-0.82)	(-2.51)	(-2.88)	(-2.72)
Asia	-1.260***	-0.733	-1.191***	-1.287***	-1.301***
	(-2.80)	(-1.55)	(-2.61)	(-2.85)	(-2.91)
M.East–N.Africa	-2.326****	-1.898****	-2.277****	-2.304****	-2.449****
	(-4.72)	(-4.03)	(-4.59)	(-4.64)	(-4.45)
Latin America	-0.721**	-0.192	-0.703*	-0.720**	-0.821**
	(-1.98)	(-0.53)	(-1.91)	(-1.97)	(-2.21)
1940s	-0.565**	-0.767***	-0.534**	-0.585**	-0.775***
	(-2.30)	(-2.76)	(-2.22)	(-2.37)	(-2.94)
1950s	-0.744****	-0.973****	-0.700***	-0.793****	-0.717***
	(-3.36)	(-4.15)	(-3.15)	(-3.56)	(-3.10)
1960s	-0.600***	-0.948****	-0.573***	-0.609***	-0.554***
	(-3.15)	(-5.10)	(-3.09)	(-3.15)	(-2.86)
1970s	-0.986****	-1.270****	-0.910****	-1.000****	-0.810****
	(-5.34)	(-7.22)	(-5.01)	(-5.37)	(-3.88)
1980s	-0.952****	-1.275****	-0.898****	-0.966****	-0.781****
	(-6.43)	(-7.94)	(-6.07)	(-6.47)	(-4.82)
1990s	-0.311****	-0.354****	-0.276***	-0.316****	-0.280***
	(-3.49)	(-4.07)	(-3.07)	(-3.48)	(-2.65)
Constant	-2.716	-4.005**	-2.263	-2.653	-2.769
	(-1.45)	(-2.31)	(-1.24)	(-1.41)	(-1.48)
N	6701	6701	6701	6593	6593
Countries	154	154	154	152	152

Table A.18: The first stage (probit models) of the Heckman Treatment-Effects models in Table 2 – different regime type measures as dependent variables.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. WAVE from Knutsen (2011*b*) – capturing whether the regime originated within one of Huntington's (1991) reverse waves of democratization or not – is the instrument. Maximum length of time series is 1946–2003.

	Model I Baseline DD *b/(t)*	Model II Re-coded DD: Type 2 democratic *b/(t)*	Model III Re-coded DD: Botswana democratic *b/(t)*	Model IV Baseline DD on BMR sample *b/(t)*	Model V BMR regime measure *b/(t)*
Democracy	2.377	1.337**	0.328	2.318	1.196
	(0.83)	(2.18)	(0.15)	(0.77)	(0.19)
Ln regime duration	-0.075	-0.059	-0.069	-0.072	-0.067
	(-0.79)	(-0.64)	(-0.73)	(-0.74)	(-0.67)
Ln GDP p.c.	-0.459	-0.381	-0.200	-0.444	-0.317
	(-1.00)	(-1.64)	(-0.50)	(-0.94)	(-0.33)
Ln population	-0.076	-0.077	-0.043	-0.066	-0.050
	(-0.56)	(-0.69)	(-0.41)	(-0.48)	(-0.34)
Ethnic fraction.	-1.408**	-1.467**	-1.619**	-1.446**	-1.603*
	(-2.02)	(-2.34)	(-2.09)	(-2.02)	(-1.73)
E.Europe–ex-Soviet	2.158	1.454***	1.146	2.064	1.542
	(1.45)	(2.78)	(1.03)	(1.34)	(0.46)
S.S. Africa	-0.259	-1.143	-1.207	-0.260	-0.820
	(-0.17)	(-1.58)	(-1.24)	(-0.17)	(-0.31)
Asia	1.295	0.676	0.540	1.304	0.885
	(1.01)	(0.99)	(0.58)	(0.98)	(0.36)
M.East–N.Africa	0.868	0.020	-0.451	0.854	0.163
	(0.45)	(0.04)	(-0.32)	(0.42)	(0.04)
Latin America	-0.712	-1.132***	-1.092**	-0.717	-0.909
	(-1.14)	(-2.99)	(-2.43)	(-1.10)	(-0.71)
1940s	-1.160**	-1.189**	-1.349***	-1.187**	-1.224
	(-2.10)	(-2.40)	(-2.64)	(-2.07)	(-1.10)
1950s	-1.020*	-1.070**	-1.285***	-1.027	-1.198
	(-1.78)	(-2.57)	(-2.67)	(-1.64)	(-1.22)
1960s	-0.494	-0.518	-0.838*	-0.521	-0.724
	(-0.87)	(-1.33)	(-1.74)	(-0.87)	(-0.68)
1970s	-2.136***	-2.240****	-2.660****	-2.179***	-2.501
	(-2.76)	(-5.71)	(-4.16)	(-2.64)	(-1.62)
1980s	-2.879****	-2.941****	-3.307****	-2.922****	-3.190**
	(-4.49)	(-7.52)	(-5.82)	(-4.30)	(-2.57)
1990s	-1.385****	-1.396****	-1.441****	-1.434****	-1.463****
	(-5.21)	(-5.47)	(-5.74)	(-5.23)	(-4.66)
Constant	7.978**	8.239***	7.274***	7.780**	7.574*
	(2.56)	(3.22)	(2.73)	(2.51)	(1.86)
N	6701	6701	6701	6593	6593
Countries	154	154	154	152	152

