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Abstract

We provide evidence that political instability deteriorates economic growth. We establish this result based on panel difference-in-differences strategies and dynamic panel data models using a large sample of 180 countries, a novel geocoded dataset for 2,660 regions, and micro data for about 250,000 households. We exploit coups d'état as a source of exogenous variation in political instability, as they are difficult to anticipate, mirror the political zeitgeist, and reduce measurement error. We use spatial variations and synthetic control methods for identification and find that periods of instability reduce growth by 2-3 percentage points, increase unemployment, and impair health and life satisfaction. The adverse effects are stronger for women than for men.

JEL-Codes: O110, O120, D740.

Keywords: coups d'état, economic growth, political stability.

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1 Introduction

> *"In revolutions the occasions may be trifling but great interests are at stake."*
> — Aristotle

Do countries need a stable political environment to prosper? With the political turmoil caused by the rise of populist politics and the downfall of established parties in many Western countries, the question of how political stability influences economic growth has become increasingly popular in both academia and the public discourse. This discussion is fueled by the observation that many countries with low political stability scores are among the most fast-growing economies on the globe, including China (rank 115 in the World Bank's 2017 political stability ranking), Indonesia (135), India (160), and Bangladesh (174).[1] First concerns are raised about the importance of stability for economic growth and development. In a 2014 World Bank column, for example, lead World Bank economist Hussain (2014) asks *"can political stability hurt economic growth?"*.

In this paper, we provide strong evidence against this view. Using panel data from 180 countries and 2,660 sub-national regions, our results show that political instability has negative effects on economic growth. We use coups d'états as a source of exogenous variation in political instability and find that periods of instability reduce growth by 2-3 percentage points. This result is very stable across numerous empirical specifications and occurs both on the country level and the sub-national level. We start by examining panel difference-in-differences and dynamic panel data models on the country level and discuss our general findings in case studies for which we use synthetic control estimations. In the next step, we use spatial variation in coup occurrence to estimate a causal effect of political instability on growth. First, we construct instrumental variables based on geospatial correlations on the country-level and, second, we exploit a newly compiled georeferenced database on coup activity on the sub-national level. The sub-national strategy provides a powerful tool to identify the effect of political instability on economic growth because it allows us to estimate the effect of a coup in regions without direct coup activity. Thus, we separate the effect of political instability from that of coup-induced violence. The parameter estimates for each of these models are very similar and support our baseline finding of a negative growth effect of 2-3 percentage points. To dig deeper into the consequences of political instability for the living conditions of individuals, we use micro data for roughly 250,000 individuals and find that instability has devastating effects on the economic situation of households.

Estimating the effect of political instability on growth is afflicted with four key challenges. First, the term "political (in)stability" is not clearly defined. The seminal paper of Alesina

[1] Data comes from the World Bank's "Political Stability and Absence of Violence/Terrorism" index, which is measured annually and part of the Worldwide Governance Indicators (WGI) dataset. The country ranks are taken from the most recent version of the WGI at the time this paper is written.

et al. (1996) approximates political instability with the propensity of government changes. Other studies use composite measures such as the "Worldwide Governance Indicators" (WGI) dataset from the World Bank, which consolidates multiple data series on conflict, violence, protests and terrorism into a single index of political instability (Kaufmann et al., 2010). Drawing evidence based on such variables is difficult, as they mix several forms of government changes and political violence. The growth effect of government changes may depend on whether power is transferred regularly or irregularly, and it is unclear whether political violence is the cause or the result of political instability. Second, regular government changes and lasting periods of political violence are predictable by economic agents. It is therefore challenging to identify an effect on growth based on such variables, as economic agents account for predictable changes in the political environment in their decision making. Third, violence and conflicts have direct negative effects on economic growth, and it is difficult to separate these effects from an unstable political environment. Fourth, researchers estimating the effect of political instability on growth face an inevitable endogeneity problem, because political tensions may have their roots in unfavorable economic conditions.

To tackle these challenges, we use a new dataset on coups d'état from Bjørnskov and Rode (2019) to measure political instability. The dataset provides the largest and most detailed compilation of coups and coup attempts, including 208 countries for the period 1950–2018. We follow Powell and Thyne (2011) and define coups as illegal attempts by the military or other elites within the state apparatus to unseat the sitting executive. By using coups d'états as measures for political instability, we focus on a certain aspect of political instability that is straightforward to measure and to interpret. This strategy allows us to address important problems accompanied by the measurement of political instability. Specifically, the focus on coups (i) circumvents the problem of anticipation effects, as coups are extremely difficult to predict (Zolberg, 1968; Bazzi and Blattman, 2014; Gassebner et al., 2016), (ii) avoids problems afflicted with the selection and aggregation of country attributes into an index of political stability, (iii) enables a clear definition of political (in)stability, which facilitates the interpretation of empirical results, and (iv) allows us to distinguish between the effect of violence and the effect of instability.

We use panel difference-in-differences models and dynamic panel data models to estimate the effect of coups d'états on economic growth. Although coups are difficult to predict with time-varying factors, our analysis shows that the ex ante probability of coups varies systematically across countries because of distinct time-invariant geospatial patterns in the occurrence of coups. We control for spatial dependency and other time-invariant factors that may confound the estimated relationship between coups and growth in a fixed effects model. To further alleviate concerns about endogenous selection into coups initiated by unfavorable economic conditions, we model pre-coup dynamics in GDP. To tackle the possibility that the relationship between coups and growth is confounded by

time-varying unobservables, we use three strategies. First, we provide case study evidence using synthetic control methods. Second, we use the geospatial correlation of coups by constructing jack-knifed spatial instruments that use coup occurrences in neighboring countries as instruments for domestic coups. Third, we examine the growth effect of coups on a sub-national level, constructing a dataset of coup occurrence for 2,660 sub-national units between 1992 and 2012. We analyze each coup listed in the Bjørnskov and Rode (2019) database and geocode the coups based on multiple scholarly articles, books, and newspaper articles. To separate the effects of political instability from those of violence, we use our georeferenced coup dataset and estimate the effect of coups on growth for sub-national regions without direct coup involvement. In the last step, we estimate the effect of coups on household-level outcomes. We first provide a stylized theoretical model of labor supply in which political instability increases uncertainty about future wage payments. The model also suggests that labor supply depends on productivity, which can be affected by coups via a decrease in health and life satisfaction. We then use data from roughly 250,000 households in 97 countries (about 13,000 of which have experienced a coup d'état) to estimate the effect of coups on household-level outcomes.

Our empirical results suggest that coups have drastic consequences for economic growth. Our estimates show that coup d'états decrease economic growth by 2-3 percentage points. These results are remarkably stable across various estimation techniques and model specifications. We examine the robustness of our empirical results, accounting for regime transitions in the aftermath of coups, political institutions and their dynamics prior to coups, potential confounding factors, and different sample compositions that focus on individual continents, countries with higher ex ante probability of coups, and coups experience. In each of these models, the effect of coups d'état on economic growth is negative, similar in size, and highly statistically significant. The estimated parameters of coups in our sub-national analysis are virtually identical to our country-level outcomes, even if we control for the spatial distribution of conflict and human capital on the sub-national level. Finally, we find that coups have negative effects on the economic situation of households, increasing unemployment and decreasing financial capacities of households. The adverse effect on employment is particularly pronounced for women and is less prevalent among men. We also find that coups decrease health and life satisfaction. The adverse effects are stronger for poorer households, while richer households are less affected by coup activities. We further document that coups depress individuals' expectations about the future and decrease the perceived importance of democracy.

Contribution to the existing literature: Our paper contributes to the literature examining the growth effect of political instability. From a theoretical viewpoint, the direction of this effect is not clear-cut. On the one hand, the traditional perspective is that political stability fosters investment (Alesina et al., 1996, Alesina and Perotti, 1996) and

that volatility in economic policies decreases economic growth (Fatás and Mihov, 2013). On the other hand, political instability can promote growth (Hopenhayn and Muniagurria, 1996). The Oi-Hartman-Abel effect posits that uncertainty increases investment when firms can insure against bad outcomes (Bloom, 2014; Li et al., 2019). Political instability can also boost growth if the incumbent is unable or unwilling to provide property rights, an efficient legal system, or growth-increasing economic policies (Acemoglu and Robinson, 2000). In a similar vein, long regime duration may increase the pervasiveness of interest-group policies and corruption (Olson, 1982), which is negative for economic growth (e.g. Gründler and Potrafke, 2019). Empirical evidence on the stability-growth nexus is also undetermined so far. While some studies support the pessimistic view of political instability (Barro, 1991; Alesina et al., 1996; Aisen and Veiga, 2013), others find indefinite relationships (Sala-i-Martín, 1997; Jong-A-Pin, 2009) or positive effects of instability on growth (Campos and Nugent, 2003; Berggren et al., 2012). A key reason for the inconclusiveness of these studies is that they use different definitions and measures of political stability, which mix regular and irregular government changes with information on protests, violence, and civil conflict.

Our paper also contributes to the literature on the relationship between coups d'états and economic growth. There is surprisingly little evidence on the political and economic consequences of coups (Lachapelle, 2020). Early studies in the empirical growth literature report negative correlations between coups and economic growth (Barro, 1991; Levine and Renelt, 1992; Alesina et al., 1996). These studies have pioneered empirical growth research during the 1990s, but restricted computational capacity has left important econometric concerns unconsidered, and coups mainly serve as vehicles for robustness analyses. Using the database of Bjørnskov and Rode (2019), our study substantially exceeds the number of included countries and years compared with previous studies. Exploiting our georeferenced sub-national regional dataset, we are the first to explore the effect of coups on the sub-national level.

We also connect to the literature on the growth effect of national leaders (Jones and Olken, 2005; Besley and Reynal-Querol, 2011). This literature has shown that individual leaders can play important roles for the economic and political trajectory of countries. The political instability angle offers an alternative interpretation of this literature. Our results suggest that part of what the literature terms "leader effect" may not be the effect of personal qualities of the incumbent leader vis-a-vis the new leader in power, but the ensuing instability that matters for economic performance in the year when leader transition took place.

Organization: The paper is organized as follows. In Section (2), we describe our data, show how coups have developed over the past six decades, and present our georeferenced dataset on sub-national coups d'état. In Section (3), we report the results of our country-

level analysis, relating coups to economic growth. In Section (4), we apply our IV approach and exploit our sub-national dataset for causal identification. Section (5) examines the consequences of coups for household-level outcomes. Section (6) summarizes our findings and discusses avenues for future research.

2 Data and descriptive evidence

2.1 Data on coups d'état

We measure coups d'état employing a novel dataset on regime types and regime changes compiled by Bjørnskov and Rode (2019). The dataset covers all coup attempts from 1950 to 2018 and indicates whether a coup has been successful or whether it failed. The dataset also includes the group which led the coup (e.g. civilian or military), the name of the coup leaders, and their military or civilian rank. There have been multiple coups in some of the countries included in the dataset, and the dataset covers detailed information also for second or third coup attempts. In total, the dataset includes 537 coups or coup attempts that took place in 498 country-year observations, 34 of which included a second or third coup.[2]

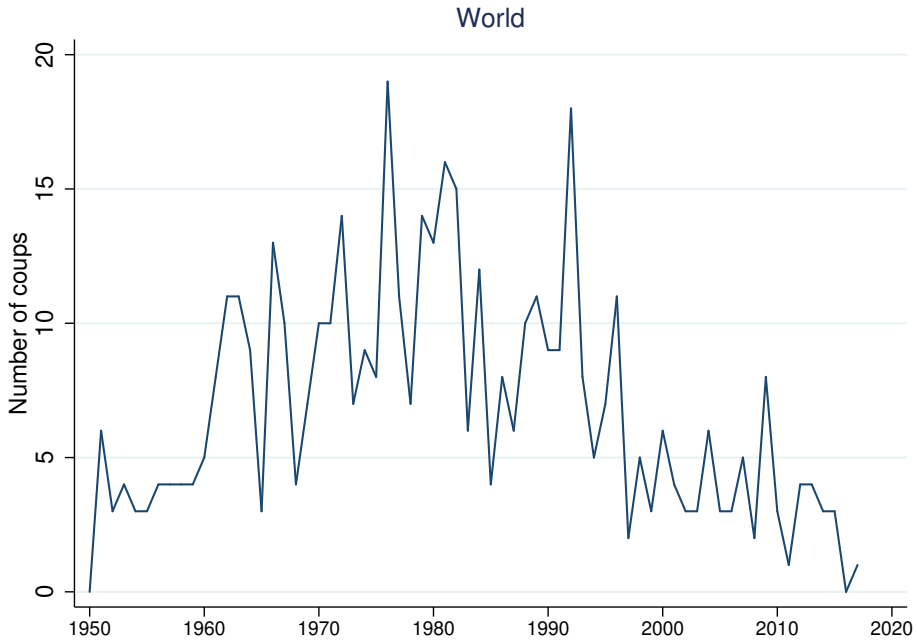

Figure 1 Development of the total number of coups d'état in the world. The figure shows the total number of coups in the world per year.

A coup is assigned to year t if the coup occurred in the first half of year t (i.e. for coups between January and June) or in the second half of the previous year $t-1$ (i.e. for coups

[2]Unless indicated otherwise, we use the term "coup" in the remainder of this article for all coup attempts irrespective of whether the coup was successful or whether it failed.

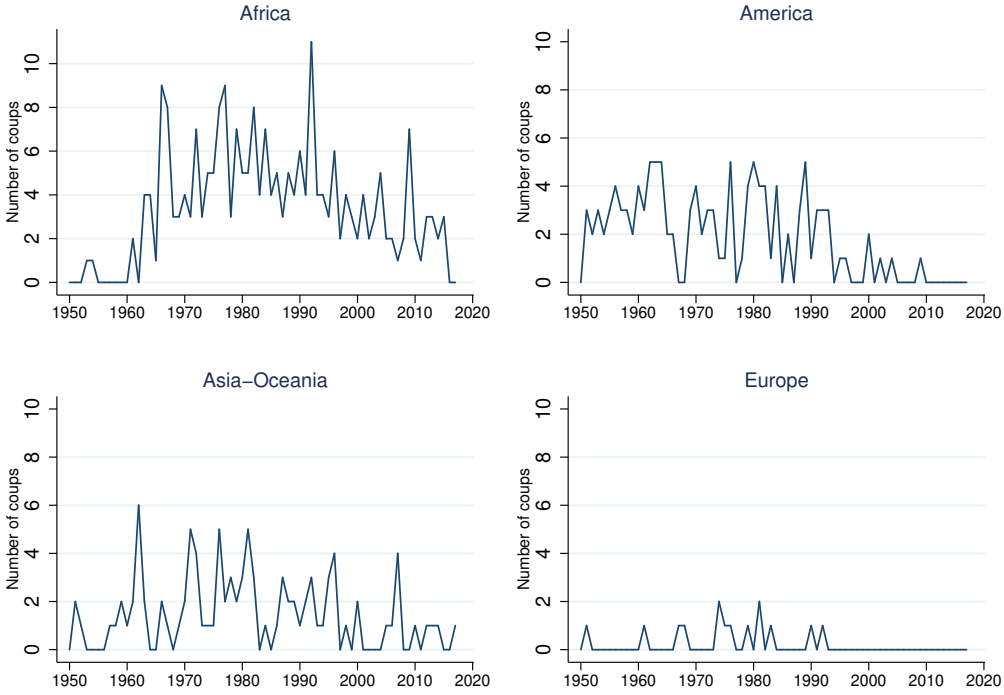

Figure 2 Development of coups d'état across continents. The Figure shows the total number of coups per continent per year. The classification of countries and continents refers to the World Bank's country classification.

between July and December). For our empirical analysis, this temporal assignment of coups defines a time window between 6 and 18 months after a coup until changes in per capita GDP become effective. This coding is important because coups are almost evenly distributed over months. Coding on an annual basis from January to December would yield downward biased estimates when coups take place at the end of a year.

A concern may be that failed coups are underreported in the Bjørnskov and Rode (2019) dataset because they may attract less public attention. Three arguments speak against this concern: first, the number of failed coups ($N = 294$) in the sample exceeds the number of successful coups ($N = 243$). Second and more importantly, governments which (politically) survive a coup attempt have little reason to hide it. Coup attempts can be politically exploited to strengthen the own power (e.g. by persecuting opposition members) and allows the head of government to stage himself as a strong ruler. Third, the creators of the dataset have put much effort in excluding rumored coups and installed control mechanisms for miscoding.

We include all countries in our sample for which data on GDP per capita and coups is available. Our panel consists of 180 countries and covers the period 1950 to 2017, which results in more than 9,000 country-year observations, 432 of which saw coups or coup attempts (402 include a single coup, 27 include two coups, and 3 include three coups). The success rate of coups in our sample is 46%. 102 of the countries in the sample

experienced at least one coup, 78 did not experience any coup since 1950. Table (B-1) in the Appendix provides detailed information on data availability and coup occurrence for all countries in our sample.

Figure (1) shows the total number of coups per year that occurred between 1950 and 2018. The numbers reveal distinct temporal patterns in coup occurrence. There have been roughly 5 coups per year during the 1950s and the early 1960s, but coup activity rose considerably during the 1960s and the 1970s, reaching its peak in 1976 with a total of 19 coups. With a brief interruption in the early 1990s, the number of coups declined since the early 1980s and reached its all-time low in the post-2010 period. Figure (2) shows differences in coup occurrence across continents. With an average of 3.39 coups per year, coup activity is strongest in Africa, followed by America (1.81) and Asia (1.42). In contrast, coups are rare events in Europe (0.21 per year), and almost all coups have occurred between the mid-1970s and the mid-1980s. Consistent with the trend observable for all countries, coup activity has substantially declined in Africa and America during the past three decades. The decline is, however, less pronounced in Asia.

2.2 The geospatial dimension of coups

Our identification strategy exploits geospatial variation in coup activity. To this end, we analyze each coup of the Bjørnskov and Rode (2019) database and georeference the coups based on multiple sources that provide information about the regions in which coups took place, including many books, scholarly articles, and newspaper articles. The detailed analysis of coups reveals distinct patterns of coup activity in terms of geographical reach and the extent of violence.

Figure (3) shows the geographic pattern of coups and coup attempts based on our geocoded data for the successful coups in Pakistan 1999 and the Central African Republic in 2003, as well as the coup attempts in Venezuela 1992 and in Turkey 2016. The countries are representative for some distinct differences in the geospatial dimension of coups in our dataset.

