

# Coups and Democracy

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Online Appendix

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# 1 Coup Occurrence

Our argument posits some relationships between the coup and post-coup stages. It would be instructive to estimate a model of coup occurrences, with the same variables, to see whether the selection dynamic we posit appears to be at work. For example, we believe that rising levels of GDP per capita fails to explain the movement to elections after coups because most richer countries never experience coups – and so, even if they *would* experience a faster onset of post-coup elections, we would not be able to observe the event in a range of the explanatory variable allowing us to estimate its impact.

Table 1 presents results of analysis of a probit estimation of likelihood of coups. We again include a weighted average of the 10 year history of coups, which we expect to significantly increase the probability of a coup as countries may be caught in ‘coup traps’. Not only does this variable thus capture the path-dependence of coups, it may also be the case that this variable would capture some of the differences between countries’ propensity to experience the event, differences not adequately summarized by the covariates.

Table 1 shows the results of the estimation. We find that a country’s wealth is signed as expected and highly statistically significant as a predictor of coups. Richer countries, before and now, are less likely to experience a coup event. The selection dynamic we posited is at work, helping to explain the attrition in the values of the wealth variable in the coup sample. Thus, Hypothesis 1, linking wealth to post-coup elections is not necessarily wrong: it is simply difficult to test in observed post-coup samples. The *observed* variation across the two periods we are looking at in the timing of post-coup elections is explained by variables other than rising global wealth.

Our findings on the importance of a country having electoral democracy in place are of considerable interest. Electoral democracies are less likely to experience coups, an effect that is strengthened after the end of the Cold War. Theoretically, this finding sits nicely with the idea that there is more of an insistence on the holding of elections after the coup: if a potential plotter knows that they would have to hold elections after they seize power, and the country is already an electoral democracy, then coup plotters can expect post-coup policy to be set where it already is: at the median voter’s preferred point. That makes the

actual gains from undertaking a risky grab of power minimal and potentially not worth the effort. This requires us to believe that the existence of electoral democracy in a country tends to result in greater pressure for elections in the post-1991 period. Whether this results from some normative shift among domestic audiences or whether some other mechanism is at work merits further research. In combination with the findings on elections after the coup, the finding on electoral democracy has a special meaning: coups after the Cold War are less likely to come to countries that already have elections and more likely to steer the countries they affect toward the holding of elections.

As expected, we find that coup-history is a significant predictor of future coups. We do not find that economic growth leads to fewer coups, a non-finding possibly attributable to the complex relationship between economic performance and political instability. The French colony variable is also insignificant, possibly a reflection of the inability or unwillingness of outsiders to intervene with the fast-developing, possibly violent events that mark most coups.

We plot the overtime variation in the incidence of successful coup d'états. Figure 1 shows two trends. The bars indicate the number of coups in a given year. The line represents the number of countries with coup-installed leaders. There is an evident overtime decline in the incidence of coups. The popularity of coups peaked at the height of the Cold War between 1960 and 1980, with some years recording 10 or more extra-constitutional seizures of executive power. Before 1991, there was not a single year on record in which a coup did not succeed at least once. After the end of the Cold War, some years record no coups, and the maximum number of events we see in a single year does not come close to the maximum observed in the earlier period.

Our results indicate that growing levels of economic development may be partly responsible for the decline, and greater insistence on post-coup elections may also play a role.

Figure 1: What Happened to the Coup d'Etat? Fewer Coups, Fewer Coup-leaders in Power