Table A.19: Robustness testing the Heckman Treatment-Effects models in Table 2 (second-stage equations) – adding log regime duration as control.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are Heckman-type Treatment-Effects model. Independent variables are lagged with 5 years. Democracy is considered endogenous, and WAVE from Knutsen (2011*b*) – capturing whether the regime originated within one of Huntington's (1991) reverse waves of democratization or not – is used as instrument in the first stage. Maximum length of time series is 1951–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	1.131	1.001**	0.689	1.211	0.979
	(0.84)	(2.25)	(0.71)	(0.92)	(0.91)
Ln GDP p.c.	0.076	0.061	0.124	0.086	0.099
	(0.26)	(0.30)	(0.47)	(0.30)	(0.35)
Ln population	-0.012	-0.023	-0.003	0.007	0.009
	(-0.13)	(-0.24)	(-0.04)	(0.07)	(0.10)
Ethnic fraction.	-1.757***	-1.730***	-1.785***	-1.879***	-1.922***
	(-2.88)	(-3.10)	(-2.92)	(-3.04)	(-3.19)
E.Eur.–ex-Soviet	1.002	0.783*	0.788	0.931	0.844
	(1.45)	(1.94)	(1.48)	(1.38)	(1.42)
S.S. Africa	0.377	-0.008	0.139	0.535	0.375
	(0.47)	(-0.01)	(0.21)	(0.66)	(0.55)
Asia	1.661**	1.431**	1.477**	1.719**	1.618**
	(2.26)	(2.35)	(2.37)	(2.34)	(2.45)
M.East–N.Africa	0.647	0.415	0.348	0.784	0.645
	(0.70)	(0.91)	(0.51)	(0.86)	(0.86)
Latin America	-0.416	-0.607*	-0.503	-0.359	-0.394
	(-1.14)	(-1.71)	(-1.49)	(-0.96)	(-1.12)
1940s	0.957	0.984	0.910	0.966	0.994
	(1.53)	(1.59)	(1.47)	(1.53)	(1.56)
1950s	-0.480	-0.437	-0.543	-0.413	-0.463
	(-1.17)	(-1.18)	(-1.43)	(-0.97)	(-1.18)
1960s	0.054	0.146	-0.022	0.043	-0.012
	(0.12)	(0.38)	(-0.06)	(0.09)	(-0.03)
1970s	-0.818*	-0.728**	-0.932**	-0.807	-0.897**
	(-1.66)	(-1.99)	(-2.22)	(-1.64)	(-2.09)
1980s	-2.819****	-2.725****	-2.912****	-2.825****	-2.901****
	(-6.51)	(-7.33)	(-7.33)	(-6.47)	(-7.30)
1990s	-2.371****	-2.361****	-2.385****	-2.448****	-2.457****
	(-6.90)	(-6.97)	(-6.99)	(-7.09)	(-7.13)
Constant	2.623	3.012	2.510	2.187	2.308
	(1.15)	(1.38)	(1.14)	(0.96)	(1.02)
N	7311	7311	7311	7183	7183
Countries	154	154	154	152	152

Table A.20: Robustness testing the Heckman Treatment-Effects models in Table 2 (second-stage equations) – using 1-year lags on independent variables.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are Heckman-type Treatment-Effects model. Independent variables are lagged with 1 year. Democracy is considered endogenous, and WAVE from Knutsen (2011*b*) – capturing whether the regime originated within one of Huntington's (1991) reverse waves of democratization or not – is used as instrument in the first stage. Maximum length of time series is 1947–2008 on dependent variable, GDP per capita growth (in percentage).

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	1.296	1.239*	0.527	1.312	1.127
	(0.79)	(1.70)	(0.43)	(0.80)	(0.68)
Ln GDP p.c.	-0.404	-0.464	-0.286	-0.414	-0.376
	(-0.96)	(-1.38)	(-0.77)	(-0.97)	(-0.91)
Ln population	0.004	-0.009	0.027	0.005	0.018
	(0.03)	(-0.08)	(0.24)	(0.04)	(0.15)
Ethnic fraction.	-1.981***	-1.904***	-2.050***	-1.919***	-1.971***
	(-2.90)	(-2.93)	(-2.95)	(-2.77)	(-2.85)
E.Eur–ex-Soviet	0.480	0.363	-0.087	0.478	0.368
	(0.37)	(0.50)	(-0.08)	(0.37)	(0.28)
S.S. Africa	-0.907	-1.277	-1.244	-0.939	-0.995
	(-0.91)	(-1.58)	(-1.39)	(-0.94)	(-1.01)
Asia	0.762	0.461	0.473	0.787	0.760
	(0.72)	(0.52)	(0.49)	(0.75)	(0.70)
M.East–N.Africa	0.041	-0.152	-0.406	0.028	-0.011
	(0.04)	(-0.24)	(-0.46)	(0.03)	(-0.01)
Latin America	-0.948*	-1.229***	-1.123**	-0.962*	-0.964*
	(-1.82)	(-2.82)	(-2.35)	(-1.85)	(-1.73)
1940s	-0.357	-0.408	-0.330	-0.315	-0.247
	(-0.51)	(-0.60)	(-0.48)	(-0.45)	(-0.35)
1950s	-0.195	-0.244	-0.198	-0.139	-0.165
	(-0.31)	(-0.39)	(-0.32)	(-0.22)	(-0.26)
1960s	0.333	0.328	0.287	0.386	0.343
	(0.53)	(0.52)	(0.46)	(0.61)	(0.54)
1970s	-1.402**	-1.398**	-1.524**	-1.354**	-1.441**
	(-2.26)	(-2.37)	(-2.51)	(-2.14)	(-2.38)
1980s	-2.125****	-2.121****	-2.214****	-2.077***	-2.157****
	(-3.33)	(-3.34)	(-3.45)	(-3.21)	(-3.36)
Constant	6.452*	7.250**	5.789*	6.440*	6.123*
	(1.78)	(2.24)	(1.79)	(1.77)	(1.81)
N	4729	4729	4729	4665	4665
Countries	133	133	133	132	132

Table A.21: Robustness testing the Heckman Treatment-Effects models in Table 2 (second-stage equations) – restricting regime data to 1946–1990, and lagging independent variables with 5 years.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are Heckman-type Treatment-Effects model. GDP per capita growth (in percentage) is dependent variable. Independent variables are lagged with 5 years. Democracy is considered endogenous, and WAVE from Knutsen (2011*b*) – capturing whether the regime originated within one of Huntington's (1991) reverse waves of democratization or not – is used as instrument in the first stage.