First, the 1999 Pakistan coup d'état was a military takeover initiated by General Pervez Musharraf, which unseated the publicly elected civilian government of Prime Minister Nawaz Sharif. The coup was relatively bloodless and took place only in the Prime Minister's Secretariat in Islamabad (Hossain, 2000). In a similar vein, General François Bozizé marched on the Central African Republic's capital Bagui in March 2003 while then President Ange-Félix Patassé (after surviving seven previous coup attempts) stayed in Niger for a regional conference. Bozizé captured the presidential palace and the international airport, with little resistance from government troops and CEMAC peacekeepers, which allowed Bozizé to suspend the constitution and to seize power (The Economist, 2003). Both the 1999 Pakistan coup and the 2003 Central African Republic coup are exemplary

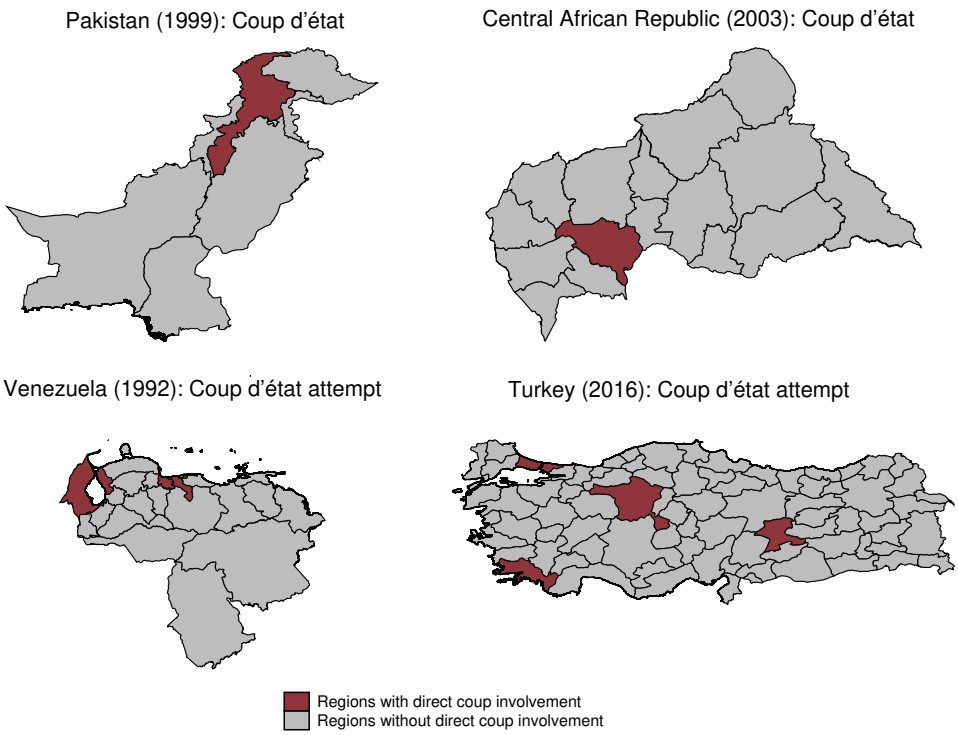

Figure 3 The spatial dimension of coups. The figure shows coups in Pakistan 1999, the Central African Republic 2003, as well as coup attempts in Venezuela 1992 and Turkey 2016. Red-shaded regions mark sub-national entities with direct coup involvement, gray-shaded regions are sub-national units without direct coup involvement. Data is a georeferenced version of the Bjørnskov and Rode (2019) dataset.

for military takeovers that take place in the capital.

In contrast to these successful and relatively non-violent coups, Venezuela saw two violent and unsuccessful coup attempts in 1992, which involved several regions in the country. The 1992 Venezuelan coups took place in February and November and were attempts to seize control by the Revolutionary Bolivarian Movement-200. The first attempt was led by Hugo Chávez, the second attempt was directed by a group of young military officers while Chávez was in prison. Both attempts were directed against President Carlos Andrés Pérez and demanded about 300 casualties and 95 injuries. In the February 1992 coup, Chávez failed to take Caracas, whereas other rebel forces took control of Valencia, Maracaibo, and Maracay. In the November coup attempt, rebelling air force officers were able to take over a state-run TV station in Caracas, broadcasting a video that was filmed in prison and in which Chávez called for a popular uprising. Before the rebellion was crushed, the putschists were able to gain control over several military bases in the country.

Finally, the 2016 coup attempt in Turkey was carried out by a faction within the Turkish Armed Forces, which attempted to seize control in many key regions, including Ankara, Istanbul, Marmaris, Malatya, and Kars. The coup had devastating consequences: during violent clashes, over 300 people were killed and more than 2,000 were injured. After the government defeated the rebellion, more than 40,000 people were detained, including

soldiers, judges, and teachers. Another 75,000 people were arrested and over 160,000 were fired from their job on accusation of connections to Fethullah Gülen, the alleged coup leader. Gülen, however, denied being behind the attempt and accused President Recep Tayyip Erdogan of a self-coup ("autogolpe") conducted to cement his political power.

The coups in Pakistan, the Central African Republic, Venezuela and Turkey show that there are substantial differences in coup attempts with regard to the geographical reach, the degree of violence, and the political consequences. Common to these coups is that they decrease political stability.

2.3 Data on economic development and growth

Data on GDP per capita is taken from Penn World Table (PWT) version 9.1, which was released in April 2019 (Feenstra et al., 2015). Version 9.1 covers data on prices, output, and productivity for 182 countries between 1950 and 2017. The PWT is often considered the "gold standard" in providing harmonized cross-country measures of GDP. As our main outcome variable, we use the log of per capita GDP, measured in constant (2011) US-Dollars. To assess the consistency of our results, we use GDP data from the World Development Indicators (WDI) database of the World Bank (2019) in our robustness tests. Summary statistics for growth-related variables, coup-related variables and control variables (which are applied in the robustness tests) are shown in Table (B-2) in the Appendix.

2.4 Descriptive evidence on coups and growth

Figure (4) shows the unconditional correlation between real per capita GDP growth and the occurrence of coups. The figure shows correlations based on (i) our full sample of country-year observations and (ii) a sample that only considers the 102 countries that experienced at least one coup between 1950 and 2017. We might expect that the second group of countries is politically more unstable in general and hence features lower per capita growth rates than countries without coup activity. The figure does not point to substantial differences between the full sample and the sample of countries with at least one coup. For both samples, however, the figure reveals striking differences in growth rates between country-year observations with and without coups. In the full sample, the average growth rate for country-year observations without coups is 2.3%, but it is -0.4% in years when a coup took place. When focusing on countries that experienced at least one coup, the average growth rate for country-years without coups is 2.0% compared to -0.4% in years during which a coup took place. The differences are even more remarkable when we restrict the sample to the post-1990s period, the period during which coups became less frequent. In this case, the average growth rate is 2.1% for country-years without

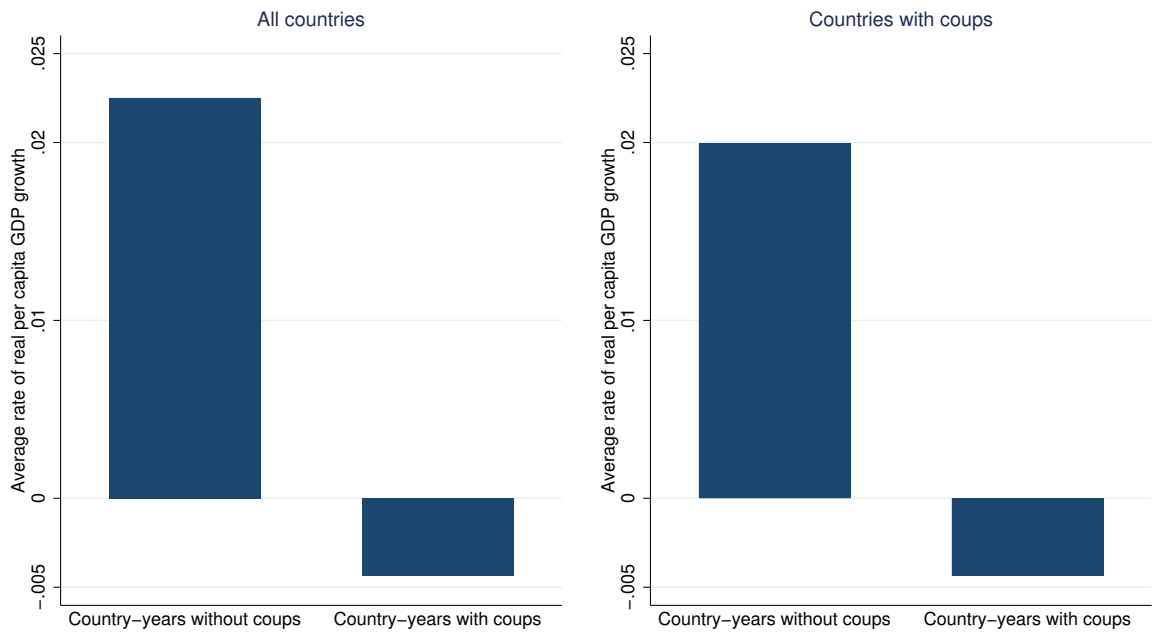

Figure 4 Coup occurrence and mean growth rates in the sample. The figure shows growth rates for country-years observations with and without coups for the whole sample of country-years (left panel) and the sample of countries that have experienced at least one coup (right panel).

coups and -1.0% for those in which a coup occurred (not illustrated).

2.5 Can coups be anticipated?

Figure (2) shows that the probability of coup occurrence exhibits distinct spatial patterns. An important conclusion is that time-invariant factors influence the ex ante probability of coups ("coup risk"). Much less clear, however, is whether coups can systematically be predicted by time-varying factors. There is a large literature studying the determinants of coups, both theoretically and empirically (for an overview, see Singh, 2014). This literature quarrels over the question of whether coups can be anticipated or predominantly contain random elements. A prominent argument is that coups occur more often in times when the cost of coups are low (see, e.g., Aidt and Albornoz, 2011). For a given cost of coups, however, innate personal characteristics of potential coup leaders (such as their risk aversion, charisma, or ambition) can tip the balance to execute a coup or not (Collier and Hoeffler, 2007). In a similar vein, studies analyzing the micro-dynamics of coups argue that elites face a daunting coordination problem when contemplating a coup d'état (Casper and Tyson, 2014), and many officers in military coups only want to join a coup if others join as well (Little, 2017). Ultimately, the decision to eventually execute a coup may feature an important element of chance. Summarizing the literature on the determinants of coups d'état, Lachapelle (2020) concludes that *"although coups have been extensively studied, current scholarship lacks a robust model of the determinants of military coups"*.

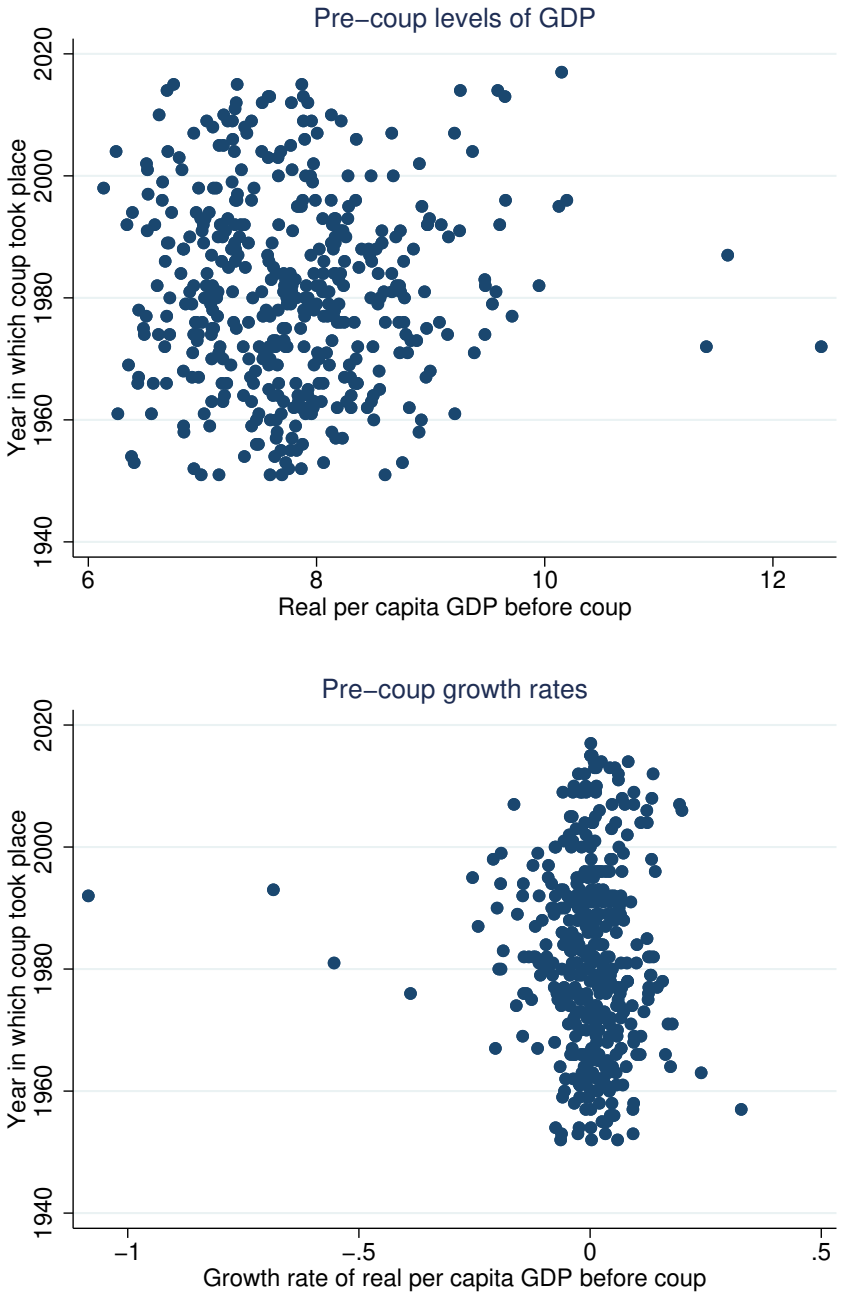

Figure 5 Timing of coups and pre-coup levels of economic development: Graphical analysis. The figure shows a scatter plot that relates the timing of coup occurrence to the level of real per capita GDP (in log terms, upper graph) and the growth rate of real per capita GDP (lower graph). The correlations are 0.0008 for GDP levels and -0.076 for growth rates.

The reason for why there is no conclusive theory of coup occurrence may either be that coup attempts are not systematically caused by time-varying factors, or that these factors have not yet been identified. Using an extreme bounds analysis based on more than three million regressions, Gassebner et al. (2016) demonstrate that most of the proposed variables are unsuccessful in describing the occurrence of coup attempts. Their results show that from 66 variables proposed in the empirical literature, unfavorable economic conditions, previous coups experiences, and other forms of political violence are the only factors that are correlated with coup attempts. Other studies confirm that coups are difficult to predict and question the conventional wisdom that per capita income is an important source of coup occurrence. Powell (2012) and Svolik (2013) show that coup attempts and incomes per capita are not statistically significantly correlated.[3] Supporting evidence comes from the study of Bazzi and Blattman (2014), who cast doubt on the effect of economic shocks on conflict and coups d'états. These recent results are consistent with the classical perspective that coups are random phenomena that cannot be systematically explained (Zolberg, 1968; Decalo, 1976).

Figure (5) provides a graphical analysis of the correlation between pre-coup economic conditions and coup attempts. The figure relates the year in which coups took place to per capita GDP (upper graph) and its growth rate (lower graph) prior to the coup attempts. This analysis suggests that there is no systematical pattern between coup occurrence and the level of per capita GDP or its rate of change prior to coups. In both cases, the correlation is weak (0.001 for levels and -0.076 for growth rates). Also, we do not observe changes in the relationship between economic conditions and coup occurrence over time.

3 Country-level results

3.1 Panel difference-in-differences model

Our first approach to estimate the effect of coups on economic development is a panel difference-in-differences model. Our specification follows a standard set-up (see, e.g., Beck et al., 2010)

$$\Delta y_{it} = \delta \text{Coup}_{it} + \mathbf{C}_i \boldsymbol{\gamma} + \mathbf{T}_t \boldsymbol{\lambda} + \varepsilon_{it}, \tag{1}$$

where the dependent variable Δy_{it} is the growth rate of real per capita GDP of country i at time t. To eliminate cross-country differences in the propensity of coups occurrence, Equation (1) includes country fixed effects, implemented by a full set of country dummies

[3] Likewise, in the study of Gassebner et al. (2016), neither the pre-coup level of per capita GDP nor the growth rate passes the critical CDF threshold for robustness in extreme bounds analyses proposed by Sturm and De Haan (2005).

Table 1 COUPS D'ÉTAT AND ECONOMIC GROWTH—BASELINE RESULTS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.027***	-0.022***	-0.026***	-0.022***	-0.021***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.021***
						(0.003)
$\text{Multiple Coups}_{it}$					-0.003	-0.024
					(0.023)	(0.023)
Observations	9,709	9,709	9,709	9,709	9,709	9,709
Countries	180	180	180	180	180	180
R-Squared	0.008	0.059	0.058	0.109	0.109	0.109
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

$\mathbf{C}_i$. The country fixed effects further account for any cross-country heterogeneity in time-invariant characteristics that may influence the probability of coups, such as institutions or cultural and ethnic factors (see Figure 2). Fixed effects also eliminate cross-country differences in climatic factors (Masters and McMillan, 2001) and natural resources (Rodríguez and Sachs, 1999), which have been shown to influence political instability. We also include a vector of year fixed effects $\mathbf{T}_t$ to absorb cross-national shocks and trends in coup activity (see Figure 1). Our variable of interest Coup_{it} is one if a coup has occurred in a given country-year, and zero otherwise.

Table (1) reports variations of the difference-in-differences model of Equation (1). Column (1) shows the results of a reduced specification without country or year fixed effects, Columns (2) and (3) gradually introduce country and year fixed effects. Column (4) presents results of the standard difference-in-differences specification described in Equation (1). Each of these models suggests a negative effect of coup activity on economic growth that is very robust across specifications. The genuine difference-in-differences model in column (4) shows that compared with periods without coup activity, the growth rate of real per capita GDP declines by about 2.2 percentage points when a coup takes place. The effect is statistically significant at the 1% level. Economically, the negative

effect of coups is sizeable: the average growth rate of real per capita GDP for observations without any coup in our sample is 2.3%. This implies that, on average, a coup almost offsets economic growth.

Column (5) estimates whether there is an additional effect of a second or third coup in the event of multiple coups in one year. There is virtually no change in the effect of our measure of coups occurrence, which remains negative and statistically significant at the 1% level. The coefficient estimate for a second or third coup (Multiple Coups$_{it}$) also has a negative sign, but the parameter estimate is far from statistical significance (p=0.891). Column (6) compares the effect of multiple coups with the effect of a single coup. i.e. country-year observations with no more than one coup. The results corroborate the outcomes of Column (5). Taken together, Columns (5) and (6) indicate that the adverse effect of political instability on economic growth fully materializes with a single coup or the first of multiple coups in a given year. The observation that further coups do not seem to matter for economic growth suggests that a first of multiple coups in a given year entails political instability to an extent which subsequent coups cannot increase further. We interpret this result as a sign that the estimated parameter for Coup$_{it}$ reflects the effect of political instability after a coup, rather than capturing other factors—such as violence and conflict—that may directly accompany coups.