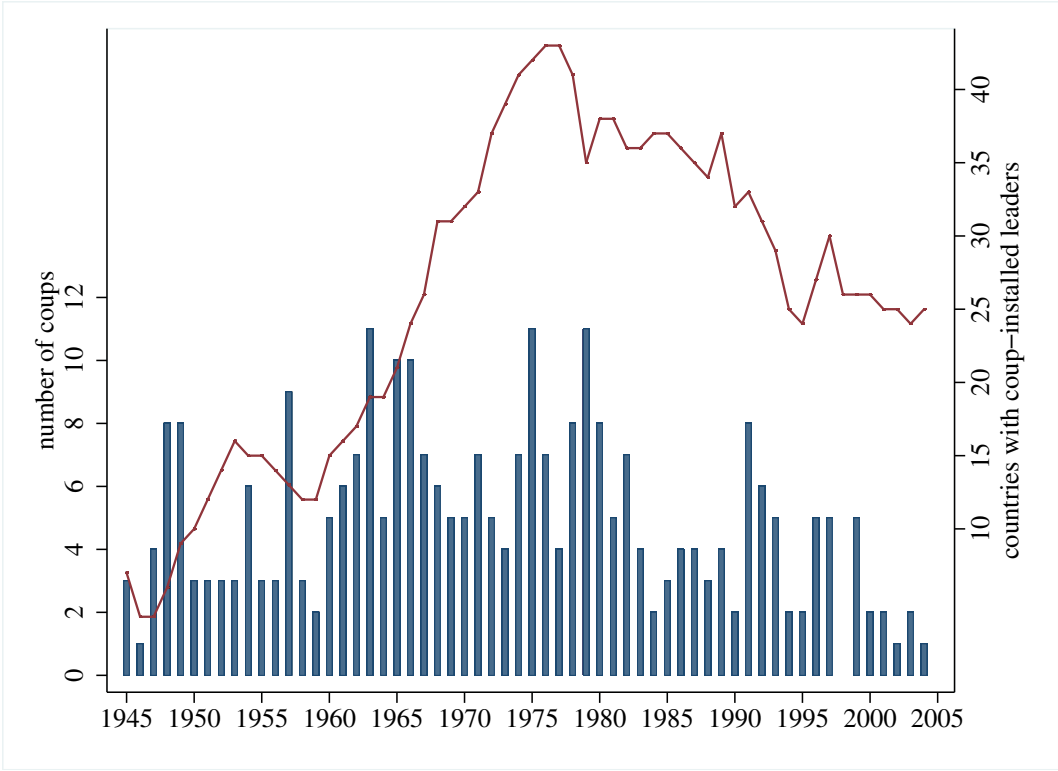


Table 1: **Probit Model of the Likelihood of a Coup**

| Variables        | (1)<br>Pre-           | (2)<br>Post-         | (3)<br>Pre and Post   |
|------------------|-----------------------|----------------------|-----------------------|
| Aid dep          | -0.365<br>(0.671)     | 0.457<br>(0.956)     | -0.380<br>(0.674)     |
| log GDP pc       | -0.191***<br>(0.0704) | -0.211**<br>(0.106)  | -0.188***<br>(0.0705) |
| Growth           | 0.485<br>(0.874)      | 0.567<br>(0.509)     | 0.500<br>(0.573)      |
| Ex-French Colony | 0.0308<br>(0.161)     | 0.176<br>(0.195)     | 0.0673<br>(0.145)     |
| El Dem           | -0.281**<br>(0.123)   | -0.789***<br>(0.224) | -0.281**<br>(0.123)   |
| Coup History     | 4.770***<br>(0.741)   | 5.500***<br>(1.301)  | 4.836***<br>(0.690)   |
| Post Cold War    |                       |                      | 0.237<br>(0.788)      |
| Post x Aid Dep   |                       |                      | 0.753<br>(1.030)      |
| Post x GDP pc    |                       |                      | -0.0432<br>(0.104)    |
| Post x El Dem    |                       |                      | -0.456**<br>(0.228)   |
| Constant         | -0.220<br>(0.522)     | -0.179<br>(0.826)    | -0.252<br>(0.519)     |
| Observations     | 1,856                 | 1,193                | 3,049                 |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 2 Coup Dates in Archigos