	Model I Baseline DD	Model II Re-coded DD: Type 2 democratic	Model III Re-coded DD: Botswana democratic	Model IV Baseline DD on BMR sample	Model V BMR regime measure
	b/(t)	*b/(t)*	*b/(t)*	*b/(t)*	*b/(t)*
Democracy	1.662	1.151*	0.968	1.665	1.304
	(1.35)	(1.73)	(0.96)	(1.33)	(1.06)
Ln GDP p.c.	-0.343	-0.328	-0.239	-0.359	-0.292
	(-0.96)	(-1.02)	(-0.70)	(-0.99)	(-0.82)
Ln population	0.009	0.010	0.032	0.014	0.032
	(0.07)	(0.09)	(0.29)	(0.11)	(0.28)
Ethnic fraction.	-2.150***	-2.129***	-2.198***	-2.087***	-2.164***
	(-3.21)	(-3.28)	(-3.26)	(-3.09)	(-3.22)
E.Eur.–ex-Soviet	0.956	0.511	0.441	0.936	0.702
	(0.92)	(0.74)	(0.50)	(0.89)	(0.68)
S.S. Africa	-0.261	-0.793	-0.582	-0.299	-0.424
	(-0.29)	(-1.04)	(-0.73)	(-0.33)	(-0.51)
Asia	1.052	0.606	0.785	1.075	0.990
	(1.14)	(0.74)	(0.93)	(1.16)	(1.09)
M.East–N.Africa	0.335	-0.108	-0.070	0.323	0.194
	(0.36)	(-0.17)	(-0.09)	(0.35)	(0.22)
Latin America	-0.886*	-1.250***	-1.047**	-0.910*	-0.944*
	(-1.79)	(-2.95)	(-2.30)	(-1.84)	(-1.94)
1940s	4.139****	4.107****	4.163****	4.065****	4.150****
	(4.16)	(4.13)	(4.20)	(4.05)	(4.13)
1950s	2.804***	2.756***	2.802***	2.783***	2.752***
	(3.09)	(3.07)	(3.10)	(3.02)	(3.03)
1960s	3.513****	3.481****	3.474****	3.419****	3.361****
	(4.20)	(4.23)	(4.18)	(4.04)	(4.06)
1970s	2.797***	2.728***	2.687***	2.733***	2.609***
	(3.17)	(3.19)	(3.07)	(3.05)	(3.02)
1980s	0.796	0.746	0.715	0.725	0.614
	(1.00)	(0.95)	(0.90)	(0.89)	(0.78)
Constant	2.461	2.823	1.839	2.572	2.084
	(0.76)	(0.92)	(0.61)	(0.79)	(0.68)
N	4732	4732	4732	4668	4668
Countries	133	133	133	132	132

Table A.22: Robustness testing the Heckman Treatment-Effects models in Table 2 (second-stage equations) – restricting regime data to 1946–1990, and lagging independent variables with 1 year.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are Heckman-type Treatment-Effects model. GDP per capita growth (in percentage) is dependent variable. Independent variables are lagged with 1 year. Democracy is considered endogenous, and WAVE from Knutsen (2011*b*) – capturing whether the regime originated within one of Huntington's (1991) reverse waves of democratization or not – is used as instrument in the first stage.

A.8 Robustness tests for Section 4.3.

As discussed in our codebook there are two different ways of coding our real-time measure. This section therefore displays robustness checks on our real-time DD tests using the alternative coding rule from what was, respectively, presented in Table 3 and Figure 2 of the paper. First, however, we show robustness tests of our results from Table 2 when including additional controls.

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	-0.234	-0.073	-0.353	-0.064	0.182	0.197
	(-0.69)	(-0.24)	(-1.23)	(-0.22)	(0.72)	(0.71)
Ln GDP p.c.	-0.274	-0.285	-0.729**	-0.753**	-0.551*	-0.558*
	(-0.76)	(-0.83)	(-2.11)	(-2.19)	(-1.89)	(-1.94)
Ln population	-0.002	-0.002	-0.016	-0.019	0.050	0.047
	(-0.02)	(-0.02)	(-0.20)	(-0.23)	(0.70)	(0.66)
Ethnic fraction.	-0.973	-0.923	-1.764***	-1.711***	-2.124****	-2.124****
	(-1.38)	(-1.32)	(-3.21)	(-3.12)	(-5.35)	(-5.33)
E.Eur.–ex-Sov.	0.611	0.693	0.150	0.318	-0.398	-0.364
	(0.85)	(1.00)	(0.25)	(0.52)	(-0.67)	(-0.61)
S.S. Africa	-1.975*	-1.910*	-2.944***	-2.818***	-2.125***	-2.106***
	(-1.92)	(-1.94)	(-3.28)	(-3.14)	(-2.94)	(-2.83)
Asia	-1.096	-1.038	-1.819**	-1.706**	-1.066	-1.071
	(-1.25)	(-1.18)	(-2.47)	(-2.28)	(-1.63)	(-1.60)
M.East–N.Afr.	-0.338	-0.285	-0.772	-0.644	-1.035**	-1.015**
	(-0.51)	(-0.43)	(-1.42)	(-1.15)	(-2.12)	(-1.98)
Latin America	-2.105****	-2.044****	-2.116****	-2.003****	-1.797****	-1.816****
	(-3.72)	(-3.81)	(-4.52)	(-4.39)	(-3.80)	(-3.78)
1940s	1.184*	1.178*	2.992****	11.805****	3.839****	3.816****
	(1.93)	(1.94)	(3.76)	(3.87)	(4.59)	(4.56)
1950s	-0.094	-0.096	1.809***	10.635****	2.709****	2.701****
	(-0.19)	(-0.19)	(2.63)	(3.46)	(3.82)	(3.80)
1960s	0.299	0.293	2.321****	11.156****	3.042****	3.036****
	(0.62)	(0.61)	(3.54)	(3.56)	(4.46)	(4.43)
1970s	.	.	1.786***	10.619****	2.509****	2.516****
	.	.	(2.87)	(3.32)	(3.71)	(3.69)
1980s	.	.	.	8.849***	0.616	0.622
	.	.	.	(2.69)	(0.94)	(0.94)
1990s	.	.	.	.	.	.
	.	.	.	.	.	.
Constant	6.292**	6.271**	8.782***	.	5.298*	5.365**
	(1.98)	(2.08)	(2.66)	.	(1.93)	(1.97)
N	2222	2222	3518	3518	4858	4858

Table A.23: Robustness tests with 1-year lag on independent variables: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged 1 year. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample. Original DD coding is from Cheibub et al. (2010).