Our panel difference-in-differences model rests on the identifying assumption that the timing of coups is unaffected by economic development prior to the coup. This is a strong assumption, but it is not implausible. First, the recent literature has cast doubt on the conventional wisdom that economic conditions trigger coup d'états and political violence (Bazzi and Blattman, 2014; Svolik, 2013; Powell, 2012). Second, Figure (2) shows distinct geospatial correlation of coups, suggesting that the propensity is influenced by more fundamental long-term roots rather than by short-term fluctuations in economic growth. Third, Figure (5) provides a graphical analysis of our key identifying assumption. The figure suggests that neither the level nor the growth rate of GDP prior to coup attempts can predict the occurrence of coups.

3.2 Dynamic panel data model

To further alleviate concerns about endogenous treatment effects of coups and to account for a potential pre-treatment correlation between economic development and coup occurrence, our second empirical strategy augments Equation (1) by pre-coup GDP dynamics (see, e.g., Acemoglu et al., 2019)

$$y_{it} = \sum_{j=1}^{J} \beta_j y_{it-j} + \mu \text{Coup}_{it} + \eta_i + \zeta_t + \varepsilon_{it}. \tag{2}$$

The dependent variable y_{it} is the log of real per capita GDP in country i in year t. The

specification includes four lags of GDP per capita prior to the period in which a coup takes place. We include four lags of GDP for two reasons: first, the standard assumption of linear dynamic panel models requires that the error term ε_{it} is serially uncorrelated and that coups and past levels of GDP are orthogonal to current and future shocks to GDP (*sequential exogeneity*):

$$\mathrm{E}\left(\varepsilon_{it}|y_{it-1},\ldots,y_{it_0},\mathrm{Coup}_{it},\ldots,\mathrm{Coup}_{it_0},\eta_i,\zeta_t\right)=0, t=1,\ldots,T. \tag{3}$$

This assumption is less demanding than strict exogeneity, under which the parameter μ in Equation (2) would be identified, but which is always violated when (2) contains lagged variables. To fulfill *sequential exogeneity*, it is required to include a sufficiently long pre-coup time period to account for GDP dynamics that may influence the probability of coup occurrence.

Second, another important assumption of the dynamic panel data model is that conditional on fixed effects, GDP and coups follow stationary processes. This assumption ensures consistent parameter estimates and well-behaved limit distributions. Hamilton (2018) shows that the inclusion of four lags of the dependent variable creates stationary series with very high probability.[4] When we include four lags of the log value of GDP per capita, we can directly compare the coefficient size of the parameter estimates with that of our panel difference-in-differences model (Equation 1). Under the assumptions of sequential exogeneity and stationarity, we estimate Equation (2) with the standard within-group estimator.

Table (2) shows the baseline estimation results. Column (1) shows the results of reduced specification without country or year fixed effects, Columns (2) and (3) gradually introduce country and year fixed effects. Column (4) shows the results of the full dynamic panel data model described in Equation (2). The first and second lag of the dependent variable is positive and statistically significant at the 1% and the 5% significance level. The occurrence of at least one coup (Coup_{it}) shows a positive effect on GDP per capita which is statistically highly significant at the 1% level. According to column (4), a coup thus reduces GDP per capita by about 3.0%. This result is in line with the descriptive results shown in Figure (4). Given that the average growth rate of GDP per capita in our sample for observations without any coup is 2.3%, an effect of 3.0% reflects a high economic significance. Column (5) estimates whether there is an additional effect of a second or third coup in the event of multiple coups in one year. The variable for a second or third coup (Multiple Coups_{it}) does, however, not turn out to be statistically significant. Column (6) shows the estimation results for single coups (Single Coup_{it}), i.e. country-year observations with not more than one coup, and multiple coups. The result for single coups is identical to the result for at least one coup while the effect of multiple coups does not

[4]The series is stationary in case that the fourth differences of GDP are stationary, an assumption which is very likely to be fulfilled.

Table 2 COUPS D'ÉTAT AND ECONOMIC GROWTH—BASELINE RESULTS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.039***	-0.035***	-0.037***	-0.030***	-0.031***	
	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)	
Single Coup_{it}						-0.031***
						(0.008)
$\text{Multiple Coups}_{it}$					0.018	-0.013
					(0.013)	(0.012)
$\text{Log}(\text{GDP}^{pc})(t-1)$	0.887***	0.851***	0.873***	0.827***	0.827***	0.827***
	(0.075)	(0.075)	(0.074)	(0.072)	(0.072)	(0.072)
$\text{Log}(\text{GDP}^{pc})(t-2)$	0.148**	0.146**	0.161**	0.155**	0.155**	0.155**
	(0.068)	(0.066)	(0.068)	(0.066)	(0.066)	(0.066)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.003	0.007	-0.000	0.002	0.002	0.002
	(0.044)	(0.044)	(0.047)	(0.047)	(0.047)	(0.047)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.044	-0.003	-0.039	-0.029	-0.029	-0.029
	(0.040)	(0.043)	(0.042)	(0.044)	(0.044)	(0.044)
Observations	9,169	9,169	9,169	9,169	9,169	9,169
Countries	180	180	180	180	180	180
R-Squared Overall	0.990	0.990	0.990	0.990	0.990	0.990
R-Squared Within	0.946	0.946	0.948	0.949	0.949	0.949
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

turn out to be statistically significant. The results thus indicate that the adverse effect of political instability on economic growth fully materializes with a single coup or the first of multiple coups in a given year. Further coups do not seem to matter for economic growth after a first coup has occurred.

3.3 Event study analysis

Our results rest on the assumption that there are no systematic differential trends in GDP of countries with and without coups d'état. To assess the plausibility of this assumption, we examine the dynamics between coups and economic growth by using a flexible event study. The flexible event study illustrates the effect of a coup in years before and years after the coup. Results for the pre-coup years thus allow to infer whether the common trends assumption holds, while results for the post-coup years show how persistent the growth effect of a coup is. The event study is flexible in the sense that all countries which experienced a coup can be included irrespective of the year in which the coup occurred. We extend our panel difference-in-differences model and our full dynamic panel data model by estimating year-specific dummy variables for years before and after a coup. The sample for the flexible event study is, however, restricted to single coups (Single Coup_{it}^{T}), i.e. each event window includes one coup—not a second or third coup in the same year and no other single coups or multiple coups in the years around the event. Additional coups, either in the same year or in other years of the event window, would bias the estimation results. The empirical models for the flexible event study are

$$\Delta y_{it} = \sum_{T=t-4}^{T=t+3} \delta_T (\text{Single Coup})_{it}^{T} + \mathbf{C}_i\boldsymbol{\gamma} + \mathbf{T}_t\boldsymbol{\gamma} + \varepsilon_{it}, \tag{4}$$

$$y_{it} = \sum_{j=1}^{j=4} \beta_j y_{it-j} + \sum_{T=t-4}^{T=t+3} \delta_T (\text{Single Coup})_{it}^{T} + \eta_i + \zeta_t + \varepsilon_{it}. \tag{5}$$

Bjørnskov and Rode (2019) code the year of a coup depending on the month in which the coup occurred (see Section 2.1), and the year of a coup is either described by year t or by year $t-1$. Hence, we chose $t-2$ as the reference year for the event study. The remaining T years are years prior to and after the coup ($T = [t-4; t+3]$). The coefficients δ_T thus estimate the effect of a coup on GDP per capita from $t-4$ years before the coup to $t+3$ years after the coup. The remaining coefficients in Equations (4) and (5) are identical to Equations (1) and (2). We chose an event window of eight years to include a sufficiently large number of countries in the sample ($N = 80$), but the results are not sensitive to changes in the window size.

Figures (6) and (7) illustrate the event study results following Equations (4) and (5) (see Tables B-3 and B-4 in the Appendix for the numeric estimation results). Coefficient

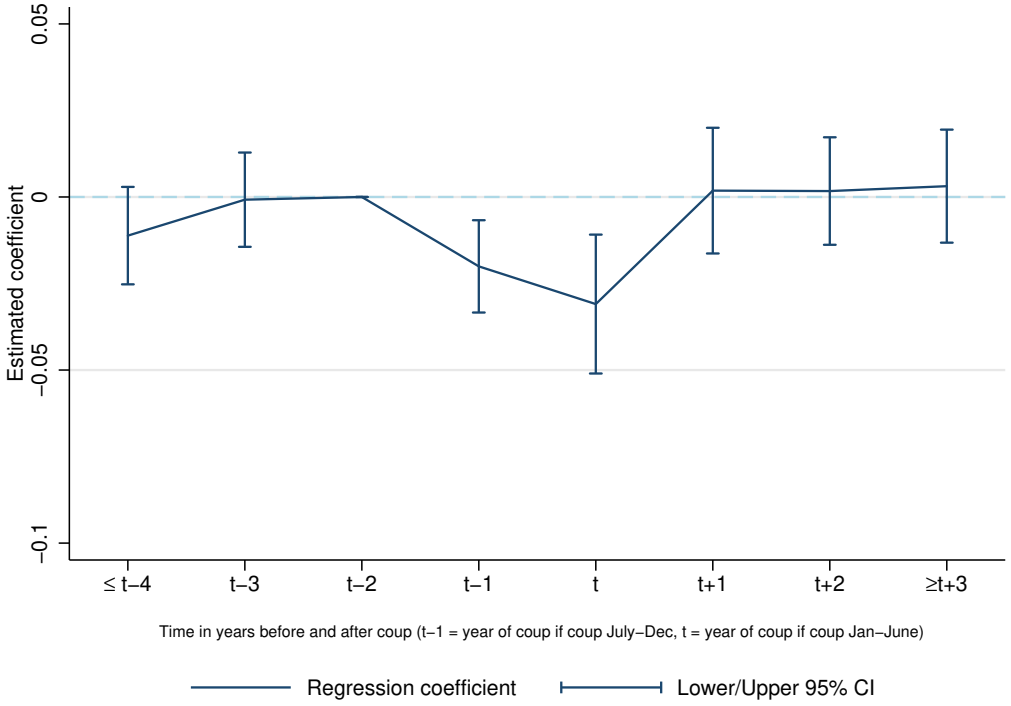

Figure 6 Event study results for the occurrence of a single coup, panel difference-in-differences model (results in growth rates). Bjørnskov and Rode (2019) assign a coup to year t if the coup either occurred in the first half of year t or in the second half of the previous year $t-1$.

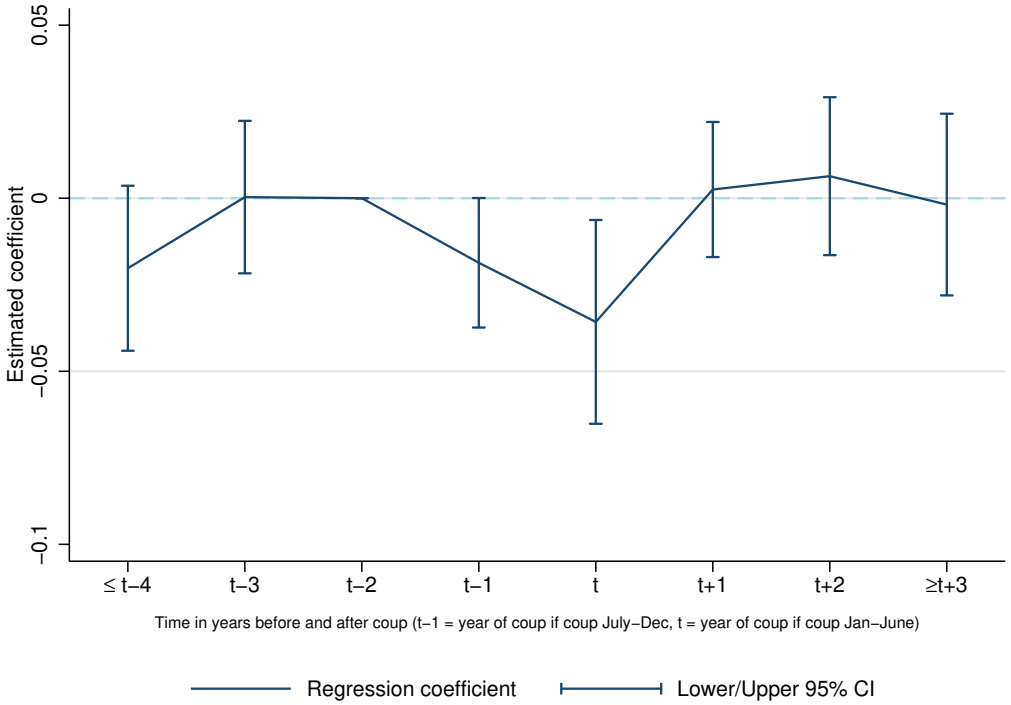

Figure 7 Event study results for the occurrence of a single coup, full dynamic panel data model. Bjørnskov and Rode (2019) assign a coup to year t if the coup either occurred in the first half of year t or in the second half of the previous year $t-1$.

estimates for both event study models are not statistically significant at the 5% level for years prior to a coup, suggesting that the common trends assumption is fulfilled. In the year of the treatment, the parameter estimates are negative and statistically significant, both in year $t-1$ (i.e. the year of a coup in case the coup occurred between July and December) and in year t (i.e. the year of a coup in case the coup occurred between January and June). In the panel difference-in-differences model, the effects are statistically significant at the 1% level and amount to a reduction in growth rates by, respectively, 2.0 and 3.1 percentage points. The results are similar for the dynamic panel data model. Given the coding rule of the coup variable, the negative coefficients for year $t-1$ and year t are consistent with our baseline estimates.

The estimated parameters of the event study analysis are not statistically significant in years after the treatment, indicating that coups directly influence growth rates for a maximum of two periods. The event study does not reveal a catch-up effect in years after the coup. This suggests that treated countries grow at rates similar to those of untreated countries two years after a coup, but they do not compensate for the loss during the coup period. The absence of a catch-up effect suggests that the adverse effect of a coup can have very long-lasting economic consequences.

3.4 Robustness

The validity of our estimates depends on some important assumptions underlying our empirical model. In this section, we investigate threats to the validity of our results caused by potential violations of these assumptions.

First, we examine the robustness of our results to changes in the control group. In our baseline models, we exploit all available information in our dataset to arrive at the broadest possible sample of coups d'état and economic growth. A concern may be, however, that the control group is not accurately specified, as (i) the ex ante probability of coups differs between the group of countries with and without coups because of systematic differences in time-invariant factors and (ii) these factors may be correlated with economic growth, i.e. countries that experienced coups in their younger economic history may have lower growth rates in general. Our baseline model includes a full set of country dummy variables to account for these concerns. Also, Figure (4) suggests that the differences in growth rates between countries with and without coup experience in the sample are small. To further tackle the possibility that the results are driven by an inadequate control group, we re-estimate our baseline model using only country-year observations from countries that experienced at least one coup (see Tables B-5 and B-6 in the Appendix). This adjustment reduces the number of countries from 180 to 102 and the number of observations from 9,709 to 5,854. The parameter estimates in this reduced model are practically identical to the full sample. In the difference-in-differences model, a coup re-

duces GDP by 2.1 percentage points (compared to 2.2 percentage points in the baseline model).

Second, we assess the stability of our results when we adjust the structure of our dataset. In Tables (B-7) and (B-8) in the Appendix, we alter the time dimension of our sample and re-estimate our model using non-overlapping five-year averages. Doing so has little effect on our results. In our preferred specification, a coup is assigned to year t if it occurred in the first half of year t (i.e. for coups between January and June) or in the second half of the previous year $t-1$ (i.e. for coups between July and December). This coding scheme is important to ensure that the coup effect can materialize in the data, but a concern may be that this coding results in a temporal bias. In Tables (B-9) and (B-10) in the Appendix, we test for an alternative coding of coup occurrence where we re-code coups to match calendar years. We do not observe any changes in the growth effect of coups d'état when we alter the coding scheme.

Third, we restrict the sample to country-year observations in which a coup took place and examine whether multiple coups or successful coups have additional adverse effects on GDP per capita. If the negative effect found in our previous estimates reflects political instability, then we would expect that neither additional coups nor coup success directly influence GDP growth. Tables (B-11) and (B-12) in the Appendix report the results for multiple coups in a sample including all observations with coup occurrence. Tables (B-13) and (B-14) in the Appendix report the results for successful coups in a sample including single coups only. The results show that (i) the negative effect of coups is independent of coup success or failure, and (ii) the adverse effect of coups sets in with the first coup, and there is no further detrimental effect of a second or third coup. We also tested for coup success in our baseline model and for horse races between failed and successful coup attempts. Doing so has little effect on inferences (not reported).

Fourth, we use alternative measures of GDP per capita from the World Bank (World Bank, 2019). The number of countries and country-year observations is slightly reduced when using the World Bank data, but the estimates are similar to our baseline results (see Tables B-15 and B-16 in the Appendix).

The occurrence of coups may be driven by exogenous shocks that also affect growth directly. As a fifth robustness test, we account for time-varying factors that possibly confound our parameter estimates. The selection of potential confounding factors refers to variables that pass the critical CDF threshold of 0.95 in the Extreme Bounds Analysis of Gassebner et al. (2016). We include dummy variables for interstate and internal war from the *UCDP/PRIO Armed Conflict Dataset* by Gleditsch et al. (2002) (Version 17.2), a score for civil and ethnic violence from the *Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2016* dataset (Version July 25, 2017), a variable for coup experience which describes the cumulative number of coups in a country since 1950, the dichotomous democracy indicator of Bjørnskov and Rode (2019), the *KOF Globalization*

Index (Gygli et al., 2019), an index for ethnic fractionalization from the *Historical Index of Ethnic Fractionalization Dataset (HIEF)* (see Drazanova, 2019) and—for the panel difference-in-differences model—the second lag of GDP per capita to account for the current level of economic development. It is worth mentioning that control variables are redundant in a correctly specified difference-in-differences model with randomly assigned treatments. In such a setup, covariates may even be "bad controls" (see Angrist and Pischke, 2009). Control variables for internal war or civil violence are likely to be an outcome of a coup which influences GDP per capita. Nevertheless, our inferences from the baseline estimation results do not change once these control variables are added to the models (see Tables B-17 and B-18 in the Appendix). We also run a battery of additional robustness tests where we control for other factors (e.g. military expenditure, military power, population dynamics). Including these factors does not change the results (not reported).

Sixth, we estimate the preferred specifications of our models (including country and year fixed effects) separately for geographic regions. Figure (2) shows that the number of coups differs between continents, and it is a concern that our baseline results may be driven by individual geographic regions. The results, reported in Tables (B-19) and (B-20) in the Appendix, show that coups reduced GDP growth regardless of the geographic region. As an alternative strategy to address regional heterogeneity, we augment our baseline model by including continent-decade fixed effects, with little effect on inferences (not reported).