Table 2: Coup Dates

|              |         |         |         |         |         |         |
|--------------|---------|---------|---------|---------|---------|---------|
| Afghanistan  | 07sep53 | 19jun65 | 17jul73 | 27apr78 | 27dec79 | 16apr92 |
|              | 29jun92 | 27sep96 | 13nov01 |         |         |         |
| Argentina    | 13nov55 | 29mar62 | 28jun66 | 08jun70 | 22mar71 | 29mar76 |
|              | 11dec81 | 17jun82 | 18jun93 |         |         |         |
| Bangladesh   | 06nov75 | 30may81 | 20mar82 |         |         |         |
| Benin        | 27oct63 | 22dec65 | 17dec67 | 10dec69 | 26oct72 |         |
| Bolivia      | 16may51 | 11apr52 | 04nov64 | 26sep69 | 06oct70 | 22aug71 |
|              | 24nov78 | 01nov79 | 17jul80 | 04aug81 | 19jul82 |         |
| Brazil       | 30oct45 | 24aug54 | 11nov55 | 02apr64 |         |         |
| Burkina Faso | 03jan66 | 08feb74 | 25nov80 | 07nov82 | 04aug83 | 15oct87 |
| Burundi      | 28nov66 | 01nov76 | 03sep87 | 21oct93 | 25jul96 |         |
| Cambodia     | 18mar70 | 10apr75 | 06jul97 |         |         |         |
| Central AR   | 01jan66 | 01sep81 | 15mar03 |         |         |         |
| Chad         | 01aug45 | 21jan49 | 13jun53 | 10may57 | 11sep73 | 13apr75 |
|              | 23mar79 | 07jun82 | 02dec90 |         |         |         |
| Comoros      | 03aug75 | 13may78 | 18dec89 | 29sep95 | 30apr99 |         |
| Congo        | 04sep68 | 18mar77 | 05feb79 |         |         |         |
| Congo, DR    | 20apr48 | 10mar52 | 01jan59 | 14sep60 | 25nov65 | 15jul74 |
|              | 16may97 | 15oct97 | 25dec99 | 16jan01 |         |         |
| Dominican R  | 30may61 | 19jan62 | 25sep63 | 27apr65 |         |         |
| Ecuador      | 03sep47 | 22jul52 | 07nov61 | 11jul63 | 15feb72 | 11jan76 |
| El Salvador  | 14dec48 | 26oct60 | 25jan61 | 03aug79 | 15oct79 | 07dec80 |
| Ethiopia     | 17feb64 | 23nov74 | 03feb77 | 14may87 | 27may91 | 06jan92 |
|              | 22jul94 | 14jul00 |         |         |         |         |
| Ghana        | 24feb66 | 13jan72 | 05jul78 | 04jun79 | 31dec81 |         |
| Greece       | 15jul65 | 13dec67 | 25nov73 |         |         |         |
| Guatemala    | 08jul54 | 27oct57 | 31mar63 | 23mar82 | 08aug83 | 03apr84 |
|              | 31may93 |         |         |         |         |         |

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**Table 2 continued from previous page**

|               |         |         |         |         |         |         |
|---------------|---------|---------|---------|---------|---------|---------|
| Guinea-Bissau | 14nov80 | 07may99 | 14sep03 |         |         |         |
| Haiti         | 11jan46 | 10may50 | 12dec56 | 14jun57 | 07feb86 | 17sep88 |
|               | 30sep91 | 29feb04 |         |         |         |         |
| Honduras      | 30apr51 | 19aug53 | 15jul56 | 21oct56 | 03oct63 | 12mar66 |
|               | 04dec72 | 22apr75 | 07aug78 |         |         |         |
| Iraq          | 14jul58 | 03jul61 | 08feb63 | 17jul68 | 26oct79 |         |
| Laos          | 31dec59 | 10dec60 | 19apr64 | 02dec75 | 22nov89 |         |
| Lesotho       | 19nov68 | 01sep69 | 11feb75 | 12apr80 | 20jan86 | 09sep90 |
|               | 26mar91 | 02may91 | 17aug94 | 06jul02 |         |         |
| Mauritania    | 26may47 | 18feb51 | 02mar62 | 10jul78 | 06apr79 | 17jul79 |
|               | 04jan80 | 12dec84 | 18sep88 |         |         |         |
| Niger         | 15apr74 | 27jan96 | 11apr99 |         |         |         |
| Nigeria       | 29jul66 | 23jul70 | 29jul75 | 13feb76 | 31dec83 | 27aug85 |
|               | 17nov93 |         |         |         |         |         |
| Pakistan      | 07oct58 | 20dec71 | 05jul77 | 18apr93 | 05nov96 | 12oct99 |
| Panama        | 01oct48 | 20nov49 | 12oct68 | 03mar82 |         |         |
| Paraguay      | 03jun48 | 10sep49 | 06may54 | 03feb89 |         |         |
| Peru          | 30dec47 | 28oct48 | 19jul62 | 03mar63 | 01nov63 | 03oct68 |
|               | 22feb72 | 05jul73 | 25apr74 | 29aug75 | 21aug91 | 27jun95 |
| Sierra Leone  | 23mar67 | 19apr68 | 26jun78 | 24jan86 | 26jan91 | 29apr92 |
|               | 17jan96 | 25may97 |         |         |         |         |
| Sudan         | 17nov58 | 23may69 | 22jul71 | 10aug83 | 06apr85 | 30jun89 |
| Syria         | 19dec49 | 28feb50 | 28feb54 | 28sep61 | 28mar62 | 27jul63 |
|               | 25feb66 | 13nov70 | 07sep92 |         |         |         |
| Thailand      | 25jul57 | 16sep57 | 13jan63 | 14apr67 | 06oct76 | 20oct77 |
|               | 07nov87 | 23feb91 |         |         |         |         |
| Turkey        | 27may60 | 12mar71 | 20sep80 | 30jun97 |         |         |
| Uganda        | 25jan71 | 01sep76 | 12may80 | 27jul85 | 29jan86 |         |
| Venezuela     | 18oct45 | 24nov48 | 13nov50 | 30jan64 | 12jun65 |         |
| Yemen         | 13mar48 | 27sep62 | 05nov67 | 22jun69 | 13jun74 |         |