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	-0.399	-0.225	-0.324	0.124	0.227	0.489*
	(-1.43)	(-0.70)	(-1.13)	(0.40)	(0.89)	(1.73)
(Lag) GDP p.c. growth	0.071*	0.071*	0.037	0.038	0.042	0.042
	(1.68)	(1.67)	(0.96)	(0.98)	(1.39)	(1.39)
Ln GDP p.c.	-0.308	-0.317	-0.833**	-0.887**	-0.513*	-0.545*
	(-1.06)	(-1.07)	(-2.33)	(-2.45)	(-1.81)	(-1.95)
Ln population	-0.053	-0.040	-0.053	-0.057	-0.007	-0.018
	(-0.66)	(-0.51)	(-0.64)	(-0.71)	(-0.10)	(-0.26)
Ethnic fract.	-0.341	-0.278	-1.574****	-1.515***	-1.692****	-1.680****
	(-0.60)	(-0.49)	(-3.29)	(-3.17)	(-3.55)	(-3.52)
E.Eur–ex-Soviet	0.340	0.422	-0.468	-0.174	-0.365	-0.121
	(0.56)	(0.70)	(-0.91)	(-0.34)	(-0.59)	(-0.20)
S.S. Africa	-2.956****	-2.860****	-3.500****	-3.314****	-2.256****	-2.081***
	(-3.41)	(-3.34)	(-4.28)	(-4.03)	(-3.36)	(-3.03)
Asia	-1.567**	-1.494**	-1.961***	-1.801**	-0.903	-0.789
	(-2.46)	(-2.30)	(-2.71)	(-2.47)	(-1.34)	(-1.16)
M.East–N.Africa	-0.290	-0.212	-1.265**	-1.044*	-0.940*	-0.734
	(-0.51)	(-0.34)	(-2.22)	(-1.77)	(-1.81)	(-1.37)
Latin America	-1.737****	-1.605****	-2.350****	-2.199****	-1.493***	-1.459***
	(-3.45)	(-3.31)	(-4.58)	(-4.29)	(-3.21)	(-3.16)
1940s	1.281*	1.311**	1.394	12.012****	8.057****	-0.414
	(1.95)	(2.01)	(1.33)	(3.87)	(3.31)	(-0.43)
1950s	1.389**	1.410**	1.616*	12.247****	8.244****	-0.203
	(2.42)	(2.47)	(1.70)	(3.92)	(3.37)	(-0.24)
1960s	1.772****	1.783****	2.084**	12.729****	8.566****	0.125
	(3.45)	(3.49)	(2.19)	(4.01)	(3.47)	(0.15)
1970s	.	.	0.633	11.292****	7.072***	-1.337
	.	.	(0.68)	(3.52)	(2.82)	(-1.61)
1980s	.	.	.	10.661***	6.405**	-2.014**
	.	.	.	(3.22)	(2.54)	(-2.50)
1990s	.	.	.	.	8.446***	.
	.	.	.	.	(3.20)	.
Constant	5.510*	5.245*	10.450***	.	.	8.609****
	(1.91)	(1.84)	(3.18)	.	.	(3.30)
N	2192	2192	3488	3488	4823	4823

Table A.24: Robustness tests including lagged economic growth as control: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged 5 years. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample. Original DD coding is from Cheibub et al. (2010).

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	-0.388	-0.216	-0.271	0.167	0.326	0.492*
	(-1.38)	(-0.65)	(-0.92)	(0.51)	(1.22)	(1.68)
Ln GDP p.c.	-0.194	-0.198	-0.785**	-0.836**	-0.468	-0.494*
	(-0.64)	(-0.64)	(-2.11)	(-2.20)	(-1.58)	(-1.68)
Ln population	-0.076	-0.071	-0.074	-0.081	-0.011	-0.018
	(-0.89)	(-0.85)	(-0.84)	(-0.95)	(-0.14)	(-0.24)
Ln regime dur.	-0.084	-0.079	-0.137	-0.143*	-0.150	-0.137
	(-0.81)	(-0.76)	(-1.57)	(-1.64)	(-1.55)	(-1.44)
Ethnic fraction.	-0.559	-0.495	-1.619****	-1.551***	-1.672****	-1.679****
	(-0.97)	(-0.84)	(-3.41)	(-3.25)	(-3.40)	(-3.42)
E.Eur. – ex-Sov.	0.375	0.484	-0.482	-0.187	-0.331	-0.143
	(0.59)	(0.77)	(-0.92)	(-0.35)	(-0.54)	(-0.23)
S.S. Africa	-2.849***	-2.726***	-3.613****	-3.435****	-2.354****	-2.214***
	(-2.97)	(-2.91)	(-4.14)	(-3.92)	(-3.31)	(-3.04)
Asia	-1.251*	-1.142	-1.887**	-1.726**	-0.876	-0.800
	(-1.73)	(-1.60)	(-2.42)	(-2.20)	(-1.24)	(-1.13)
M.East–N.Afr.	-0.464	-0.386	-1.394**	-1.182**	-1.090**	-0.927*
	(-0.82)	(-0.65)	(-2.40)	(-1.99)	(-2.02)	(-1.67)
Latin America	-1.818****	-1.664***	-2.486****	-2.345****	-1.616***	-1.609***
	(-3.37)	(-3.29)	(-4.61)	(-4.35)	(-3.27)	(-3.26)
1940s	1.409**	1.432**	1.482	1.430	-0.232	-0.249
	(2.21)	(2.27)	(1.44)	(1.39)	(-0.25)	(-0.26)
1950s	1.319**	1.334**	1.636*	1.595*	-0.135	-0.135
	(2.44)	(2.49)	(1.76)	(1.71)	(-0.16)	(-0.16)
1960s	1.727****	1.737****	2.134**	2.109**	0.218	0.222
	(3.66)	(3.71)	(2.31)	(2.28)	(0.27)	(0.27)
1970s			0.718	0.715	-1.246	-1.217
			(0.79)	(0.79)	(-1.54)	(-1.50)
1980s					-1.980**	-1.962**
					(-2.53)	(-2.50)
Constant	5.489*	5.279*	10.849***	11.099***	8.532***	8.628***
	(1.83)	(1.81)	(3.19)	(3.25)	(3.12)	(3.19)
N	2154	2154	3424	3424	4731	4731

Table A.25: Robustness tests including log regime duration as control: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged 5 years. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample. Original DD coding is from Cheibub et al. (2010).

Models including country-fixed effects do not find the expected difference between the original and real-time DD estimates, but rather report differences in the opposite direction. However, we think there are very good reasons for being careful when it comes to interpreting the results from these models. As we note in footnote 12 of the article, a "reason is the lack of within-country variation in the dichotomous regime measure, leading to inefficient estimates. This is amplified by short time series; for the 1970s regressions, only 25 countries had experienced regime changes according to DD and 15 to real-time DD. Countries without changes ... do not influence fixed-effects estimates. We thus draw inferences using information from a small set of countries".