Seventh, we examine whether certain characteristics of a coup influence the growth effect of coups d'état. We test for the type of coup (i.e. whether the coup was led by the military, by civilians, or by members of the royal family) and for biographic information of the coup leader, including the age of the coup leader, the civil rank of the coup leader (in case of a civilian coup), and the military rank of the coup leader (in case of a military coup). We also account for the tenure of incumbents to address the "leader effect" of incumbents. None of these variables influences the growth effect of coups. The generality of the coup effect bolsters our argument that the adverse growth effect of coups is caused by an environment of political instability (see Tables B-21 and B-22).

Eighth, an additional source of bias in our estimates would come from differential trends in GDP among countries with coup attempts. To investigate the extent to which differences in trends influence our results, we follow Acemoglu et al. (2019) by interacting dummies for the quintile of per capita GDP of countries in 1960 with a full set of period effects. The rationale for this strategy is to identify the effect of coups by comparing countries that were similarly developed at the start of our sample.[5] Columns (1)-(2) of Table (B-23) in the Appendix show that differences in GDP trends have no impact on the effect of coups on GDP.

[5]To construct the quintiles, we use data from the Maddison database to maximize the number of included countries. The Maddison dataset compiles historical GDP data for a large number of countries.

Our dynamic panel data model allows us to remove the potentially confounding influence of any pre-coup trend in GDP. To specify the time horizon of pre-coup GDP dynamics, we follow Acemoglu et al. (2019) and Hamilton (2018) in using four periods prior to coups. In Columns (3)-(5) of Table (B-23) in the Appendix, we examine the sensitivity of the results to changes in the specification of GDP dynamics. We reduce the time horizon before the treatment to one, two, and three lags, with little effect on inferences. Differences in the lag structure also do not influence the size of the estimated parameter: In each case, the Wald test does not reject the null of equality of the parameter estimates for coups in the baseline specification (four lags) compared to specifications with alternative lag structures presented in Columns (3)-(5). We also run models with (i) richer GDP dynamic including up to ten lags and (ii) country-specific linear time trends. These models have no effect on inferences (not reported).

The within group estimates of our dynamic panel data models have an asymptotic bias of order $1/T$ (Nickell, 1981). This bias is caused by the failure of strict exogeneity and is mitigated for large T. As our sample includes a total of 68 periods, we expect the "Nickell-bias" to be small, which motivates usage of the within estimator as our baseline approach. Column (6) of Table (B-23) in the Appendix reports the results from a GMM estimation that yields consistent estimates of the dynamic panel data model for finite T. From the sequential-exogeneity condition, we can derive the following moment condition for the GMM framework

$$\mathrm{E}[(\varepsilon_{it} - \varepsilon_{it-1})(y_{is},\, \mathrm{Coup}_{is+1})'] = 0 \;\forall s \geq t-2, \tag{6}$$

which can be employed using the "difference-GMM estimator" (Arellano and Bond, 1991). Intuitively, the Arellano-Bond estimator accounts for correlations of our coup variable with past and current realizations of the error term. The difference-GMM results are very similar to those of our baseline dynamic panel data model, which corroborates our expectation that the Nickell-bias of our baseline models is small.

A disadvantage of the difference-GMM estimator is that it is designed for "large N, small T" settings. For large T, the number of moment conditions is of order T^2, which can lead to instrument proliferation (Roodman, 2009) and causes an asymptotic bias of order $1/N$. Our specification of the difference-GMM estimator uses a weighting matrix proposed by Alvarez and Arellano (2003), which delivers consistent estimates even when T is large. To address the problem of instrument proliferation more directly, Column (7) of Table (B-23) in the Appendix shows the results when we estimate our baseline model using the dynamic panel data estimator of Han and Phillips (2010). The Han-Phillips estimator imposes no restriction on the number of cross-sectional units and the time span other than $NT \to \infty$, and Gaussian asymptotics apply irrespective of the composition of NT. Again, there is virtually no change in the growth effect of coups.

Finally, our baseline models rely on the assumption that the relationship between coups and economic growth is linear. The last column in Table (B-23) in the Appendix presents results of nonparametric kernel regressions with Li–Racine kernel and bootstrapped standard errors following Cattaneo and Jansson (2018). Nonparametric regressions make no assumption on the functional form of the relationship between coups and growth.[6] The reported effects in Column (8) are averages of contrasts of factor covariates and are strongly comparable to our parametric specifications.

3.5 Coups and political transitions

Marinov and Goemans (2014) argue that coups are the single most important factor for the downfall of democratic governments. Violent regime transitions are more likely than transitions through reforms (Buchheim and Ulbricht, 2020). Hence, a threat to the validity of our results is that our coup variable may capture the effect of transitions to autocracy rather than the coup effect *per se*. In our sample, the majority of coups took place within certain regime types and did not lead to political transitions: of the 402 single coup attempts in our sample (185 of which have been successful), 45 successful coups led to a transition from democracy to autocracy, 7 successful coups led to a transition from autocracy to democracy, and 128 (5) successful coups took place in autocracies (democracies) without regime transitions.

To rule out that our results are driven by regime transitions, we estimate the effect of a transition towards autocracy or democracy after a coup. Tables (B-24) and (B-25) in the Appendix show that our baseline estimates are not driven by regime transitions towards autocracy. A coup with a subsequent transition to autocracy is negatively related to growth. The correlation is statistically significant in the unconditional model (Column 1) but ceases to be significant once we control for the general occurrence of a coup (Column 2). Consistent with our previous results, the growth effect of coups is negative and statistically significant. The coup effect also remains unchanged when we control for democracy (Column 3) or exclude country-year observations with transition to autocracy (Column 4).

We also test for potential effects of transitions towards democracy initiated by coups to account for the argument that coup leaders have incentives to democratize in order to establish political legitimacy (see, e.g., Thyne and Powell, 2016). Consistent with the results for a transition to autocracy, there is no direct growth effect from a coup-led transition towards democracy, but the negative effect of the coup persists (Tables B-26 and B-27 in the Appendix).

In Tables (B-13) and (B-14) in the Appendix, we tested whether successful coups, i.e. coups which overthrew the incumbent government, have different effects on growth than

[6] Our nonparametric estimator takes averages of the local-linear estimates (see Li et al., 2003 and Cattaneo and Jansson, 2018).

failed coups. A related potential source of bias is that our estimates may capture the effect of a government change rather than the stability effect of coups. We account for this concern in Tables (B-28) and (B-29) in the Appendix, augmenting our baseline models by an interaction term between government change and coups d'état.[7] The results show that the negative effect of coups is not driven by changes in government. The effect of a coup d'état remains negative and statistically significant in each model, also when we exclude country-year observations with government changes in Column (4). The Wald test suggests that the parameter estimates are not significantly different from the baseline outcomes. Consistent with previous studies (see, e.g., Alesina et al., 1996), government changes exert additional adverse effects on growth *on top* of the coup effect.

Overall, the results provide support for our argument that the negative effect of coups stems from political instability initiated by coups d'état rather than from regime transitions or government changes.

3.6 Coups and political institutions

A concern may be that the institutional environment of countries and, in particular, institutional changes influence the likelihood of a coup d'état. Countries with underdeveloped institutions may be more politically unstable and hence more prone to coups. Established institutions may increase the hurdles of a coup, while coups are less costly when institutions are underdeveloped. In particular, institutional changes may influence the occurrence of coups, as (i) the cost of coups is low in times when institutions are vulnerable, which is typically the case when newly formed institutional environments are not yet established (Aidt and Albornoz, 2011) and (ii) institutional changes may have detrimental effects for parts of the elite, increasing incentives to conduct a coup to preserve the status quo. A related literature argues that states "are a prize that can be seized, especially when the institutions that constrain power are weak" (Bazzi and Blattman, 2014; see also Acemoglu and Robinson, 2001; Besley and Persson, 2010, 2011).

To rule out that the estimated relationship between coups and economic growth is confounded by institutional dynamics and regime-type heterogeneity, we augment our empirical models by the quality of political institutions. As we are not interested in regime transitions (which are examined in Section 3.5), we cannot use dichotomous democracy indicators for our analysis. Instead, we use the "Continuous Support Vector Machines Democracy Index" (CSVMDI) compiled by Gründler and Krieger (2016, 2018, 2019), which is based on machine learning algorithms to classify the extent of democratization on a continuous scale between 0 and 1. To model institutional dynamics prior to coups, we include four lags of the CSVMDI in our baseline models. The results, presented in Tables (B-30) and (B-31) in the Appendix, are very similar to our baseline estimates.

[7] Since data for government change from the Database of Political Institutions (DPI) does not cover years prior to 1975, the sample for this analysis is restricted to years from 1975 onwards.

3.7 Case study evidence

Our results so far reflect average growth effects of coups. In the next step, we examine in more detail the anatomy of coups d'état by analyzing case studies of specific coups. This analysis is motivated by Bazzi and Blattman (2014), who argue that systematic selection of country cases is essential to assess robustness of studies that deal with political instability. A demanding requirement for the selection of country cases is that there is a sufficiently long pre-treatment period that is not interrupted by any coup (usually of ten years or more), along with a post-treatment period of at least three years without additional coups or coup attempts. This requirement leaves us with a handful of coups that can be used to draw case study evidence. We carefully examine all of these events. Figure (8) shows the results of a synthetic control analysis on coups d'état in four countries. The figure shows the logarithm of GDP per capita for the treated country and its synthetic twin, which consists of a weighted average of up to 69 eligible countries without any coup activity. The coup in the Democratic Republic of Congo in 1960 took place during the Congo Crisis after independence from Belgium and was led by Joseph-Désiré Mobutu, who finally became president after a second successful coup attempt in 1965. The coup can be interpreted as a symptom of high political instability after the Congo became independent (Haskin, 2005). The coup in Thailand 1971 was a self-coup by the prime minister to gain support for the suppression of communist tendencies. At that time, Thailand experienced peasant revolts and student protests that were inspired by its neighbors Laos and Cambodia, which had come under communist rule one year earlier. The 1979 military coup in South Korea led by Major General Chun Doo-Hwan ended the Fourth Republic of Korea. It took Chun several months to finally gain control over most government apparatuses, resulting in high political instability (Hyun-Hee et al., 2005). The coup in Cameroon 1984 was an unsuccessful attempt by presidential palace guards to unseat President Paul Biya and involved armed fights in Cameroon's capital Yaoundé with several casualties (Randal, 1984).

For the majority of coups with a sufficiently large pre- and post-treatment period without further coups, we observe that per capita GDP develops unfavorable relative to the synthetic control group after the treatment. In some (relatively rare) cases, there are no statistically significant differences between the treated country and the control group. An important conclusion that we draw based on a detailed analysis of these growth-neutral coups is that there are no systematic patterns connecting these coups. Rather, there are specific circumstances that mitigate the detrimental growth effects that are unique to each coup d'état. A prominent example is the "constitutional coup" in Tunisia 1987, in which the new Prime Minister Zine El Abidine Ben Ali made a group of seven doctors sign a medical report, attesting that the aging and sick President Habib Bourguiba was mentally incapable. This coup, allegedly backed by Article 57 of the Tunisian Constitution, did

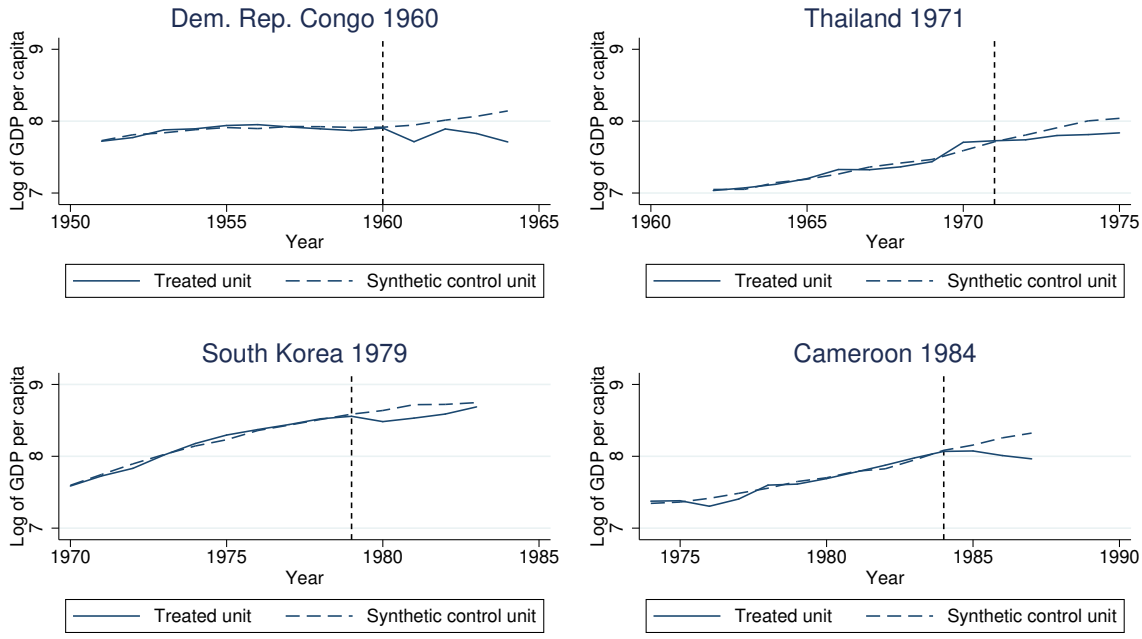

Figure 8 Synthetic control analysis for selected coup examples. The solid line represents the development of per capita GDP (log scale) of the treated country, the dashed line is the counterfactual development suggested by the synthetic control group. All countries only feature one coup during the time period used for the synthetic control analysis. The donor pool includes countries without coups or coup attempts. Weights: Democratic Republic of Congo: India 32.5%, Nicaragua 67.5%; Thailand: Botswana 33.5%, Cape Verde 3%, China 25%, Malta 3.2%, Singapore 35.2%; South Korea: Botswana 48.4%, Malta 36%, Saudi Arabia 15.6%; Cameroon: Antigua and Barbuda 10.1%, Botswana 76.6%, Cape Verde 13.4%.

not affect political stability. Ben Ali continued Bourguibas policies, positioning himself as his spiritual successor (see Figure 12 in the Appendix).

To alleviate concerns about strategic selection of the country case studies, Appendix (A.1) provides synthetic control estimates and accompanying descriptions for additional country cases.

4 Geospatial patterns and sub-national results

4.1 IV estimates: Coup contagious hypothesis

The key identifying assumption of our baseline regressions is that coups are difficult to predict with time-varying factors. We now relax this assumption and develop an IV approach that accounts for time-varying unobservables that may confound the relationship between coups and growth. The descriptive analysis of coups d'états in Section (2.1) shows that the ex ante probability of coups depends on the geographic region in which a country is located. We control for country fixed effects in our baseline model to account for time-invariant geographic confounders. In the next step, we exploit the geographical pattern for causal identification.

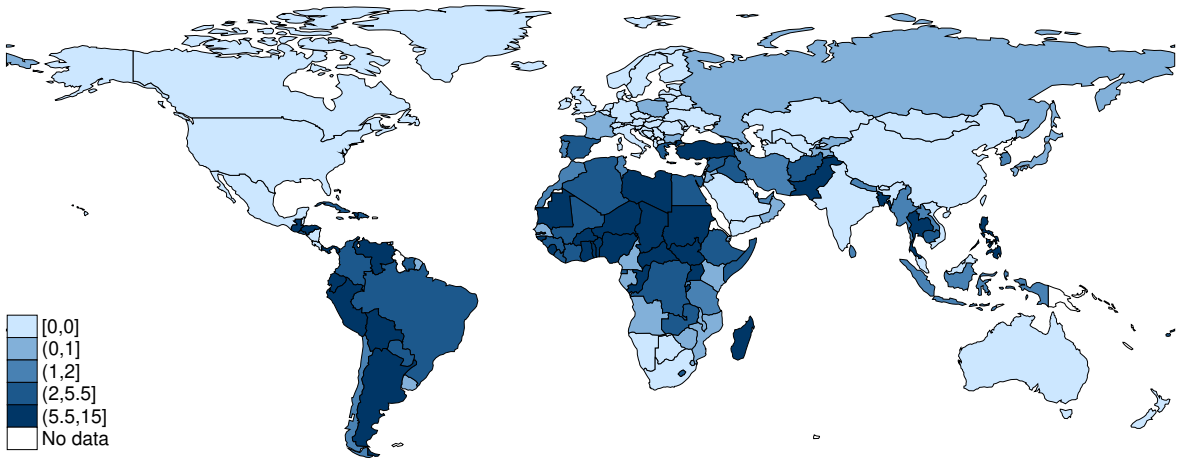

Figure 9 Number of Coups per country, 1950–2017. The numbers are calculated using the Bjørnskov and Rode (2019) dataset.

The political science literature has intensely studied the geographic patterns of coups. The most prominent explanation for the observed spatial dependency is the "coup contagious hypothesis", which was first raised by Li and Thompson (1975) and later re-evaluated by numerous scholars. Based on stochastic statistical models, Li and Thompson (1975) find a correlation of military coups in a country and the occurrence of coups in neighboring countries. The work was the foundation for the discussion of a "coup contagion" phenomenon. Li and Thompson (1975) explain the spatial correlation by a behavioral reinforcement process: successful coups in one country inspire and encourage military leaders in geographically close countries to follow the example. Consistent with our argument that coups are difficult to predict, a recent study by Miller et al. (2018) challenges the view of a direct causal spread of coup attempts across country borders. However, in line with earlier studies on the coup contagious hypothesis, they also report a strong spatial correlation in coup occurrence. A similar correlation can be found in our data. Figure (9) shows the total number of coups for each country between 1950 and 2017, pointing to a strong geospatial pattern in coup occurrence.

We exploit the geographic correlation of coup occurrence to construct an instrumental variable for coups. For each country i, we first define a set $\mathfrak{S}_i \equiv \{\tilde{i} : \tilde{i} \neq i, L_{\tilde{i}} = L_i\}$ of other countries $\tilde{i}$ in which coup occurrence may be correlated with coups attempts in i. We use the classification of the World Bank for the specification of the relevant peer group of countries, which consolidates countries that share a common political and economic history into regions L_i. As coups are rare events (we observe in about 5% of our country-year observations), we define a time-window $t' = t - \tau$ to be relevant for coup occurrence in t. Our baseline IV uses $\tau = 5$. Based on $\mathfrak{S}_i$, we compute averages for L_i, leaving out i to not violate the exclusion restriction ("jack-knifed" averages)

$$Z_{it} = |\mathfrak{S}_i|^{-1} \sum_{\tilde{i} \in \mathfrak{S}_i} \text{Coup}_{it'} \tag{7}$$

A similar logic is used to construct instruments in the democracy literature (Acemoglu et al., 2019; Gründler and Krieger, 2016; Madsen et al., 2015). We posit that jack-knifed regional averages are even better suited to identify the effect of coups, as (i) coups are more difficult to predict than democratization events and (ii) in the majority of cases, coups can unequivocally be assigned to a given time period, while it takes several periods to cultivate a democracy, and mistiming in the coding of democratization is likely to bias the instrument.