### 3 Onset of Elections After Coups: Polity Scores

Figure 2 shows the average polity2 score of countries experiencing coups. Depending on the number of years since the onset of the coup, the average polity2 score will differ. As we can see, there is no or little liberalization for the pre-1991 period. Even many years after the onset of the coup, a country is likely to record a polity2 score in negative (undemocratic) category. This changes after 1991. Countries move quickly into positive territory on polity2. Coups after 1991 take place against more liberalized settings than their predecessors: the year before the coup (-1) on the  $x$ -axis shows countries close to 1 on polity2 for 1991 and later, and shows countries in negative polity2 territory for the preceding period. This is probably a function of the greater prevalence of elections after the Cold War ends. Still, seven years after a country undergoes a coup in the 1991 period, it is (1) more liberalized than a pre-1991 coup country at the same juncture, but also it is (2) more liberalized relative to where it starts off before the coup. While our dependent variable is time-to-elections, and not polity2, this discussion confirms that there the end of the Cold War is non-trivial watershed in the consequences of coups for democratization.



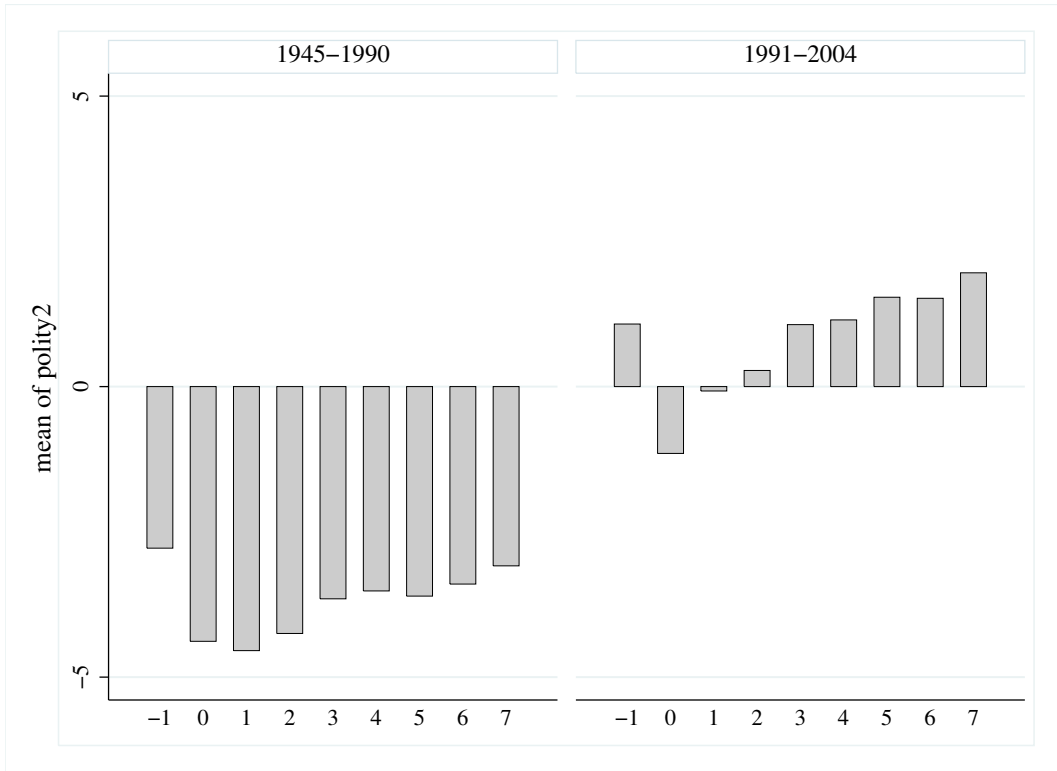


Figure 2: Countries' Changing Post-Coup Trajectories: Polity