In a sense the logic of the real-time DD test is to compare estimates where we hold everything constant, and only change the coding of particular countries – thus isolating "country-specific coding changes" as the factor that varies over the two regressions. Paradoxically, this approach does not work as well when comparing two fixed effects models: Japan, for example, is coded as democratic for the entire time series by original DD *and* as autocratic for the entire time series by real-time DD in all the regression models in Table A.26. Hence, it does not affect the regime coefficients for any of the two fixed effects models, and we cannot learn *anything* about our proposed alternation-rule bias by correcting the Type II error observations from Japan in one of the regressions and not in the other. Although incorporating country-fixed effects may appropriately be considered a prerequisite for drawing strong inferences on *substantive* causal effects between, e.g., income and democracy (see, e.g., Acemoglu et al. 2008), we are therefore hesitant to trust the *comparisons* of fixed effects models when conducting this particular test of the alternation-rule bias.

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	0.275	-0.255	0.120	-0.064	0.530	0.204
	(0.75)	(-0.65)	(0.46)	(-0.22)	(1.40)	(0.64)
Ln GDP p.c.	-4.252**	-4.269**	-4.683****	-4.676****	-4.101****	-4.075****
	(-2.19)	(-2.20)	(-4.42)	(-4.40)	(-5.09)	(-5.11)
Ln population	2.340	2.368	-2.423*	-2.422*	-2.237**	-2.237**
	(1.54)	(1.58)	(-1.91)	(-1.91)	(-2.12)	(-2.12)
1940s	0.402	0.404	.	.	.	.
	(0.26)	(0.26)	.	.	.	.
1950s	0.905	0.910	1.106**	1.106**	1.031**	1.041**
	(0.83)	(0.84)	(2.30)	(2.29)	(2.14)	(2.16)
1960s	2.044***	2.049***	3.490****	3.489****	3.254****	3.268****
	(2.72)	(2.74)	(4.37)	(4.36)	(4.44)	(4.45)
1970s	.	.	3.324***	3.321***	2.870***	2.898***
	.	.	(2.77)	(2.76)	(2.72)	(2.74)
1980s	.	.	3.150**	3.148**	3.021**	3.065**
	.	.	(2.24)	(2.23)	(2.42)	(2.44)
1990s	.	.	.	.	5.552****	5.621****
	.	.	.	.	(3.80)	(3.83)
Constant	-3.037	-3.184	74.353***	74.337***	66.658***	66.478***
	(-0.10)	(-0.11)	(3.12)	(3.12)	(3.24)	(3.23)
N	2223	2223	3519	3519	4855	4855

Table A.26: Robustness tests employing fixed effects models: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. The models include country-fixed effects and errors are clustered on country. Independent variables are lagged 5 years. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample. Original DD coding is from Cheibub et al. (2010).

As we can see when comparing Figure A.1 with Figure 2 in the paper, not invoking the "CGV override rule" slightly draws the real-time estimates towards the estimates for the original DD coding from Cheibub et al. Comparing Table A.27 on the next page – which invokes the CGV override rule – with Table 3 in the article further illustrates this point. The results in the appendix table – at least for the 1946–1970 and 1946–1980 samples – provide stronger indications of our proposed alternation-rule-induced bias than the results provided in the table included in the article.

Finally, Table A.28 shows results for models equivalent to Table 2 in the article, but where we re-code the entire time series for Switzerland as democratic on real-time DD (thus correcting the most important discrepancy from the original DD coding by Cheibub et al in terms of number of observations). We refer to the discussion in the codebook for the background for this divergence in coding. In any case, the reported results show that this does not matter much for our conclusions.

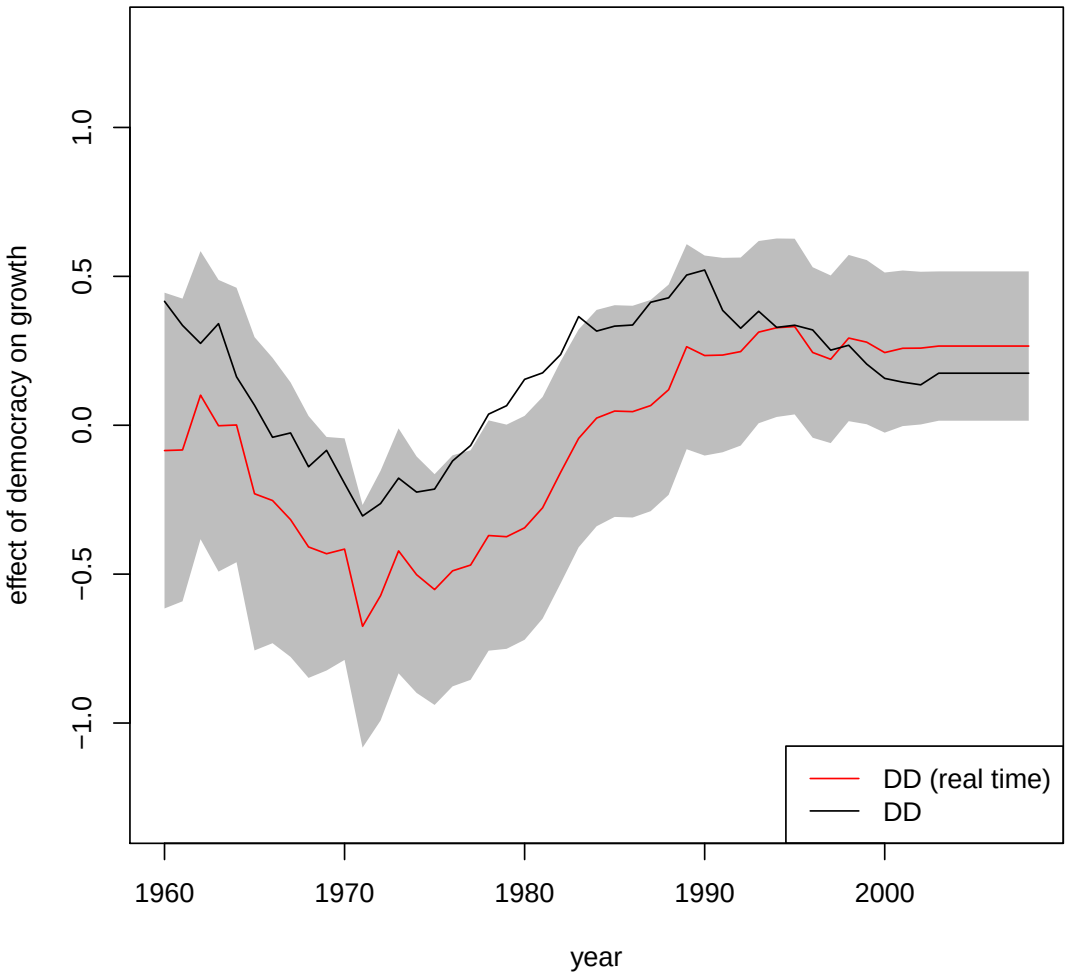

Figure A.1: Estimated effect of democracy according to DD as coded by Cheibub et al. (2010) and to real-time DD coding (with 90 percent CIs) from OLS PCSE regressions, specified as in Table 3, for samples from 1946 to year given by x-axis.