The corresponding empirical model is identical to the models in Equations (1) and (2) except that coups are treated as endogenous variables, which yields (panel difference-in-differences model equivalently)

$$\begin{aligned} y_{it} &= \sum_{j=1}^{J} \beta_j y_{it-j} + \mu \text{Coup}_{it} + \eta_i + \zeta_t + \varepsilon_{it} \\ \text{Coup}_{it} &= \sum_{j=1}^{J} \pi_j Z_{it-j} + \sum_{j=1}^{J} \lambda_j y_{it-j} + \psi_i + \varphi_t + \nu_{it}. \end{aligned} \tag{8}$$

The key identifying assumption is that, conditional on GDP dynamics and country and year fixed effects, coups in countries $i \in \mathfrak{S}_i$ do not influence GDP in i via channels other than the encouragement of coups in i ("exclusion restriction"). This assumption is plausible, but it may be violated if coups increase the probability of violent conflict with neighboring countries or lead to a decrease in trade. We control for these potential threats to the validity of our IV strategy.

Panel A of Table (3) shows the second-stage results of our IV estimates, with first-stage results reported in Panel B. Columns (1)-(3) show the outcomes for the difference-in-differences setting and Columns (4)-(6) report the results for the dynamic panel data model. For both estimation techniques, the first specification (Columns 1 and 4) presents estimates without country and year fixed effects, the second specification (Columns 2 and 5) includes country and year fixed effects, and the third specification (Columns 3 and 6) adds variables that potentially violate the exclusion restriction. The exclusion restriction may be violated if coups exert direct effects on neighboring countries when they initiated interstate war activity or influence trade between states. We account for these effects by controlling for interstate war of i as well as for exports and imports. In each model, the effect of coups on GDP growth is negative and statistically significant. The effect size is somewhat larger than in the baseline results, indicating a downward bias in the baseline estimates due to time-variant unobservables. However, once we account for country and year fixed effects, the parameter estimates are similar to those of the baseline estimates. Except for Column (1), the Wald test cannot reject the null hypothesis that the IV estimates are statistically equal to the baseline estimates.

Table 3 COUPS D'ÉTAT AND ECONOMIC GROWTH—INSTRUMENTAL VARIABLE ESTIMATIONS

Dependent variables: Growth rate (Δy_{it}) and log (y_{it}) of GDP (per capita)						
	Panel Diff-in-Diff Model			Dynamic Panel Data Model		
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Second-stage results					
Coup_{it}	-0.059***	-0.037**	-0.037*	-0.077***	-0.029*	-0.029**
	(0.018)	(0.019)	(0.020)	(0.025)	(0.016)	(0.020)
$\text{Log}(\text{GDP}^{pc})(t-1)$				0.884***	0.827***	0.834***
				(0.074)	(0.72)	(0.076)
$\text{Log}(\text{GDP}^{pc})(t-2)$				0.149**	0.155**	0.143**
				(0.068)	(0.065)	(0.061)
$\text{Log}(\text{GDP}^{pc})(t-3)$				0.004	0.002	-0.017
				(0.044)	(0.047)	(0.038)
$\text{Log}(\text{GDP}^{pc})(t-4)$				-0.043	-0.029	-0.016
				(0.040)	(0.044)	(0.030)
Imports_{it}			0.001			0.093***
			(0.001)			(0.028)
Exports_{it}			-0.000			0.100***
			(0.009)			(0.031)
$\text{Interstate War}_{it}$			-0.025**			-0.032**
			(0.012)			(0.015)
	Panel B: First-stage results					
$Z(t-1)$	24.214	15.112	14.950	21.276	15.110	14.995
	(22.269)	(17.950)	(17.792)	(21.125)	(17.893)	(17.774)
$Z(t-2)$	23.037**	17.137*	17.155*	20.609**	17.209*	17.048*
	(10.11)	(10.155)	(10.159)	(10.063)	(10.224)	(10.222)
$Z(t-3)$	8.840	2.746	2.755	6.675	2.776	0.2778
	(7.565)	(5.268)	(5.631)	(6.912)	(5.571)	(5.577)
$Z(t-4)$	37.100***	30.206***	30.233***	34.770	30.113***	30.143***
	(4.555)	(4.838)	(4.849)	(4.590)	(4.815)	(4.830)
Observations	9,169	9,169	9,169	9,169	9,169	9,169
Countries	180	180	180	180	180	180
R-squared Overall	0.113	0.050	0.052	0.982	0.981	0.959
Equality with baseline (Wald)	0.038	0.621	0.437	0.129	0.944	0.583
Kleinbergen-Paap F	42.36	18.77	18.56	34.31	18.54	18.35
Stock-Yogo (10% rel. bias)	10.27	10.27	10.27	10.27	10.27	10.27
Hansen J p-val	0.302	0.305	0.320	0.511	0.514	0.767
SW χ^2 p-val	0.000	0.000	0.000	0.000	0.000	0.000
Country Fixed Effects	No	Yes	Yes	No	Yes	Yes
Year Fixed Effects	No	Yes	Yes	No	Yes	Yes

Notes: Table reports the results of panel difference-in-differences models (Columns 1–3) and dynamic panel data estimations (Columns 4–6) on the effect of coups d'état on economic growth. Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The instrumental variable captures spatial correlations of coups measured by Equation (7).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

The validity of our IV results depends on the suitability of regional coup activity to instrument national coup occurrence. The test statistics reported in Table (3) give us confidence that our IV strategy is valid: the Kleibergen-Paap test clearly rejects the possibility of weak identification, the Sanderson-Windmeijer test and Hansen's J test provide no sign of misspecification due to under- or overidentification. Also, the first-stage results reported in Panel B show that coup occurrence is significantly correlated with regional coup occurrence within our five-year time window. We also test for different lag structures of Z_{it}, with little effect on inferences.

4.2 Effects of coups on the sub-national level

We next develop a different and complementary approach to tackle endogeneity exploiting sub-national data. To this end, we construct a new geospatial dataset of coup occurrence. We analyze each coup of the Bjørnskov and Rode (2019) database and geocode the coups based on multiple books, scholarly articles, and newspaper articles (see Section 2.2 for a detailed description of the geospatial dimension of coups). We then merge the georeferenced data to sub-national income levels computed by Lessmann and Seidel (2017).

Examining the geospatial dimension of coups allows us to separate the effect of political instability from that of violent actions and conflict. We might expect that the negative effect of coups may depress growth in the geospatial area where it was initiated. However, a negative parameter estimate may be due to (i) the effect of political instability or (ii) the direct adverse effect on growth initiated by coup-induced violence (e.g. injuries, casualties and the destruction of infrastructure). The geospatial analysis allows us to disentangle these effects. If regions without direct coup involvement would be affected by coups that take place in other sub-national entities within the same country, this would provide strong evidence for the hypothesis that it is the instability and uncertainty caused by coups that decreases growth rather than the direct effect of violence. This argument is a sub-national version of the coup contagious hypothesis exploited in the previous section. Across sub-national units, coups are contagious per definition, as sub-national entities share a common national government that is attempted to be unseated by a coup.

The sub-national dataset of Lessmann and Seidel (2017) is computed based on nighttime lights collected from satellite data provided by the National Oceanic and Atmospheric Administration (NOAA). The data is available for the period between 1992 and 2012. The collected data on coups and regional incomes allows us to analyze 2,660 sub-national regions in 168 countries (due to territorial changes, there are changes in the total number of sub-national units over time). Our georeferenced data on coup occurrence shows that coups often occur in the capital, but there are many instances in which coups took place in multiple regions or in sub-national units outside the capital.

The coups in Pakistan, the Central African Republic, Venezuela and Turkey discussed in

Section (2.2) show that there are substantial differences in coup attempts with regard to the geographical reach, the degree of violence, and the political consequences. Common to these coups is that they reflect political instability. Looking at the geospatial dimension of coups allows us to separate this type of instability from direct effects caused by violent actions. We follow a two-step approach to examine the geospatial dimension of coups. First, we estimate the effect of coups in the region where the coup takes place via (panel difference-in-differences model equivalently)

$$y_{irt}^{\text{reg}} = \sum_{j=1}^{J} \beta_j y_{irt-j}^{\text{reg}} + \mu \text{Coup}_{irt} + \eta_r + \zeta_t + \varepsilon_{irt}, \tag{9}$$

where y_{irt}^{reg} is the log of real per capita gross regional product (GRP) of sub-national region r of country i at time t, η_r and ζ_t are regional and year fixed effects, and ε_{irt} is the idiosyncratic error.

Second, we generate a new variable $\text{Coup}_{irt,r\neq\tilde{r}}^{c}$ that assumes a value of 1 (and zero otherwise) for region r when two criteria are fulfilled: (1) a coup took place in one or more regions $\tilde{r}$ at time t in the country to which region r belongs, and (2) the coup did not take place in region r itself, i.e. $r \neq \tilde{r}$. The newly constructed variable measures *indirect* involvement in coup activity: regions r are not directly affected by violent actions that may have direct effects on economic growth. Hence, $\text{Coup}_{irt,r\neq\tilde{r}}^{c}$ only captures the effect of political instability rather than that of coup-induced violence. We estimate the empirical model (panel difference-in-differences model equivalently)

$$y_{irt}^{\text{reg}} = \sum_{j=1}^{J} \beta_j y_{irt-j}^{\text{reg}} + \theta \text{Coup}_{irt}^{c} + \eta_r + \zeta_t + \varepsilon_{irt} \; \forall r \neq \tilde{r}, \tag{10}$$

where we exclude regions $\tilde{r}$, i.e. regions in which coups took place, to ensure that the model only captures indirect coup involvement.

The results are presented in Table (4). Columns (1) and (2) show the results of the panel difference-in-differences setting with (Column 1) and without (Columns 2) regions with direct coup involvement. Columns (3) and (4) use the same specifications for our dynamic panel data setting. The results strongly coincide with our baseline results obtained with country-level data. In the panel difference-in-differences setting, a coup lowers GDP growth by 2.1 percentage points, which is almost identical to the country-level estimate of 2.2 percentage points. The parameter estimate is somewhat smaller in the dynamic panel data model, but it is still not statistically distinguishable from the country-level estimate ($p = 0.150$).

The parameter estimates are unaffected if we identify the effect of political instability by restricting the sample to sub-national units without direct coup involvement. If anything, the parameter estimates are larger in the models that estimate indirect effects of coups. Taken together, the sub-national results allow us to draw two conclusions: (i) The strong

Table 4 COUPS D'ÉTAT AND ECONOMIC GROWTH—RESULTS ON THE SUB-NATIONAL LEVEL

Dependent variables: Growth rate (Δy_{irt}) and log (y_{irt}) of GRP (per capita)				
	Panel Diff-in-Diff Model		Dynamic Panel Data Model	
	(1) *All Regions*	(2) *Coup Regions Excluded*	(3) *All Regions*	(4) *Coup Regions Excluded*
Coup_{irt}	-0.021***		-0.018***	
	(0.007)		(0.008)	
$\text{Coup}^{c}_{irt,r\neq\tilde{r}}$		-0.023***		-0.020***
		(0.006)		(0.007)
$\text{Log}(\text{GRP}^{pc})(t-1)$			0.816***	0.815***
			(0.075)	(0.075)
$\text{Log}(\text{GRP}^{pc})(t-2)$			0.168**	0.169**
			(0.074)	(0.074)
$\text{Log}(\text{GRP}^{pc})(t-3)$			-0.043	-0.042
			(0.045)	(0.045)
$\text{Log}(\text{GRP}^{pc})(t-4)$			-0.065	-0.066
			(0.040)	(0.040)
Observations	51,727	51,655	43,707	43,650
Sub-National Units	2,660	2,660	2,659	2,659
R-Squared Overall	0.297	0.298	0.935	0.935
F-Stat	86.66	82.64	833.1	844.3
Sub-National Unit Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences models (Columns 1–2) and dynamic panel data models (Columns 3–4) on the effect of coups d'état on economic growth at the sub-national level. Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GRP is measured in real terms, data on coups d'état is geocoded by sub-national units using the coups listed in Bjørnskov and Rode (2019). Due to restrictions availability of sub-national GRP estimates, the models include the period 1992–2012. Sub-national regions are first-level administrative areas (ADM1).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

similarity between the estimation results on the sub-national level and the country level indicates that the strong negative correlation found at the national level is not mediated by time-varying unobservables at the country level. (ii) The fact that the parameter estimates of the country-level and the sub-national-level analyses are identical even when we exclude regions with direct coup involvement suggests that the country-level estimates are not biased by direct growth effects of violent actions that may accompany coups. This finding also provides support for our hypothesis that it is political instability that initiates the negative growth effect, rather than direct effects of violent actions. This finding is plausible, as many coups in our dataset have been relatively unbloody, and we would not expect these events to exert effects as large as our estimated parameters.

Still, violent conflicts that accompany coups may be stronger on the sub-national level, because the spatial distribution of conflicts is asynchronous across countries. Hence, a concern may be that our sub-national parameter estimates are confounded by regional conflicts. To alleviate these concerns, we re-estimate Equations (9) and (10) by including data on sub-national conflicts. We construct a conflict dummy variable using the UCDP Georeferenced Event Dataset of Sundberg and Melander (2013). The geo-coded data allows us to compute conflict measures that coincide with our ADM1 regions. The results, shown in Table (B-32) in the appendix, illustrate that conflict goes in tandem with weak economic growth. The estimate on coups is stable in all models and the size of the estimated coefficient is unaffected from the inclusion of regional conflict. In particular, the parameter estimate is larger for coups than for conflict, suggesting that political instability is the relatively stronger negative correlate of development. In Table (B-33) in the Appendix, we provide additional robustness checks on the sub-national levels, where we account for cross-regional differences in human capital (measured via the georeferenced data provided by Gennaioli et al., 2013). Although restrictions in data availability reduce the number of included sub-national units, there is little impact on inferences, and the parameter estimates are robust in both their size and significance levels.

5 Household-level results

5.1 Theory

We now shift the focus from the macro perspective to the micro level and examine how coups influence household-level outcomes. Previous studies mainly focus on the microeconomic effect of violent civil conflict: Dupas and Robinson (2010) observe a sizable decrease in income, expenditure, and food consumption in Kenya in the aftermath of the 2007 presidential election, which led to a two month period of civil conflict. In a similar vein, empirical studies investigate micro effects of civil conflict in Sierra Leone (Bellows and Miguel, 2006), civil war in Rwanda (Serneels and Verpoorten, 2013), and political

violence in Perú (Léon, 2012). The underlying argument of these studies is that causes and consequences of civil conflict tend to be visible mostly at the micro level (Balcells and Justino, 2014), and that violent civil conflict may disrupt productive activity (Dupas and Robinson, 2010). It is, however, unclear whether the effects identified in these studies are driven by violence or by political instability.

We study the household-level impact of coup d'états to examine the micro effects of political instability. Compared to violent civil conflict or war, much less individuals are directly affected by a coup d'état. Potential effects of a coup should hence much more reflect the influence of political instability than the effect of violence.

To date, very little is known about the household-level effects of coups, both from a theoretical and an empirical perspective. We posit that coups influence household-level outcomes by affecting labor markets. On the demand side, the arguments are similar to those regarding the micro effect of conflict: labor demand may decrease if firms are hesitant to hire employees in times when political instability makes it difficult to anticipate future market potentials. Also, unemployment may rise as a consequence of violence that accompanies coups, i.e. when infrastructure and production plants are destroyed. On the supply side, the effects are less clear-cut. We study labor supply effects of coups d'état based on a simple stylized model in the spirit of Keane and Rogerson (2012). Consider a T-period lived household with preferences

$$\sum^{T} \beta^t \left[\frac{1}{1-\left(\frac{1}{\zeta}\right)} c_t^{1-\left(\frac{1}{\zeta}\right)} \frac{1}{1-\left(\frac{1}{\delta}\right)} h_t^{1+\left(\frac{1}{\delta}\right)} \right], \tag{11}$$

where c_t and h_t denote consumption and working hours at age t, ζ and δ are preference parameters for consumption and working hours, and β is the discount factor. Each individual has productivity θ_t, so that a supply of h_t units of time results in $\theta_t h_t$, which will be rewarded with ω. In steady state, a newly born individual with zero initial wealth faces the maximization problem

$$\sum^{T} \beta^t c_t = \sum^{T} \beta^t \theta_t h_t (1-\rho)\omega, \tag{12}$$

where $(1-\rho)$ denotes the probability that ω will be received, and ρ is a risk factor. There may be many reasons for why $\rho > 0$, for instance when firms are insolvent and cannot pay wages. In our model, we argue that political instability increases ρ. Now consider the effects of a change in ρ on working hours h_t. Keane and Rogerson (2015) analyze a similar problem based on the elasticity of labor supply to changes in the tax and transfer scheme. We can use the same logic to derive the first-order condition for h_t

$$\log(h_t) = a\left[(\zeta-1)\log(\omega) - \zeta\log(t) - \log(\bar{c}) - \delta\log(\theta_0)\right] + a\zeta\log(1-\rho) + \delta\log(\theta_t), \tag{13}$$

where $\bar{c}$ is a constant and $a = \delta/(\zeta + \delta)$.[8] Equation (13) helps us to arrive at two important conclusions. First, labor supply depends on the productivity in t relative to the initial productivity in 0. This implies that factors which decrease productivity have a negative effect on labor supply. Second, labor supply declines for increasing ρ. This result indicates that individuals decrease their labor supply when the political instability initiated by coups increases the risk of defaulting wage payments.

An important question is whether the effects differ between women and men. We might expect that the elasticity is smaller for chief income earners of households, a role which—in countries with high frequency of coups—is mostly occupied by men.

5.2 Empirical analysis on the household level

To estimate the effect of coups on household-level outcomes, we use micro data from the World Value Survey (WVS). The WVS is the most extensive cross-country collection of micro data intended to measure individuals' beliefs, values, and well-being. The WVS also measures a wide range of socio-economic characteristics that we can use to evaluate the influence of coups. At the time we conduct our study, the WVS provides data from 341,271 individuals in 97 countries that are representative for about 90% of the world population. The key advantage of the WVS is its unparalleled coverage that includes both developed and developing countries. The data spans the period 1981-2016 and includes multiple observations of households living in countries during years in which a coup takes place. To analyze the microeconomic effects of coups, we combine our data on coup attempts with the individual-level data of the WVS.