## 4 Onset of Elections After Coups: Results with Different Decades

Table 3 shows results for different decades and results for whether democracy was in place longer (more than 10 years). In model (2), the 1960s are the baseline category. The 1970s dummy and the 1980's dummy cannot distinguish time to elections in those decades from the 1960s. This confirms the view that the end of the Cold War is an important dividing line. Models (3) and (4) contrast the case of coups against democracies that have been in place for 7 and 15 years, respectively. In either case, we are more likely to see elections after a coup. This does not settle the question of what is the magic age (causing democracy to get institutionalized), but it indicates that it is not necessarily the case that representative institutions need to be in place for a very long period of time to have consequences.

We provide another look at the variation in time to election over time, this time using a structural break approach. Figure 3 shows a test for structural breaks in the data, using time to election after coup as the dependent variable. Tests with R's *sctest* command using time to elections within 3 years indicate that the evidence for structural break in the data is strongest for 1991. Results are similar using 5 year interval as the cutoff date. Results for early 1960s reflect a change to shorter time to elections. That change is not as significant as the change with the onset of the post-CW period.

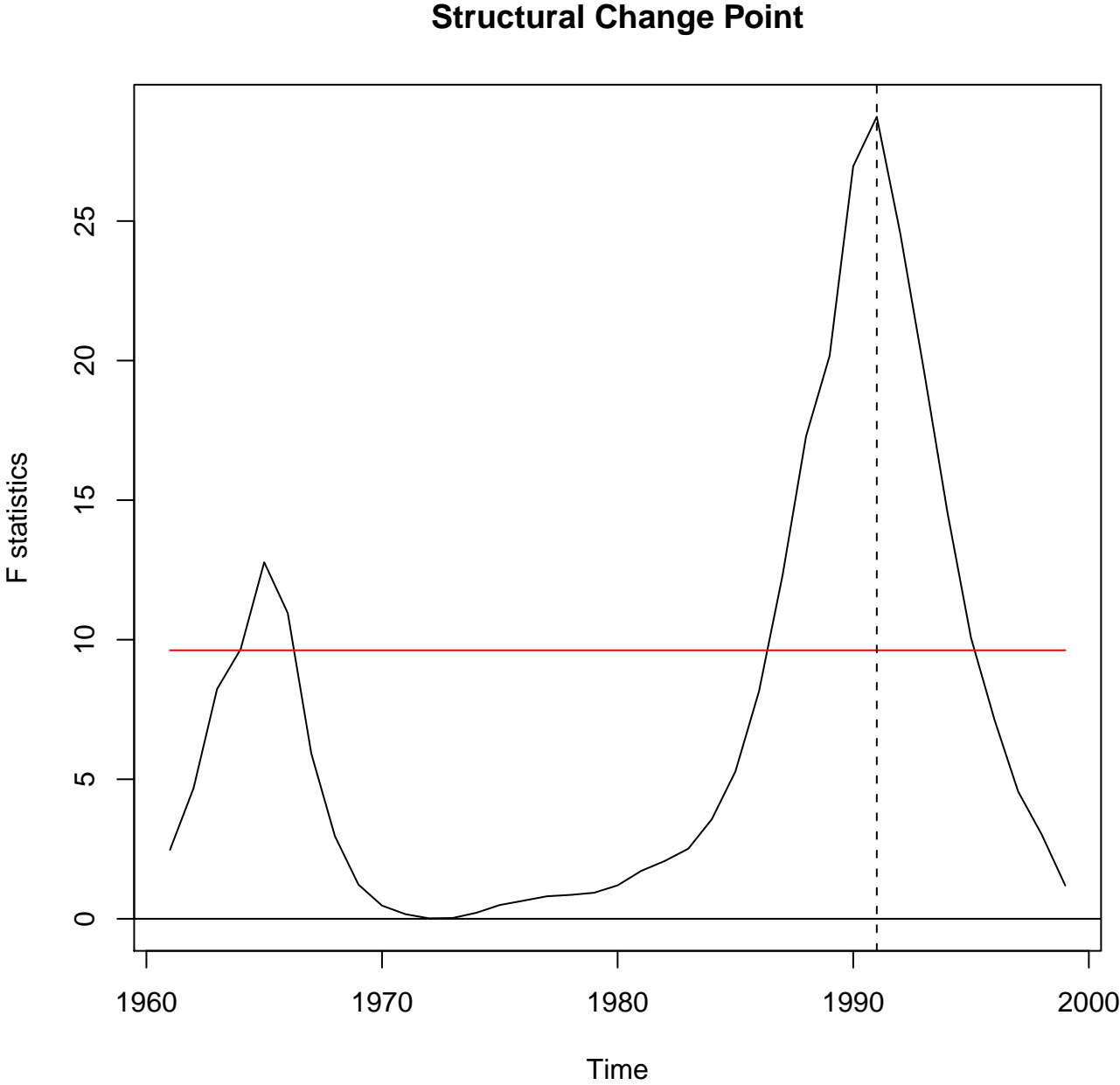
Table 3: Elections After Coups: Different Decades and Coups in Older Democracies