Notes: The real-time DD coding in this figure is produced solely on the basis of the four formal rules, and does not incorporate the "CGV override rule" which lets the Cheibub et al. scoring of dictatorships override democracy scores produced by the formal rules (160 observations in total for whole dataset).

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	-0.548**	-0.196	-0.513*	0.154	0.116	0.521*
	(-1.97)	(-0.60)	(-1.78)	(0.48)	(0.43)	(1.80)
Ln GDP p.c.	-0.230	-0.269	-0.796**	-0.875**	-0.496*	-0.546*
	(-0.82)	(-0.92)	(-2.24)	(-2.38)	(-1.74)	(-1.91)
Ln population	-0.044	-0.029	-0.049	-0.055	0.001	-0.014
	(-0.53)	(-0.35)	(-0.59)	(-0.68)	(0.02)	(-0.20)
Ethnic fractional.	-0.808	-0.725	-1.798****	-1.713****	-1.868****	-1.837****
	(-1.34)	(-1.19)	(-3.84)	(-3.66)	(-3.94)	(-3.87)
E.Eur–ex-Soviet	0.335	0.524	-0.518	-0.087	-0.414	-0.078
	(0.57)	(0.88)	(-1.02)	(-0.17)	(-0.68)	(-0.13)
S.S. Africa	-2.706***	-2.545***	-3.500****	-3.221****	-2.282***	-2.054***
	(-2.91)	(-2.72)	(-4.19)	(-3.78)	(-3.16)	(-2.84)
Asia	-1.388**	-1.259*	-1.968***	-1.719**	-0.927	-0.762
	(-2.05)	(-1.83)	(-2.69)	(-2.31)	(-1.32)	(-1.09)
M.East–N.Afr.	-0.538	-0.339	-1.405**	-1.052*	-1.060**	-0.779
	(-0.89)	(-0.55)	(-2.46)	(-1.79)	(-1.97)	(-1.44)
Latin America	-1.793****	-1.589***	-2.420****	-2.192****	-1.541***	-1.468***
	(-3.48)	(-3.22)	(-4.68)	(-4.23)	(-3.20)	(-3.10)
1940s	6.647**	1.457**	11.872****	12.113****	-0.116	-0.129
	(2.46)	(2.28)	(3.94)	(3.89)	(-0.12)	(-0.14)
1950s	6.547**	1.338**	11.978****	12.229****	-0.049	-0.044
	(2.40)	(2.39)	(3.92)	(3.87)	(-0.06)	(-0.05)
1960s	6.943**	1.734****	12.494****	12.761****	0.323	0.341
	(2.52)	(3.40)	(4.03)	(3.98)	(0.39)	(0.41)
1970s	5.217*	.	11.017****	11.304****	-1.212	-1.159
	(1.87)	.	(3.52)	(3.48)	(-1.48)	(-1.41)
1980s	.	.	10.336***	10.627***	-1.962**	-1.926**
	.	.	(3.20)	(3.18)	(-2.47)	(-2.42)
Constant	.	5.041*	.	.	8.256***	8.533***
	.	(1.78)	.	.	(3.06)	(3.18)
N	2232	2232	3537	3537	4873	4873

Table A.27: Robustness tests with alternative real-time DD measure (using CGV override rule): Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged 5 years. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample, and for this alternative specification all originally DD-coded democracies are also coded real-time democracies ("override rule"). Original DD coding is from Cheibub et al. (2010).

	1946-70 Real-time DD *b/(t)*	1946-70 Original DD *b/(t)*	1946-80 Real-time DD *b/(t)*	1946-80 Original DD *b/(t)*	1946-90 Real-time DD *b/(t)*	1946-90 Original DD *b/(t)*
Democracy	-0.526*	-0.180	-0.370	0.160	0.237	0.523*
	(-1.74)	(-0.55)	(-1.15)	(0.50)	(0.84)	(1.81)
Ln GDP p.c.	-0.220	-0.265	-0.814**	-0.881**	-0.515*	-0.546*
	(-0.78)	(-0.93)	(-2.21)	(-2.39)	(-1.76)	(-1.91)
Ln population	-0.050	-0.036	-0.052	-0.057	-0.004	-0.017
	(-0.60)	(-0.44)	(-0.62)	(-0.70)	(-0.06)	(-0.24)
Ethnic fraction.	-0.651	-0.601	-1.750****	-1.706****	-1.847****	-1.817****
	(-1.10)	(-1.00)	(-3.63)	(-3.54)	(-3.81)	(-3.75)
E.Eur–ex-Soviet	0.285	0.498	-0.446	-0.078	-0.339	-0.087
	(0.47)	(0.83)	(-0.88)	(-0.15)	(-0.56)	(-0.15)
S.S. Africa	-2.870***	-2.689***	-3.493****	-3.249****	-2.263****	-2.086***
	(-3.10)	(-2.98)	(-4.21)	(-3.84)	(-3.30)	(-2.96)
Asia	-1.421**	-1.285*	-1.920***	-1.714**	-0.881	-0.766
	(-2.06)	(-1.88)	(-2.63)	(-2.31)	(-1.29)	(-1.11)
M.East–N.Africa	-0.546	-0.376	-1.336**	-1.051*	-1.005**	-0.793
	(-0.95)	(-0.62)	(-2.47)	(-1.82)	(-1.99)	(-1.50)
Latin America	-1.860****	-1.635****	-2.387****	-2.189****	-1.505***	-1.481***
	(-3.57)	(-3.36)	(-4.66)	(-4.26)	(-3.22)	(-3.19)
1940s	1.342**	6.555**	11.962****	12.165****	8.280****	8.426****
	(2.12)	(2.44)	(3.86)	(3.92)	(3.36)	(3.48)
1950s	1.229**	6.442**	12.071****	12.291****	8.351****	8.520****
	(2.23)	(2.39)	(3.85)	(3.91)	(3.36)	(3.49)
1960s	1.633****	6.851**	12.583****	12.821****	8.723****	8.897****
	(3.31)	(2.51)	(3.95)	(4.01)	(3.47)	(3.60)
1970s	.	5.208*	11.149****	11.406****	7.235***	7.442***
	.	(1.87)	(3.46)	(3.53)	(2.84)	(2.97)
1980s	.	.	10.428***	10.688***	6.456**	6.652***
	.	.	(3.14)	(3.21)	(2.51)	(2.63)
1990s	.	.	.	.	8.445***	8.611***
	.	.	.	.	(3.14)	(3.25)
Constant	5.318*	.	.	.	.	.
	(1.87)	.	.	.	.	.
N	2198	2198	3484	3484	4810	4810