Data for our variables of interest are available for a maximum of about 254,000 individuals in 85 countries. About 13,000 of the surveyed households experienced a coup, which is about 5% of all included observations. This proportion resembles the share of country-year observations with coups in the data used for our baseline model on the growth effect of coup attempts (4.4%).

We estimate empirical models of the form

$$m_{ith} = \delta \text{Coup}_{it} + \mathbf{X}_{ith}\boldsymbol{\beta} + \eta_i + \varphi_t + \varepsilon_{ith}, \tag{14}$$

where m_{ith} is the relevant outcome for individual h living in country i at time t. In accordance with our stylized model, we analyze the effect of a coup in country i at t (denoted with Coup_{it}) on employment and the financial situation of individuals. Consistent with the implications of the model, we also look at factors that influence the productivity of individuals, namely health and life satisfaction. Both variables arguably influence the ability of individuals to produce output and may be influenced by political instability and the accompanying tensions and violence.

[8] See Keane and Rogerson (2012, 2015) for a detailed derivation.

Table 5 EFFECTS OF COUPS D'ÉTAT ON THE HOUSEHOLD-LEVEL

	Financial Situation		Unemployment		Health		Life Satisfaction	
	(1) *Reduced*	(2) *Controls*	(3) *Reduced*	(4) *Controls*	(5) *Reduced*	(6) *Controls*	(7) *Reduced*	(8) *Controls*
Coup_{it}	-0.300***	-0.387***	0.010***	0.019***	-0.197***	-0.173***	-0.289***	-0.294***
	(0.037)	(0.034)	(0.004)	(0.004)	(0.012)	(0.012)	(0.012)	(0.011)
$\text{Income decile}_{ith}$		0.342***		-0.013***		0.047***		0.049***
		(0.002)		(0.000)		(0.001)		(0.001)
Age_{ith}		-0.057***		-0.013**		-0.017**		-0.010***
		(0.002)		(0.002)		(0.001)		(0.001)
Age squared_{ith}		0.001***		0.000***		0.000***		0.000***
		(0.000)		(0.000)		(0.000)		(0.000)
Student_{ith}		-0.006		-0.195***		-0.030***		-0.013**
		(0.020)		(0.002)		(0.007)		(0.006)
Retired_{ith}		-0.030		-0.109***		-0.170***		-0.051***
		(0.020)		(0.002)		(0.007)		(0.006)
Education_{ith}		0.055***		-0.003***		0.032***		0.008***
		(0.002)		(0.000)		(0.001)		(0.001)
Unemployed_{ith}		-0.475***				-0.081***		-0.142***
		(0.018)				(0.006)		(0.006)
Households	249,231	249,231	254,079	254,079	246,880	246,880	248,953	248,953
Countries	85	85	85	85	85	85	85	85
R-squared	0.146	0.249	0.049	0.105	0.105	0.211	0.117	0.151
F-Stat	525.241	979.195	124.733	278.151	340.778	726.276	384.855	469.743
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports estimations on the effect of coup d'états on the household level, with robust standard errors (adjusted for heteroskedasticity) in parentheses. Household-level data is taken from the World Value Survey (WVS). We include all observations for which data on coups and data on household characteristics are available. Our combined dataset covers a maximum of 254,079 households in 85 countries observed between 1981 and 2016. The financial situation is measured with (referring to the last wave; alternative questions of earlier waves in parentheses) question V59 (V64, V132, V80, and V68 in earlier waves), where respondents are asked to classify their satisfaction with their household's financial situation on a scale running from 1 to 10. Employment status is measured with question V229 (V220, V358, V229, and V241 in previous waves). Health is measured based on question V11 (V82 and V12 in earlier waves), where respondents classify their health level as "very good", "good", "fair", or "poor". Life satisfaction refers to question V10 (V18 and V11 in earlier waves), where respondents classify their life satisfaction on a 4-scale index.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

The matrix $\mathbf{X}_{ith}$ controls for individual socio-economic characteristics, including age, age squared, education, the decile on the national income distribution, a dummy variable for retired individuals, and a dummy variable for individuals that are students or on educational training. To account for unobserved time-invariant heterogeneity in the form of institutions, culture, geography, and national coup history, we include a country fixed effect η_i in the regression. We also include a wave fixed effect φ_t to account for cross-national trends in coup occurrence documented in Section (2.1).

Our outcome variables are measured based on different questions of the WVS. To assess the financial situation of households, we use question V59 of the sixth wave of the WVS (V64, V132, V80, and V68 in Waves 1-5), which asks respondents: *"How satisfied are you with the financial situation of your household? If '1' means you are completely dissatisfied on this scale, and '10' means you are completely satisfied, where would you put your satisfaction with your household's financial situation?"*. The employment status is recovered from question V229 of Wave 6 (V358, V220, and V241 in previous waves). Health is measured based on question V11 (alternative numbering: V82 in Wave 2 and V12 in Wave 4): *"All in all, how would you describe your state of health these days? Would you say it is very good, good, fair, or poor?"*. Finally, life satisfaction refers to question V10 (alternative numbering: V18 in Wave 2 and V11 in Wave 4): *"Taking all things together, would you say you are: Very happy, quite happy, not very happy, or not at all happy?"*.

Table (5) presents our results on the effects of coups on the household level. The table reports estimates of two model specifications for each outcome variable (financial situation of households, unemployment, health, life satisfaction): (i) a specification that only includes fixed effects and our coup variable (labeled "reduced") and (ii) a fully-specified model that includes individual control variables. The results show that coups worsen the financial situation of households, increase unemployment, and decrease health and life satisfaction. Each effect is statistically significant at the 1% level and relatively unaffected by the introduction of individual controls.

Possible threats to the identification of the coup effect on the individual-level outcomes come from differences across age cohorts or sub-national regions. To examine the influence of these factors on our results, we re-estimate our micro-level models with cohort fixed effects and region fixed effects, with very little impact on inferences: while the model on the effect of coup activity on unemployment in Column (3) of Table (5) yields an estimate of 0.10, the effect is 0.11 and remains statistically significant at the 1% level when we include cohort and region fixed effects. The same applies to the other outcomes and model specifications (not reported).

It is conceivable that the effect of coups on individual-level outcomes varies across income groups. In particular, the effects may be different between the elite and the working class. To examine differences in the coup effect relative to the position of the household on the national income ladder, we re-estimate our models with interaction terms that account for

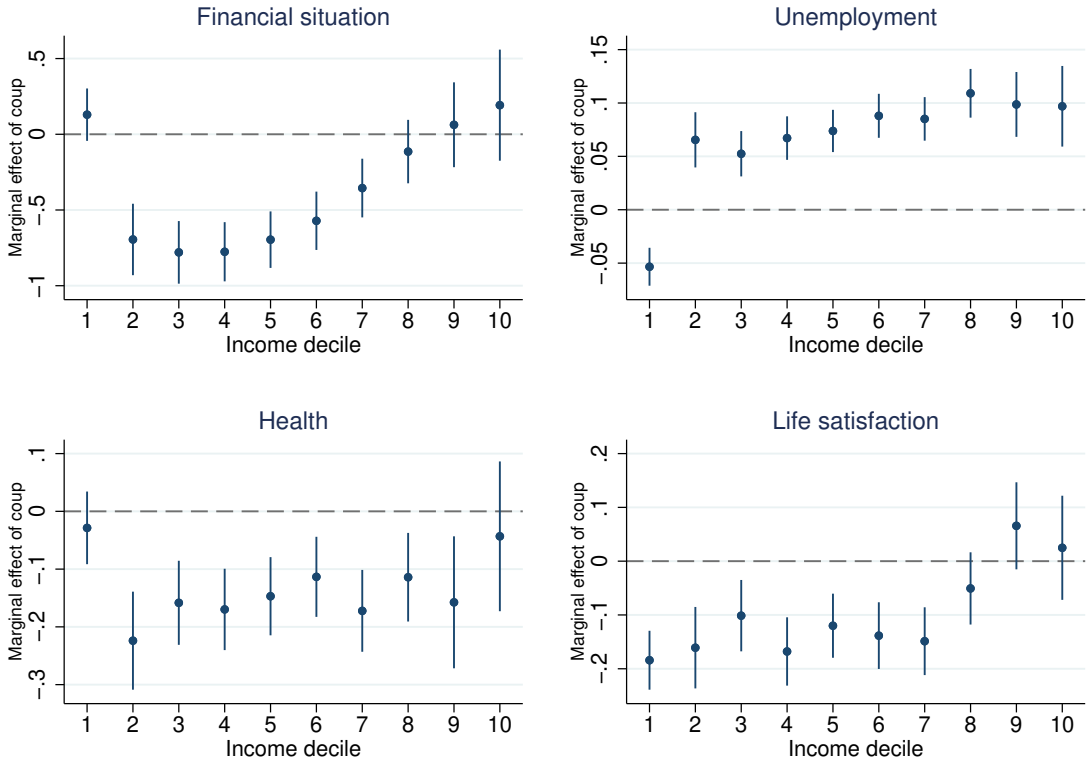

Figure 10 Effects of Coups on Individual Characteristics Dependent on the Income Decile of Households. The figure shows the effect of coups on household characteristics dependent on the income decile of households in the national income distribution. The results are derived based on approximately 250,000 households in 85 countries (see Table 5). Vertical lines represent the 95% confident intervals.

the income decile of the respondent. The results are visualized in Figure (10) and indicate distinct pattern of the coup effect relative to the income level. The figure suggests that the financial situation and the health level of the poorest 10% is relatively unaffected by coups. However, coups substantially decrease the financial situation and the health level of individuals from the second income decile to the upper middle class. Top-income earners on average are not affected by coups. While the employment effect is negative for all income groups except for the poorest 10%, coups influence life satisfaction of the poor and the middle class, but have little effect on life satisfaction of top-income earners.

Figure (11) examines gender differences in the coup effect. While we do not find large differences between women and men regarding the financial situation, the employment effect seems predominately caused by an adverse employment effect for women, while employment of men on average remains unaffected by coups. One interpretation of this result may be that in countries with higher exposure to coups, the elasticity of labor supply is lower for men than for women. We also observe that the negative effects of coups on health and life satisfaction are almost only driven by an adverse effect on women.

Finally, in Table (B-34) in the Appendix, we examine whether coups influence individuals' expectations and preferences. We associate the experience of a coup with expectations

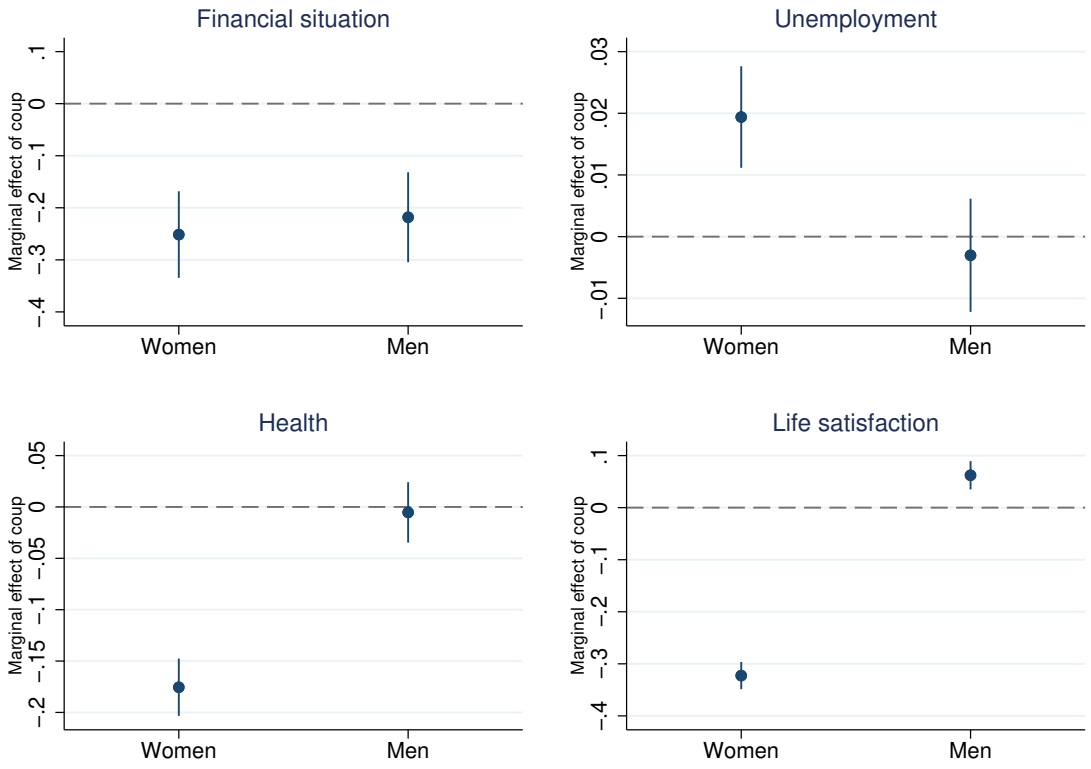

Figure 11 Gender Differences in the Effect of Coups. The figure shows the effect of coups on the financial situation, unemployment, health and life satisfaction conditional on the gender of the respondents. The results are derived based on approximately 250,000 households in 85 countries (see Table 5). Vertical lines represent the 95% confident intervals.

about the future, measured by question V50, where respondents are asked to classify their view on the statements *"humanity has a bright future"* versus *"humanity has a bleak future"*. We use this data to construct a dummy for negative future expectations. We also examine the extent to which individuals have confidence in their government (V115, measured on a four-scale ladder) and attitudes towards democracy (V140, measured on a ten-scale ladder). Again, we report unconditional correlations and estimates conditioned on socio-economic characteristics. The results show that the experience of a coup d'état depresses individuals' expectations about the future. Coups also decrease confidence in the government and lower the subjective importance of democracy. Given the importance of expectations and preferences for decision making (Falk et al., 2018), the results of Table (B-34) suggest that coups can also have economically relevant psychological effects that go beyond proximate socio-economic factors.

6 Conclusions

Motivated by the growing interest in and lack of evidence for the economic effects of political instability, we study how coups d'état influence economic growth. Our results

show that there is a statistically and economically significant negative effect of coups on per capita GDP growth. Across manifold model specifications on the country-level and the sub-national level, a coup is associated with a decrease in per capita GDP of 2-3 percentage points. The abundance of evidence, drawn from manifold empirical techniques and all leading to very similar results, gives us confidence that there is a causal effect of coups d'état on future GDP growth.

Our focus on coups d'état highlights a particular aspect of political instability, one that mirrors the *zeitgeist* of countries' political environment. Against the backdrop of increasing instability tendencies in the Western world, our results paint a pessimistic picture but advocate for the establishment of a stable political environment.

We propose several directions for future research. First, more quantitative country case studies are needed to better understand the political instability caused by coups. Our synthetic control analyses provide a first step in this direction, but the specific circumstances are yet to explore. Second, the mechanisms through which coups d'état and political instability influence economic development are still poorly understood. Third, our microeconomic results show how socio-economic characteristics of individuals react to coups in the short-run, but more research should be conducted on the long-run effects of political instability.

A. Supplementary Notes (for online publication)

A.1 Additional Country Case Studies

This section provides accompanying case study evidence to Section (3.7). We show the result of synthetic control methods for coups with the typical pattern of a decrease in the development of GDP relative to the synthetic control group (Argentina 1988, Thailand 2006, and Egypt 2013), and also show results for the 1987 coup in Tunisia, for which this pattern cannot be observed.

The coup in Tunisia 1987 is said to be a "constitutional coup" in which Prime Minister Zine El Abidine Ben Ali replaced the aging and sick President Habib Bourguiba, backed by the Tunisian Constitution. The synthetic control analysis for this successful coup shows no effect on GDP per capita. This is not surprising, given that there was no change in policies and no increase in uncertainty after the unseating of Bourguiba.

Argentina experienced several uprisings by the Argentine Army from 1987 to 1990 of which, however, none overturned the government. The synthetic control analysis shows the typical pattern of a reduction in GDP after the coup. In contrast to many other coups, however, there was a catch-up effect in GDP per capita in the aftermath of the 1988 Argentinian coup that was initiated in the early 1990s.

Thailand experienced a successful coup in 2006, which was led by the Royal Thai Army. The military unseated Prime Minister Thaksin Shinawatra after a year of political crises and unrest associated with his government. Under military rule, human rights and freedom of expression have been restricted, Thailand received a new constitution and the party of Thaksin Shinawatra was banned from the elections in 2007. The turmoil that accompanied the 2006 coup in Thailand led to a period of high political instability.

In a similar vein, the successful military coup in Egypt 2013 overthrew the democratically elected President Morsi and suspended the Egyptian constitution. The coup was justified with the repression of the opposition by Morsi's Muslim Brotherhood and disappointment about the democratization process in Egypt.

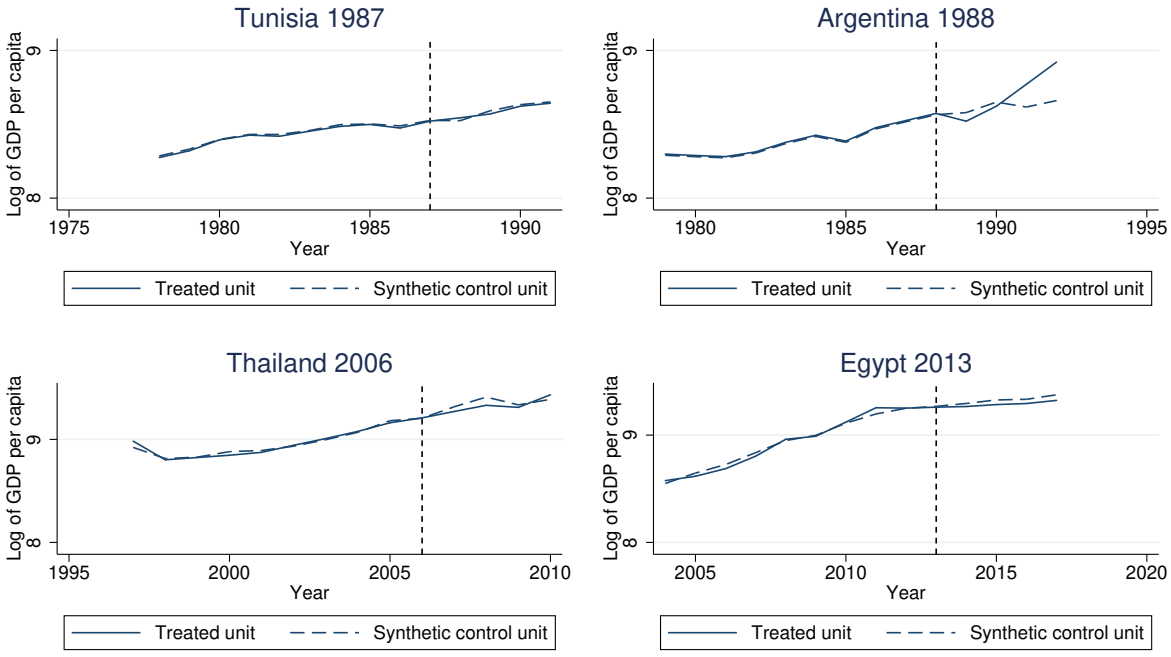

Figure 12 Synthetic control analysis for selected coup examples. The solid line represents the development of per capita GDP (log scale) of the treated country, the dashed line is the counterfactual development suggested by the synthetic control group. All countries only feature one coup during the time period used for the synthetic control analysis. The donor pool includes countries without coups or coup attempts. Weights: Tunisia: Belize 4.7%, Botswana: 21.8%, Cape Verde 17.8%, Malaysia 5.6%, Mexico 16.5%, Nicaragua 5.1%, Singapore 4.2%, Vietnam 14.4%; Argentina: Antigua and Barbuda 13.9%, Botswana: 4.2%, China 4.6%, Costa Rica 15.6%, Kuwait 0.9%, Mauritius 1.3%, Mongolia 18.3%, St. Lucia 12.8%, St. Vincent and Grenadines 25.5%, Vietnam 2.8%; Thailand: Barbados 1.2%, Malaysia 50%, Ukraine 31.2%, Uzbekistan 17.6%; Egypt: Albania 42%, India 13.7%, Kazakhstan 21.8%, St. Lucia 0.6%, Uzbekistan 21.9%.