|                     | (1)<br>By CW            | (2)<br>By Dec           | (3)<br>Dem             | (4)<br>Old Dem          |
|---------------------|-------------------------|-------------------------|------------------------|-------------------------|
| Aid Dependence      | 0.145<br>(0.390)        | 0.0566<br>(0.405)       | -1.076<br>(0.880)      | -1.145<br>(0.891)       |
| GDP per capita      | 0.0584<br>(0.0553)      | 0.0579<br>(0.0560)      | 0.0389<br>(0.0540)     | 0.0277<br>(0.0549)      |
| Economic Growth     | -0.952<br>(0.639)       | -0.843<br>(0.647)       | -0.863<br>(0.682)      | -1.023<br>(0.657)       |
| Ex-French Colony    | -0.00713<br>(0.107)     | -0.0201<br>(0.106)      | 0.112<br>(0.124)       | 0.115<br>(0.129)        |
| Years since Coup    | -0.0211***<br>(0.00631) | -0.0227***<br>(0.00663) | -0.0165**<br>(0.00668) | -0.0191***<br>(0.00663) |
| Pre-Coup Dem        |                         |                         | 0.367***<br>(0.129)    |                         |
| Pre-Coup 15-yrs Dem |                         |                         |                        | 0.364**<br>(0.159)      |
| Post x Aid Dep      |                         |                         | 1.866**<br>(0.896)     | 2.001**<br>(0.894)      |
| 1970s               |                         | -0.165<br>(0.164)       |                        |                         |
| 1980s               |                         | 0.144<br>(0.159)        |                        |                         |
| Post Cold War       | 0.685***<br>(0.109)     | 0.702***<br>(0.156)     | 0.507***<br>(0.124)    | 0.523***<br>(0.124)     |
| Constant            | -1.871***<br>(0.386)    | -1.853***<br>(0.393)    | -1.879***<br>(0.398)   | -1.731***<br>(0.390)    |
| Observations        | 1,591                   | 1,591                   | 1,588                  | 1,591                   |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 3: Test for a Structural Break in Data: Does Time to Elections After Coup Change in year  $t$ ? Test with R *sctest* command (*strucchange*) with a three-year cutoff criterion. See Zeileis (2006).



## 5 Results with Different Coup Datasets

Tables 4 and 5 show a comparison of results for the pre-1990 and post-1991 period respectively for five datasets of coups: (1) coup data by Goemans, Gleditsch, Chiozza and Choung (2004); (2) Alesina, Ozler, Roubini and Swagel (1996); (3) Belkin and Schofer (2003); (4) coup data by Monty G. Marshall and Donna Ramsey at the Center for Systemic Peace and (5) data by Powell and Thyne (2011). These datasets are the major existing efforts to collect data on a global scale. Since we are interested in time to elections after coups, we look at successful coups. The models reflect the availability of covariates across all the datasets (for example, not all datasets include the identity of the actors perpetrating the coup, so this information cannot be included).