Table A.28: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on growth: Robustness testing by excluding Switzerland.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models are OLS with PCSE, adjusting for panel-level heteroskedasticity, panel-specific AR(1) autocorrelation, and contemporaneous correlation. Independent variables are lagged 5 years. Maximum time series is given in top row (for independent variables). Real-time DD is calculated using historical information on alternations available at last year of sample. Original DD coding is from Cheibub et al. (2010). Decade dummies and constant omitted from table. See Appendix Table A.5 for lists of countries that differ on real-time and original DD for selected years.

A.9 Results from Section 5

This section reports the logit models we employ and mention in the paper for civil wars and coup attempts. For each outcome variable, the first table shows the differences in estimates when we compare baseline DD to, respectively, the adjusted DD measure flipping potential Type II regimes to the democratic column and to the BMR measure. The second table, for each of the two outcome variables, shows the models from which we compare baseline DD with real-time DD estimates, for different time periods.

IVs\DV :	Baseline DD Civil war onset	Original DD: Type II democratic Civil war onset	Baseline DD on BMR sample Civil war onset	BMR regime measure Civil war onset
Democracy	-0.270	-0.406**	-0.217	-0.255
	(-1.23)	(-2.12)	(-0.93)	(-1.09)
Ln GDP p.c.	-0.315***	-0.300***	-0.326***	-0.316***
	(-3.35)	(-3.35)	(-3.40)	(-3.29)
Ln population	0.319***	0.320***	0.319***	0.318***
	(5.78)	(5.91)	(5.58)	(5.62)
Growth (last five years)	0.065***	0.066***	0.066***	0.065***
	(2.67)	(2.71)	(2.68)	(2.66)
ELF	1.053***	1.040***	1.027***	1.048***
	(2.99)	(2.98)	(2.86)	(2.90)
Peace years	0.001	0.006	0.033	0.032
	(0.01)	(0.05)	(0.30)	(0.29)
Spline 1	0.005	0.005	0.006	0.006
	(1.22)	(1.25)	(1.44)	(1.44)
Spline 2	-0.002	-0.002	-0.002*	-0.002*
	(-1.62)	(-1.63)	(-1.79)	(-1.79)
Spline 3	0.000**	0.000**	0.000**	0.000**
	(2.36)	(2.38)	(2.39)	(2.40)
Year	0.011*	0.013**	0.012*	0.012**
	(1.90)	(2.10)	(1.91)	(1.97)
N	4225	4233	4130	4147

Table A.29: Testing for potential bias, induced by the DD measure, in the estimated effect of democracy on civil war onset.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Logit models of the impact of regime type on civil war onset. T-statistics in parenthesis, standard errors clustered on countries.

IVs\DV :	1946-70 Original DD Civil war onset	1946-70 Realtime DD Civil war onset	1946-80 Original DD Civil war onset	1946-80 Real-time DD Civil war onset	1946-90 Original DD Civil war onset	1946-90 Real-time DD Civil war onset
Democracy	-0.480	-0.636	-0.534*	-0.358	-0.287	-0.193
	(-1.09)	(-0.98)	(-1.72)	(-0.82)	(-0.94)	(-0.49)
Ln GDP p.c.	-0.543***	-0.553***	-0.315**	-0.369**	-0.323***	-0.351**
	(-3.05)	(-2.96)	(-2.04)	(-2.18)	(-2.68)	(-2.57)
Ln Population	0.348***	0.334***	0.394***	0.379***	0.306***	0.300***
	(3.28)	(3.15)	(4.99)	(5.09)	(4.53)	(4.41)
Growth (last five years)	0.108**	0.109**	0.089**	0.097**	0.082***	0.089***
	(2.25)	(2.32)	(2.19)	(2.44)	(2.93)	(3.15)
ELF	1.390**	1.391**	1.268***	1.377***	1.107***	1.176***
	(2.37)	(2.29)	(2.59)	(2.67)	(2.69)	(2.76)
Peace years	0.005	-0.012	0.061	0.045	-0.131	-0.146
	(0.03)	(-0.06)	(0.37)	(0.27)	(-0.93)	(-1.03)
Spline 1	0.011	0.011	0.008	0.008	-0.002	-0.002
	(1.38)	(1.28)	(1.21)	(1.12)	(-0.30)	(-0.38)
Spline 2	-0.010***	-0.009**	-0.003	-0.003	0.000	0.000
	(-2.63)	(-2.52)	(-1.42)	(-1.38)	(0.23)	(0.28)
Spline 3	0.007***	0.007***	0.001	0.001	-0.000	-0.000
	(3.18)	(3.11)	(1.38)	(1.41)	(-0.19)	(-0.17)
Year	0.032	0.033	0.026*	0.026*	0.017	0.018
	(1.27)	(1.28)	(1.71)	(1.65)	(1.60)	(1.61)
N	1430	1436	2215	2220	2993	2998

Table A.30: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on civil war onset.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Logit models of the impact of regime type on civil war onset. T-statistics in parenthesis, standard errors clustered on countries.

IVs\DV :	Baseline DD Coup attempt	Re-coded DD: Type II democratic Coup attempt	Baseline DD on BMR sample Coup attempt	BMR regime measure Coup attempt
Democracy	-0.082	-0.306	-0.074	-0.317
	(-0.31)	(-1.30)	(-0.28)	(-1.10)
Military regime	1.666****	1.566****	1.674****	1.588****
	(7.73)	(7.35)	(7.70)	(7.63)
Mil. expenditure. per soldier	-0.259***	-0.254***	-0.255***	-0.248***
	(-2.78)	(-2.77)	(-2.74)	(-2.72)
Change in mil. expenditure	-0.027	-0.038	-0.026	-0.039
	(-0.28)	(-0.30)	(-0.29)	(-0.31)
Ln military personnel	-0.216****	-0.210****	-0.206****	-0.194****
	(-4.08)	(-4.01)	(-3.89)	(-3.71)
GDP growth	-1.802	-1.752	-1.823	-1.762
	(-1.59)	(-1.56)	(-1.60)	(-1.58)
Ln GDP p.c.	-0.084	-0.072	-0.095	-0.091
	(-0.71)	(-0.63)	(-0.80)	(-0.78)
Instability	0.106****	0.109****	0.105****	0.108****
	(6.38)	(6.44)	(6.25)	(6.33)
Years since coup	-0.221****	-0.225****	-0.218****	-0.227****
	(-3.95)	(-4.04)	(-3.87)	(-4.04)
Spline 1	-0.002**	-0.002**	-0.002*	-0.002**
	(-2.01)	(-2.03)	(-1.87)	(-1.96)
Spline 2	0.001	0.001	0.001	0.001
	(0.94)	(0.94)	(0.79)	(0.85)
Spline 3	0.000	0.000	0.000	0.000
	(0.45)	(0.45)	(0.56)	(0.52)
N	4728	4732	4696	4703