B. Supplementary Tables (for online publication)

Table B-1 LIST OF COUNTRIES, NUMBER OF COUPS, OBSERVATIONS, AND INCLUDED YEARS

ID	Country	Coups	Years	From	To	Included in event study
1	Albania	0	48	1970	2017	no
2	Algeria	3	58	1960	2017	yes
3	Angola	1	48	1970	2017	yes
4	Anguilla	0	48	1970	2017	no
5	Antigua and Barbuda	0	48	1970	2017	no
6	Argentina	10	68	1950	2017	yes
7	Armenia	0	28	1990	2017	no
8	Aruba	0	48	1970	2017	no
9	Australia	0	68	1950	2017	no
10	Austria	0	68	1950	2017	no
11	Azerbaijan	1	28	1990	2017	yes
12	Bahamas	0	48	1970	2017	no
13	Bahrain	2	48	1970	2017	yes
14	Bangladesh	10	59	1959	2017	yes
15	Barbados	0	58	1960	2017	no
16	Belarus	0	28	1990	2017	no
17	Belgium	0	68	1950	2017	no
18	Belize	0	48	1970	2017	no
19	Benin	11	59	1959	2017	yes
20	Bermuda	0	48	1970	2017	no
21	Bhutan	0	48	1970	2017	no
22	Bolivia	17	68	1950	2017	yes
23	Bosnia-Herzegovina	0	28	1990	2017	no
24	Botswana	0	58	1960	2017	no
25	Brazil	5	68	1950	2017	yes
26	British Virgin Islands	0	48	1970	2017	no
27	Brunei	0	48	1970	2017	no
28	Bulgaria	1	48	1970	2017	yes
29	Burkina Faso	7	59	1959	2017	yes
30	Burundi	12	58	1960	2017	yes
31	Cambodia	5	48	1970	2017	yes
32	Cameroon	1	58	1960	2017	yes
33	Canada	0	68	1950	2017	no
34	Cape Verde	0	58	1960	2017	no
35	Cayman Islands	0	48	1970	2017	no
36	Central African Republic	8	58	1960	2017	yes
37	Chad	14	58	1960	2017	yes
38	Chile	2	67	1951	2017	no
39	China	0	66	1952	2017	no
40	Colombia	4	68	1950	2017	no
41	Comoros	14	58	1960	2017	yes
42	Congo, Dem. Rep.	4	68	1950	2017	yes
43	Congo, Republic of	6	58	1960	2017	no
44	Costa Rica	0	68	1950	2017	no
45	Cote d'Ivoire	4	58	1960	2017	yes
46	Croatia	0	28	1990	2017	no
47	Curacao	0	13	2005	2017	no
48	Cyprus	1	68	1950	2017	yes
49	Czech Rep.	0	28	1990	2017	no
50	Denmark	0	68	1950	2017	no
51	Djibouti	1	48	1970	2017	yes

LIST OF COUNTRIES, NUMBER OF COUPS, OBSERVATIONS, AND INCLUDED YEARS—CONTINUED

ID	Country	Coups	Years	From	To	Included in event study
52	Dominica	2	48	1970	2017	no
53	Dominican Republic	3	67	1951	2017	no
54	Ecuador	10	68	1950	2017	yes
55	Egypt	3	68	1950	2017	yes
56	El Salvador	3	68	1950	2017	yes
57	Equatorial Guinea	5	58	1960	2017	yes
58	Estonia	0	28	1990	2017	no
59	Ethiopia	5	68	1950	2017	yes
60	Fiji	4	58	1960	2017	yes
61	Finland	0	68	1950	2017	no
62	France	1	68	1950	2017	yes
63	Gabon	1	58	1960	2017	yes
64	Gambia, The	5	58	1960	2017	yes
65	Georgia	2	28	1990	2017	no
66	Germany	0	68	1950	2017	no
67	Ghana	10	63	1955	2017	yes
68	Greece	4	67	1951	2017	yes
69	Grenada	2	48	1970	2017	yes
70	Guatemala	10	68	1950	2017	yes
71	Guinea	4	59	1959	2017	yes
72	Guinea-Bissau	9	58	1960	2017	yes
73	Haiti	9	58	1960	2017	yes
74	Honduras	8	68	1950	2017	yes
75	Hong Kong	0	58	1960	2017	no
76	Hungary	0	48	1970	2017	no
77	Iceland	0	68	1950	2017	no
78	India	0	68	1950	2017	no
79	Indonesia	2	58	1960	2017	no
80	Iran	2	63	1955	2017	no
81	Iraq	5	48	1970	2017	yes
82	Ireland	0	68	1950	2017	no
83	Israel	0	68	1950	2017	no
84	Italy	0	68	1950	2017	no
85	Jamaica	1	65	1953	2017	yes
86	Japan	1	68	1950	2017	yes
87	Jordan	1	64	1954	2017	no
88	Kazakhstan	0	28	1990	2017	no
89	Kenya	1	68	1950	2017	yes
90	Kuwait	0	48	1970	2017	no
91	Kyrgyzstan	1	28	1990	2017	yes
92	Laos	2	48	1970	2017	yes
93	Latvia	0	28	1990	2017	no
94	Lebanon	1	48	1970	2017	yes
95	Lesotho	4	58	1960	2017	yes
96	Liberia	4	54	1964	2017	no
97	Lithuania	0	28	1990	2017	no
98	Luxembourg	0	68	1950	2017	no
99	Macao	0	48	1970	2017	no
100	Macedonia	0	28	1990	2017	no
101	Madagascar	7	58	1960	2017	no
102	Malawi	1	64	1954	2017	yes
103	Malaysia	0	63	1955	2017	no
104	Maldives	4	48	1970	2017	yes
105	Mali	5	58	1960	2017	yes
106	Malta	0	64	1954	2017	no

LIST OF COUNTRIES, NUMBER OF COUPS, OBSERVATIONS, AND INCLUDED YEARS—CONTINUED

ID	Country	Coups	Years	From	To	Included in event study
107	Mauritania	10	58	1960	2017	no
108	Mauritius	0	68	1950	2017	no
109	Mexico	0	68	1950	2017	no
110	Moldova	0	28	1990	2017	no
111	Mongolia	0	48	1970	2017	no
112	Montenegro	0	28	1990	2017	no
113	Morocco	2	66	1950	2015	no
114	Mozambique	1	58	1960	2017	yes
115	Myanmar	2	56	1962	2017	yes
116	Namibia	0	58	1960	2017	no
117	Nepal	2	58	1960	2017	yes
118	Netherlands	0	68	1950	2017	no
119	New Zealand	0	68	1950	2017	no
120	Nicaragua	0	68	1950	2017	no
121	Niger	7	58	1960	2017	yes
122	Nigeria	10	68	1950	2017	no
123	Norway	0	68	1950	2017	no
124	Oman	1	48	1970	2017	no
125	Pakistan	7	68	1950	2017	yes
126	Panama	8	68	1950	2017	yes
127	Paraguay	5	67	1951	2017	yes
128	Peru	7	68	1950	2017	yes
129	Philippines	6	68	1950	2017	yes
130	Poland	1	48	1970	2017	yes
131	Portugal	2	68	1950	2017	no
132	Qatar	3	48	1970	2017	no
133	Romania	0	58	1960	2017	no
134	Russia	1	28	1990	2017	no
135	Rwanda	2	58	1960	2017	yes
136	Sao Tome and Principe	2	48	1970	2017	yes
137	Saudi Arabia	0	48	1970	2017	no
138	Senegal	1	58	1960	2017	no
139	Serbia	0	28	1990	2017	no
140	Seychelles	2	58	1960	2017	yes
141	Sierra Leone	12	57	1961	2017	yes
142	Singapore	0	58	1960	2017	no
143	Sint Maarten	0	13	2005	2017	no
144	Slovak Republic	0	28	1990	2017	no
145	Slovenia	0	28	1990	2017	no
146	South Africa	0	68	1950	2017	no
147	South Korea	2	65	1953	2017	yes
148	Spain	3	68	1950	2017	no
149	Sri Lanka	2	68	1950	2017	yes
150	St. Kitts & Nevis	0	48	1970	2017	no
151	St. Lucia	0	48	1970	2017	no
152	St.Vincent & Grenadines	0	48	1970	2017	no
153	Sudan	7	48	1970	2017	yes
154	Surinam	7	48	1970	2017	yes
155	Swaziland	1	48	1970	2017	yes
156	Sweden	0	68	1950	2017	no
157	Switzerland	0	68	1950	2017	no
158	Syria	7	58	1960	2017	no
159	Taiwan	0	67	1951	2017	no
160	Tajikistan	1	28	1990	2017	no
161	Tanzania	2	58	1960	2017	yes

LIST OF COUNTRIES, NUMBER OF COUPS, OBSERVATIONS, AND INCLUDED YEARS—CONTINUED

ID	Country	Coups	Years	From	To	Included in event study
162	Thailand	13	68	1950	2017	yes
163	Togo	9	58	1960	2017	yes
164	Trinidad &Tobago	1	68	1950	2017	yes
165	Tunisia	2	58	1960	2017	yes
166	Turkey	6	68	1950	2017	yes
167	Turkmenistan	0	28	1990	2017	no
168	Turks and Caicos	0	48	1970	2017	no
169	UAE	2	48	1970	2017	yes
170	UK	0	68	1950	2017	no
171	USA	0	68	1950	2017	no
172	Uganda	7	68	1950	2017	yes
173	Ukraine	0	28	1990	2017	no
174	Uruguay	1	68	1950	2017	yes
175	Uzbekistan	0	28	1990	2017	no
176	Venezuela	8	68	1950	2017	yes
177	Vietnam	0	48	1970	2017	no
178	Yemen	0	29	1989	2017	no
179	Zambia	3	63	1955	2017	yes
180	Zimbabwe	1	64	1954	2017	yes

Table B-2 SUMMARY STATISTICS

	N	Mean	Std. Dev.	Min.	p25	p75	Max
Growth-related variables							
GDP growth (PWT)	9709	.0213268	.06293268	-.6701439	-.0026377	.0481403	.9413755
GDP per capita (PWT)	9889	12965.8	30798.17	131.3002	2274.093	14473.53	792461.3
GDP growth (WB)	7846	.0213966	.057925	-.6499237	-.000957	.0460856	1.403708
GDP per capita (WB)	8019	10965.81	16168.53	132.3032	1099.682	14061.38	116232.8
Coup-related variables							
Coup	9889	.0436849	.2044034	0	0	0	1
Single Coup	9889	.0406512	.1974909	0	0	0	1
Multiple Coups	9889	.0030337	.054998	0	0	0	1
Successful Coup	9889	.0187077	.1354974	0	0	0	1
Failed Coup	9889	.0219436	.1465067	0	0	0	1
Civilian Coup	9889	.010719	.1029813	0	0	0	1
Military Coup	9889	.0319547	.1758884	0	0	0	1
Royal Coup	9889	.0010112	.0317853	0	0	0	1
Transition to Autocracy	9889	.0044494	.0665585	0	0	0	1
Transition to Democracy	9889	.0007079	.0265975	0	0	0	1
Government Change	9889	.0056629	.0750424	0	0	0	1
Age of Coup Leader	432	38.11806	21.32986	0	32	52	89
Civilian Rank Index	432	.2777778	.7187684	0	0	0	3
Military Rank Index	432	6.643519	4.16401	0	4	11	12
Control variables							
Interstate War	9889	.0185054	.1347768	0	0	0	1
Internal War	9889	.1305491	.3369236	0	0	0	1
Civil and Ethnic Violence	7852	.623026	1.581165	0	0	0	10
Coup Experience	9889	1.746183	2.809321	0	0	2	17
Democracy	9889	.4998483	.5000253	0	0	1	1
Government Change	9889	.0958641	.2944197	0	0	0	1
KOF Globalization Index	7152	51.08496	17.29259	14.2923	38.23158	64.45823	91.16795
Ethnic Fractonalization	7175	.4339861	.2707481	0	.187	.669	.89

Note: The table reports summary statistics of the variables used in the empirical estimations. GDP growth reports GDP per capita growth. Data refers to WB = World Band and PWT = Penn World Tables. GDP is measured in constant 2011 US-Dollar (PWT) and constant 2010 US-Dollar (WB). "Transition to Autocracy" and "Transition to Democracy" show regime transitions after a coup d'état. "Government Change" reports changes in government after a coup d'état. A description of the variables and corresponding data sources can be found in Sections (2) and (3.4). Column labeled "Std. Dev." reports the standard deviation, "p25" gives the 25^{th} percentile, "p75" reports the 75^{th} percentile.

Table B-3 FLEXIBLE EVENT STUDY ANALYSIS—PARAMETER ESTIMATES FOR THE PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}	
Treatment variable at the corresponding time pre- and post coups	*Parameter estimates*
Single coup ($T \leq t-4$)	-0.011
	(0.007)
Single coup ($T = t-3$)	-0.001
	(0.007)
Single coup ($T = t-2$)	–
	–
Single coup ($T = t-1$)	-0.020***
	(0.007)
Single coup ($T = t$)	-0.031***
	(0.010)
Single coup ($T = t+1$)	0.002
	(0.009)
Single coup ($T = t+2$)	0.002
	(0.008)
Single coup ($T \geq t = 3$	0.003
	(0.008)
Observations	1,058
Countries	80
R-squared Overall	0.228
Country Fixed Effects	Yes
Year Fixed Effects	Yes

Notes: The table reports the results of the flexible event study analysis (Equation 4), which is shown graphically in Figure (6). Standard errors in parentheses. All standard errors account for heteroskedasticity and are clustered at the country level.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-4 FLEXIBLE EVENT STUDY ANALYSIS—PARAMETER ESTIMATES FOR THE FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}	
Treatment variable at the corresponding time pre- and post coups	*Parameter estimates*
GDP per capita, $(t-4)$	0.775***
	(0.064)
GDP per capita, $(t-3)$	0.056
	(0.046)
GDP per capita, $(t-2)$	0.063
	(0.058)
GDP per capita, $(t-1)$	0.047
	(0.060)
Single coup $(T \leq t-4)$	-0.020*
	(0.012)
Single coup $(T = t-3)$	0.000
	(0.011)
Single coup $(T = t-2)$	–
	–
Single coup $(T = t-1)$	-0.019*
	(0.009)
Single coup $(T = t)$	-0.036**
	(0.015)
Single coup $(T = t+1)$	0.003
	(0.010)
Single coup $(T = t+2)$	0.006
	(0.011)
Single coup $(T \geq t = 3$	-0.002
	(0.013)
Observations	1,030
Countries	80
R-squared Overall	0.919
R-squared Within	0.919
R-squared Between	0.996
Country Fixed Effects	Yes
Year Fixed Effects	Yes