Table 4 shows that results on the effect of aid dependence are the same for the period preceding the end of the Cold War: there is no significant effect. Table 5 shows that, by contrast, aid dependent states move to adopt elections faster in the post-1991 period. The effect is insignificant only in model (2) but then again, this model has significantly fewer observations than the other models, an artifact of the mid-1990s cutoff date for the data collection. Comparing Archigos to the other data, we see that the pattern is even stronger elsewhere. Inspection of the trends in the different datasets, often available in the original publication, indicate that time to election is also on average shorter for the period after the end of the Cold War.

Table 4: Elections After Coups: A Comparison of the Archigos, Alesina, Belkin and Schofer, Marshall and Marshall, Powell and Thyne Datasets - Cold War Period

| Variable         | (1)<br>Arch             | (2)<br>Ales           | (3)<br>BelSch          | (4)<br>MM              | (5)<br>PowTh           |
|------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| Aid Dependence   | -0.730<br>(0.836)       | -1.360<br>(1.209)     | -0.512<br>(0.957)      | -0.634<br>(0.895)      | -1.022<br>(0.958)      |
| GDP per capita   | 0.0591<br>(0.0637)      | 0.175**<br>(0.0827)   | 0.128<br>(0.0809)      | 0.0972<br>(0.0778)     | 0.0749<br>(0.0774)     |
| Economic Growth  | -2.584***<br>(0.721)    | -2.722***<br>(1.012)  | -2.612***<br>(0.880)   | -1.866**<br>(0.750)    | -2.591***<br>(0.827)   |
| Ex-French Colony | -0.290*<br>(0.162)      | -0.661***<br>(0.239)  | -0.469**<br>(0.183)    | -0.193<br>(0.179)      | -0.226<br>(0.176)      |
| Years Since Coup | -0.0272***<br>(0.00852) | -0.0281**<br>(0.0123) | -0.0438***<br>(0.0133) | -0.0588***<br>(0.0165) | -0.0430***<br>(0.0148) |
| Constant         | -1.665***<br>(0.457)    | -2.260***<br>(0.591)  | -1.909***<br>(0.567)   | -1.735***<br>(0.544)   | -1.592***<br>(0.547)   |
| Observations     | 1,251                   | 864                   | 936                    | 854                    | 925                    |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5: Elections After Coups: A Comparison of the Archigos, Alesina, Belkin and Schofer, Marshall and Marshall, Powell and Thyne Datasets - the Post-Cold War Period

| Variable         | (1)<br>Arch         | (2)<br>Ales         | (3)<br>BelSch        | (4)<br>MM            | (5)<br>PowTh          |
|------------------|---------------------|---------------------|----------------------|----------------------|-----------------------|
| Aid Dependence   | 0.749*<br>(0.425)   | 1.021<br>(0.709)    | 1.282**<br>(0.646)   | 0.999**<br>(0.405)   | 1.068*<br>(0.596)     |
| GDP per capita   | -0.0233<br>(0.0822) | -0.116<br>(0.159)   | 0.0357<br>(0.129)    | -0.144<br>(0.0928)   | -0.138<br>(0.0910)    |
| Economic Growth  | 0.296<br>(0.783)    | -0.132<br>(0.729)   | -0.577<br>(0.861)    | 0.782<br>(0.891)     | 0.304<br>(0.794)      |
| Ex-French Colony | 0.487***<br>(0.180) | 0.821***<br>(0.304) | 0.500**<br>(0.217)   | 0.643***<br>(0.210)  | 0.755***<br>(0.215)   |
| Years Since Coup | -0.0161<br>(0.0106) | -0.0211<br>(0.0240) | -0.0228*<br>(0.0118) | -0.0183*<br>(0.0110) | -0.0239**<br>(0.0105) |
| Constant         | -0.998*<br>(0.523)  | -0.462<br>(0.945)   | -1.342*<br>(0.743)   | -0.432<br>(0.567)    | -0.459<br>(0.566)     |
| Observations     | 341                 | 139                 | 218                  | 248                  | 254                   |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## References

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