Table A.31: Testing for potential bias, induced by the DD measure, in the estimated effect of democracy on attempted coup d'états.
Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Logit models of the impact of regime type on risk of coup attempt. Replication of Powell and Thyne 2012. T-statistics in parenthesis, standard errors clustered on countries.

IVs\DV :	1946-70 Original DD Coup attempt	1946-70 Real-time DD Coup attempt	1946-80 Original DD Coup attempt	1946-80 Real-time DD Coup attempt	1946-90 Original DD Coup attempt	1946-90 Real-time DD Coup attempt
Democracy	0.477	(.)	-0.010	-3.099**	0.240	-1.894**
	(1.26)	(.)	(-0.03)	(-2.26)	(0.82)	(-2.15)
Military regime	2.350****	2.045****	1.896****	1.739****	1.815****	1.606****
	(6.44)	(5.75)	(5.76)	(5.83)	(7.29)	(7.02)
Mil. exp. per soldier	-0.456**	-0.319	-0.406***	-0.343**	-0.290**	-0.241**
	(-2.44)	(-1.46)	(-2.69)	(-2.28)	(-2.42)	(-2.03)
Change in mil. exp.	-0.009	-0.013	-0.049	-0.102	-0.027	-0.077
	(-1.27)	(-1.38)	(-0.29)	(-0.57)	(-0.28)	(-0.51)
Ln military personnel	-0.349****	-0.324****	-0.254****	-0.240****	-0.220****	-0.204****
	(-3.74)	(-3.29)	(-3.76)	(-3.46)	(-4.05)	(-3.66)
GDP growth	-1.128	-1.314	-0.222	-0.293	-1.437	-1.262
	(-0.43)	(-0.55)	(-0.14)	(-0.19)	(-1.09)	(-1.03)
Ln GDP p.c.	0.126	0.317	0.026	0.093	-0.109	-0.019
	(0.60)	(1.54)	(0.15)	(0.59)	(-0.82)	(-0.15)
Instability	0.114****	0.164***	0.123****	0.134****	0.105****	0.115****
	(3.44)	(3.17)	(5.32)	(5.35)	(6.06)	(6.04)
Years since coup	-0.104	-0.085	-0.175**	-0.168**	-0.214****	-0.211****
	(-0.63)	(-0.51)	(-2.17)	(-2.11)	(-3.34)	(-3.35)
Spline 1	0.004	0.004	-0.001	-0.001	-0.003*	-0.003
	(0.09)	(0.09)	(-0.33)	(-0.31)	(-1.72)	(-1.58)
Spline 2	-0.002	-0.002	-0.018	-0.020	0.002	0.002
	(-0.05)	(-0.05)	(-0.99)	(-1.04)	(1.36)	(1.25)
Spline 3	(.)	(.)	0.031	0.034	-0.001	-0.001
	(.)	(.)	(1.11)	(1.17)	(-1.14)	(-1.11)
N	955	766	2146	2147	3436	3437

Table A.32: Correcting historical Type II errors in DD, and investigating the bias in the estimated effect of democracy on attempted coup d'états.

Notes: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Logit models of the impact of regime type on risk of coup attempt. Replication of Powell and Thyne 2012. T-statistics in parenthesis, standard errors clustered on countries.

Finally, Figure A.2 is similar to Figure 3, except that the real-time DD estimates draw on the "expansive coding" of this measure (see codebook). The results are not much affected by this change, neither for civil war onsets (where there is no indication of the hypothesized bias) nor for coup attempts (where there are indications of the bias).

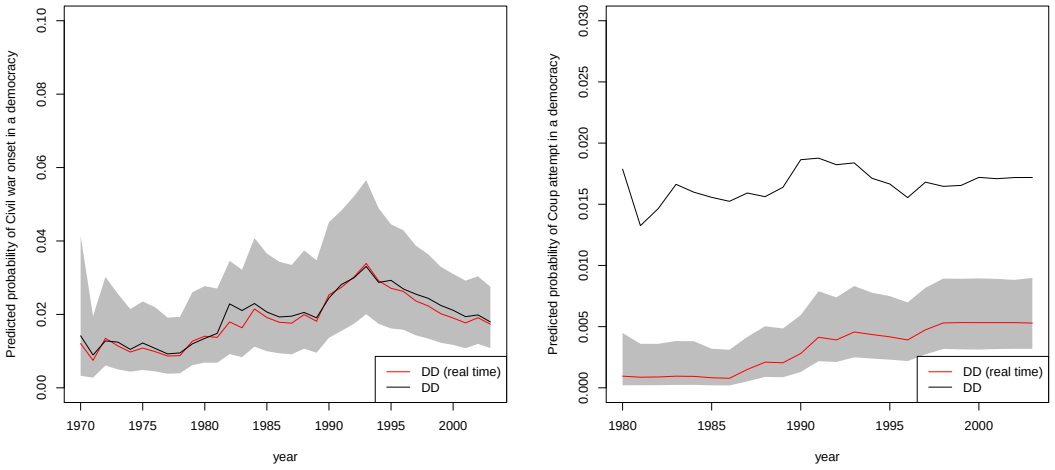

Figure A.2: Simulated probability of experiencing civil war onsets (left) and coup attempts (right) for originally coded DD democracies and real-time DD democracies (*expansive coding*), for samples from 1946 to year given by x-axis (t).
Notes: All covariates (see Tables A.30 for civil wars) and A.31 for coups) are held at median values. For civil war estimation starts for $t = 1970$ since models for shorter samples will not converge (few democracies experience civil wars). For coups, estimation starts in $t = 1980$ for the same reason. This real-time DD coding does not invoke the CGV override rule.