Notes: The table reports the results of the flexible event study analysis (Equation 5), which is shown graphically in Figure (7). Standard errors in parentheses. All standard errors account for heteroskedasticity and are clustered at the country level.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-5 COUPS D'ÉTAT AND ECONOMIC GROWTH—SAMPLE OF COUNTRIES WITH AT LEAST ONE COUP BETWEEN 1950 AND 2017, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.024***	-0.022***	-0.023***	-0.021***	-0.021***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.021***
						(0.003)
$\text{Multiple Coups}_{it}$					-0.003	-0.024
					(0.023)	(0.023)
Observations	5,854	5,854	5,854	5,854	5,854	5,854
Countries	102	102	102	102	102	102
R-Squared	0.009	0.050	0.051	0.092	0.092	0.092
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The sample is restricted to country-year observations of countries that experienced at least one coup in the sample period between 1950 and 2017. For details, see Table (B-1).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-6 COUPS D'ÉTAT AND ECONOMIC GROWTH—SAMPLE OF COUNTRIES WITH AT LEAST ONE COUP BETWEEN 1950 AND 2017, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.027***	-0.029***	-0.025***	-0.024***	-0.025***	
	(0.007)	(0.007)	(0.006)	(0.006)	(0.007)	
Single Coup_{it}						-0.025***
						(0.007)
$\text{Multiple Coups}_{it}$					0.018	-0.007
					(0.014)	(0.013)
$\text{Log}(\text{GDP}^{pc})(t-1)$	1.103***	1.075***	1.083***	1.039***	1.039***	1.039***
	(0.025)	(0.025)	(0.025)	(0.026)	(0.026)	(0.026)
$\text{Log}(\text{GDP}^{pc})(t-2)$	-0.029	-0.024	-0.011	-0.007	-0.007	-0.007
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
$\text{Log}(\text{GDP}^{pc})(t-3)$	-0.009	-0.006	-0.015	-0.011	-0.011	-0.011
	(0.028)	(0.028)	(0.028)	(0.027)	(0.027)	(0.027)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.068***	-0.069***	-0.059***	-0.063***	-0.063***	-0.063***
	(0.017)	(0.018)	(0.017)	(0.017)	(0.017)	(0.017)
Observations	5,548	5,548	5,548	5,548	5,548	5,548
Countries	102	102	102	102	102	102
R-Squared Overall	0.992	0.992	0.993	0.993	0.993	0.993
R-Squared Within	0.963	0.963	0.966	0.966	0.966	0.966
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The sample is restricted to country-year observations of countries that experienced at least one coup in the sample period between 1950 and 2017. For details, see Table (B-1).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-7 COUPS D'ÉTAT AND ECONOMIC GROWTH—SAMPLE OF NON-OVERLAPPING FIVE-YEAR AVERAGES, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}				
	(1)	(2)	(3)	(4)
Coup_{it}	-0.012***	-0.009***	-0.013***	-0.009***
	(0.003)	(0.003)	(0.003)	(0.003)
Observations	2,051	2,051	2,051	2,051
Countries	180	180	180	180
R-squared Overall	0.013	0.139	0.088	0.212
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. Estimates are based on non-overlapping five year averages (1960-1964; 1965-1969; ...), where each five-year interval serves as a unit of observation.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-8 COUPS D'ÉTAT AND ECONOMIC GROWTH—SAMPLE OF NON-OVERLAPPING FIVE-YEAR AVERAGES, DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}				
	(1)	(2)	(3)	(4)
Coup_{it}	-0.105***	-0.094***	-0.102***	-0.076***
	(0.020)	(0.020)	(0.019)	(0.019)
$\text{Log}(\text{GDP}^{pc})(t-1)$	0.966***	0.911***	0.967***	0.860***
	(0.007)	(0.013)	(0.007)	(0.026)
Observations	1,881	1,881	1,881	1,881
Countries	180	180	180	180
R-squared Overall	0.967	0.967	0.970	0.968
R-squared Within	0.847	0.847	0.863	0.866
R-squared Between	0.993	0.993	0.993	0.992
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The logarithm of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. Estimates are based on non-overlapping five year averages (1960-1964; 1965-1969; ...), where each five-year interval serves as a unit of observation.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-9 COUPS D'ÉTAT AND ECONOMIC GROWTH—ALTERNATIVE CODING SCHEME OF COUPS (CALENDAR YEARS), PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.026***	-0.021***	-0.026***	-0.021***	-0.021***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.021***
						(0.004)
$\text{Multiple Coups}_{it}$					0.006	-0.015
					(0.017)	(0.016)
Observations	9,709	9,709	9,709	9,709	9,709	9,709
Countries	180	180	180	180	180	180
R-Squared Overall	0.007	0.058	0.058	0.109	0.109	0.109
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The coding scheme of coups d'état differs from the original coding of Bjørnskov and Rode (2019) and re-codes coups to match calendar years.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-10 COUPS D'ÉTAT AND ECONOMIC GROWTH—ALTERNATIVE CODING SCHEME OF COUPS (CALENDAR YEARS), FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.035***	-0.030***	-0.033***	-0.025***	-0.026***	
	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)	
Single Coup_{it}						-0.026***
						(0.007)
$\text{Multiple Coups}_{it}$					0.005	-0.021*
					(0.012)	(0.011)
$\text{Log}(\text{GDP}^{pc})(t-1)$	0.888***	0.852***	0.874***	0.828***	0.828***	0.828***
	(0.075)	(0.075)	(0.075)	(0.072)	(0.072)	(0.072)
$\text{Log}(\text{GDP}^{pc})(t-2)$	0.148**	0.145**	0.161**	0.155**	0.155**	0.155**
	(0.068)	(0.066)	(0.068)	(0.066)	(0.066)	(0.066)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.004	0.007	-0.000	0.002	0.002	0.002
	(0.044)	(0.044)	(0.047)	(0.047)	(0.047)	(0.047)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.044	-0.030	-0.039	-0.029	0.019	-0.029
	(0.040)	(0.043)	(0.043)	(0.044)	(0.045)	(0.045)
Observations	9,169	9,169	9,169	9,169	9,169	9,169
Countries	180	180	180	180	180	180
R-Squared Overall	0.990	0.990	0.990	0.990	0.990	0.990
R-Squared Within	0.946	0.946	0.948	0.949	0.949	0.949
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The coding scheme of coups d'état differs from the original coding of Bjørnskov and Rode (2019) and re-codes coups to match calendar years.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-11 COUPS D'ÉTAT AND ECONOMIC GROWTH—EFFECT OF TWO OR MORE COUPS, SAMPLE OF COUNTRY-YEARS WITH COUPS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}				
	(1)	(2)	(3)	(4)
Multiple Coups$_{it}$	-0.009	0.014	0.006	0.025
	(0.022)	(0.018)	(0.027)	(0.022)
Observations	427	427	427	427
Countries	102	102	102	102
R-squared Overall	0.001	0.410	0.163	0.547
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Multiple Coups" considers country-year observations with multiple coups in a given year. The sample is restricted to country-year observations in which a coup has taken place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-12 COUPS D'ÉTAT AND ECONOMIC GROWTH—EFFECT OF TWO OR MORE COUPS, SAMPLE OF COUNTRY-YEARS WITH COUPS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}				
	(1)	(2)	(3)	(4)
Multiple Coups$_{it}$	0.017	0.021*	0.027	0.024
	(0.013)	(0.013)	(0.019)	(0.016)
Log(GDP^{pc})$(t-1)$	1.091***	0.959***	1.041***	0.921***
	(0.129)	(0.094)	(0.121)	(0.080)
Log(GDP^{pc})$(t-2)$	-0.127	-0.084	-0.128	-0.133
	(0.168)	(0.152)	(0.154)	(0.152)
Log(GDP^{pc})$(t-3)$	0.104	0.152	0.090	0.163*
	(0.097)	(0.096)	(0.093)	(0.087)
Log(GDP^{pc})$(t-4)$	-0.091	-0.061	-0.028	0.004
	(0.072)	(0.076)	(0.074)	(0.076)
Observations	398	398	398	398
Countries	96	96	96	96
R-squared Overall	0.980	0.979	0.982	0.981
R-squared Within	0.929	0.930	0.944	0.946
R-squared Between	0.983	0.980	0.984	0.978
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of full dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Multiple Coups" considers country-year observations with multiple coups in a given year. The sample is restricted to country-year observations in which a coup has taken place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-13 COUPS D'ÉTAT AND ECONOMIC GROWTH—EFFECT OF COUP SUCCESS, SAMPLE OF COUNTRY-YEARS WITH SINGLE COUPS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}				
	(1)	(2)	(3)	(4)
Successful Coup$_{it}$	-0.010	-0.009	-0.013	-0.013
	(0.008)	(0.009)	(0.009)	(0.012)
Observations	397	397	397	397
Countries	101	101	101	101
R-squared Overall	0.005	0.378	0.181	0.533
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Successful Coup" considers country-year observations with coups that were successful in unseating the ruling government in a given year. The sample is restricted to country-year observations in which a single coup has taken place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-14 COUPS D'ÉTAT AND ECONOMIC GROWTH—EFFECT OF COUP SUCCESS, SAMPLE OF COUNTRY-YEARS WITH SINGLE COUPS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}				
	(1)	(2)	(3)	(4)
Successful Coup$_{it}$	-0.012	-0.012	-0.014	-0.016
	(0.013)	(0.013)	(0.013)	(0.013)
Log(GDP^{pc})$(t-1)$	1.105***	0.958***	1.060***	0.932 ***
	(0.143)	(0.104)	(0.135)	(0.093)
Log(GDP^{pc})$(t-2)$	-0.133	-0.090	-0.133	-0.157
	(0.181)	(0.161)	(0.169)	(0.166)
Log(GDP^{pc})$(t-3)$	0.105	0.159	0.084	0.167*
	(0.104)	(0.106)	(0.097)	(0.096)
Log(GDP^{pc})$(t-4)$	-0.100	-0.064	-0.037	0.004
	(0.077)	(0.077)	(0.079)	(0.079)
Observations	370	370	370	370
Countries	96	96	96	96
R-squared Overall	0.979	0.978	0.982	0.980
R-squared Within	0.928	0.929	0.943	0.946
R-squared Between	0.983	0.980	0.985	0.979
Country Fixed Effects	No	Yes	No	Yes
Year Fixed Effects	No	No	Yes	Yes

Notes: Table reports the results of full dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Successful Coup" considers country-year observations with coups that were successful in unseating the ruling government in a given year. The sample is restricted to country-year observations in which a single coup has taken place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-15 COUPS D'ÉTAT AND ECONOMIC GROWTH—BASELINE SPECIFICATION WITH WORLD BANK GDP DATA, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.025***	-0.020***	-0.024***	-0.019***	-0.019***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.019***
						(0.004)
$\text{Multiple Coups}_{it}$					-0.003	-0.022
					(0.018)	(0.018)
Observations	7,846	7,846	7,846	7,846	7,846	7,846
Countries	171	171	171	171	171	171
R-Squared Overall	0.008	0.086	0.069	0.148	0.148	0.148
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2010 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-16 COUPS D'ÉTAT AND ECONOMIC GROWTH—BASELINE SPECIFICATION WITH WORLD BANK GDP DATA, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.017***	-0.015***	-0.016***	-0.013***	-0.014***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.014***
						(0.004)
$\text{Multiple Coups}_{it}$					0.015*	0.001
					(0.009)	(0.008)
$\text{Log}(\text{GDP}^{pc})(t-1)$	1.252***	1.191***	1.243***	1.173***	1.173***	1.173***
	(0.065)	(0.065)	(0.067)	(0.067)	(0.067)	(0.067)
$\text{Log}(\text{GDP}^{pc})(t-2)$	-0.185**	-0.164**	-0.175**	-0.153*	-0.153*	-0.153*
	(0.085)	(0.080)	(0.084)	(0.079)	(0.079)	(0.079)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.017	0.017	0.021	0.022	0.022	0.022
	(0.026)	(0.024)	(0.025)	(0.023)	(0.023)	(0.023)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.085***	-0.063***	-0.091***	-0.070***	-0.070***	-0.070***
	(0.016)	(0.016)	(0.017)	(0.017)	(0.017)	(0.017)
Observations	7,333	7,333	7,333	7,333	7,333	7,333
Countries	171	171	171	171	171	171
R-Squared Overall	0.999	0.999	0.999	0.999	0.999	0.999
R-Squared Within	0.982	0.982	0.983	0.984	0.984	0.984
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2010 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-17 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR POTENTIAL CONFOUNDING FACTORS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.027***	-0.020***	-0.028***	-0.021***	-0.020***	
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	
Single Coup_{it}						-0.020***
						(0.005)
$\text{Multiple Coups}_{it}$					-0.006	-0.026
					(0.022)	(0.021)
$\text{Interstate War}_{it}$	-0.020	-0.038**	-0.020	-0.038**	-0.038**	-0.038**
	(0.016)	(0.019)	(0.015)	(0.018)	(0.018)	(0.018)
Internal War_{it}	-0.003	-0.010**	-0.004	-0.009**	-0.009**	-0.009**
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
$\text{Civil and Ethnic Violence}_{it}$	-0.001	-0.005***	-0.001	-0.004***	-0.004***	-0.004***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
$\text{Coup Experience}_{it}$	-0.001	-0.003**	-0.001	-0.002	-0.002	-0.002
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Democracy_{it}	-0.003	-0.004	-0.002	-0.002	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
$\text{KOF Globalization Index}_{it}$	0.001***	0.002***	0.001***	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$\text{Ethnic Fractionalization Index}_{it}$	-0.016**	-0.118**	-0.017**	-0.113**	-0.112**	-0.112**
	(0.007)	(0.049)	(0.007)	(0.047)	(0.046)	(0.046)
$\text{Log}(\text{GDP}^{pc})(t-2)$	-0.018***	-0.058***	-0.016***	-0.056***	-0.056***	-0.070***
	(0.002)	(0.008)	(0.002)	(0.008)	(0.008)	(0.008)
Observations	5,514	5,514	5,514	5,514	5,514	5,514
Countries	138	138	138	138	138	138
R-Squared Overall	0.053	0.175	0.096	0.209	0.209	0.209
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. Dummy variables for interstate and internal war are constructed based on data from the *UCDP/PRIO Armed Conflict Dataset* (Gleditsch et al., 2002, Version 17.2). Scores for civil and ethnic violence are taken from the *Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2016* dataset (Version July 25, 2017). Coup experience is measured with the cumulative number of coups in a country since 1950. Democracy is measured via the dichotomous democracy indicator of Bjørnskov and Rode (2019). Globalization is measured with the *KOF Globalization Index* of Dreher (2006) and Gygli et al. (2019). Data on ethnic fractionalization is from the *Historical Index of Ethnic Fractionalization Dataset (HIEF)* (see Drazanova, 2019). The second lag of GDP per capita accounts for the current level of economic development.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-18 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR POTENTIAL CONFOUNDING FACTORS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup	-0.032***	-0.026***	-0.031***	-0.026***	-0.028***	
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	
Single Coup$_{it}$						-0.028***
						(0.009)
Multiple Coups$_{it}$					0.035**	0.006
					(0.016)	(0.013)
Interstate War$_{it}$	-0.023	-0.039*	-0.023	-0.040**	-0.040**	-0.040**
	(0.018)	(0.021)	(0.017)	(0.020)	(0.020)	(0.020)
Internal War$_{it}$	-0.001	-0.008	-0.001	-0.008	-0.008	-0.008
	(0.005)	(0.007)	(0.005)	(0.006)	(0.006)	(0.006)
Civil and Ethnic Violence$_{it}$	-0.001	-0.005***	-0.001	-0.004**	-0.004**	-0.004**
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
Coup Experience$_{it}$	-0.000	-0.003***	0.000	-0.004***	-0.004***	-0.004***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Democracy$_{it}$	-0.002	-0.000	-0.001	-0.002	-0.002	-0.002
	(0.003)	(0.006)	(0.003)	(0.006)	(0.006)	(0.006)
KOF Globalization Index$_{it}$	0.001***	0.003***	0.001***	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ethnic Fractionalization Index$_{it}$	-0.013**	-0.042	-0.017***	-0.091*	-0.092*	-0.092*
	(0.005)	(0.053)	(0.005)	(0.052)	(0.052)	(0.052)
Log(GDP^{pc})$(t-1)$	1.107***	1.043***	1.101***	1.032***	1.032***	1.032***
	(0.028)	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)
Log(GDP^{pc})$(t-2)$	-0.053**	-0.046	-0.037	-0.030	-0.031	-0.031
	(0.032)	(0.031)	(0.032)	(0.031)	(0.031)	(0.031)
Log(GDP^{pc})$(t-3)$	0.014	0.018	-0.001	0.004	0.005	0.005
	(0.032)	(0.030)	(0.031)	(0.029)	(0.029)	(0.029)
Log(GDP^{pc})$(t-4)$	-0.085***	-0.084***	-0.077***	-0.075***	-0.075***	-0.075***
	(0.016)	(0.017)	(0.016)	(0.016)	(0.016)	(0.016)
Observations	5,542	5,542	5,542	5,542	5,542	5,542
Countries	138	138	138	138	138	138
R-Squared Overall	0.995	0.994	0.995	0.994	0.994	0.994
R-Squared Within	0.952	0.952	0.955	0.956	0.956	0.956
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. Dummy variables for interstate and internal war are constructed based on data from the *UCDP/PRIO Armed Conflict Dataset* (Gleditsch et al., 2002, Version 17.2). Scores for civil and ethnic violence are taken from the *Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2016* dataset (Version July 25, 2017). Coup experience is measured with the cumulative number of coups in a country since 1950. Democracy is measured via the dichotomous democracy indicator of Bjørnskov and Rode (2019). Globalization is measured with the *KOF Globalization Index* of Dreher (2006) and Gygli et al. (2019). Data on ethnic fractionalization is from the *Historical Index of Ethnic Fractionalization Dataset (HIEF)* (see Drazanova, 2019).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-19 COUPS D'ÉTAT AND ECONOMIC GROWTH—REGIONAL DIFFERENCES, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}										
	(1) Africa	(2) Africa	(3) Africa	(4) America	(5) America	(6) America	(7) Asia-Oceania	(8) Asia-Oceania	(9) Asia-Oceania	(10) Europe
Coup_{it}	-0.020***	-0.019***		-0.023***	-0.023***		-0.024*	-0.024**		-0.055***
	(0.005)	(0.004)		(0.004)	(0.005)		(0.012)	(0.011)		(0.018)
Single Coup_{it}			-0.019***			-0.023***			-0.024**	
			(0.004)			(0.005)			(0.011)	
$\text{Multiple Coups}_{it}$		-0.009	-0.028		0.004	0.020***		-0.011	-0.035	
		(0.025)	(0.025)		(0.008)	(0.06)		(0.141)	(0.141)	
Observations	2,910	2,910	2,910	2,311	2,311	2,311	2,503	2,503	2,503	1,985
Countries	50	50	50	41	41	41	49	49	49	40
R-Squared Overall	0.103	0.103	0.103	0.176	0.176	0.176	0.101	0.101	0.101	0.322
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The regional classification refers to the classification of the World Bank. There have been no multiple coups in Europe.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-20 COUPS D'ÉTAT AND ECONOMIC GROWTH—REGIONAL DIFFERENCES, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}										
	(1) Africa	(2) Africa	(3) Africa	(4) America	(5) America	(6) America	(7) Asia-Oceania	(8) Asia-Oceania	(9) Asia-Oceania	(10) Europe
Coup	-0.023***	-0.025***		-0.042***	-0.043***		-0.027	-0.030		-0.046***
	(0.010)	(0.011)		(0.008)	(0.009)		(0.018)	(0.018)		(0.021)
Single Coup$_{it}$			-0.025**			-0.043***			-0.030	
			(0.011)			(0.009)			(0.018)	
Multiple Coups$_{it}$		0.020	-0.005		0.002	-0.041**		0.094***	0.064**	
		(0.022)	(0.020)		(0.021)	(0.019)		(0.030)	(0.029)	
Log(GDP^{pc})$(t-1)$	1.102***	1.102***	1.102***	0.615***	0.615***	0.615***	1.052***	1.052***	1.052***	0.821***
	(0.033)	(0.033)	(0.033)	(0.075)	(0.075)	(0.075)	(0.044)	(0.044)	(0.044)	(0.133)
Log(GDP^{pc})$(t-2)$	-0.001	-0.002	-0.002	0.215**	0.215**	0.215**	-0.015	-0.014	-0.014	0.084
	(0.040)	(0.040)	(0.040)	(0.091)	(0.091)	(0.091)	(0.035)	(0.035)	(0.035)	(0.068)
Log(GDP^{pc})$(t-3)$	0.004	0.005	0.005	0.042	0.042	0.042	-0.037	-0.036	-0.036	0.145**
	(0.038)	(0.038)	(0.038)	(0.082)	(0.082)	(0.082)	(0.037)	(0.037)	(0.037)	(0.070)
Log(GDP^{pc})$(t-4)$	-0.054**	-0.054**	-0.054**	0.102	0.102	0.102	-0.059**	-0.059**	-0.059**	-0.153***
	(0.026)	(0.026)	(0.026)	(0.075)	(0.075)	(0.075)	(0.023)	(0.023)	(0.023)	(0.021)
Observations	2,760	2,760	2,760	2,188	2,188	2,188	2,356	2,356	2,356	1,865
Countries	50	50	50	41	41	41	49	49	49	40
R-Squared Overall	0.988	0.988	0.988	0.972	0.972	0.972	0.994	0.944	0.944	0.984
R-Squared Within	0.954	0.954	0.954	0.880	0.880	0.880	0.978	0.978	0.978	0.979
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.997
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The regional classification refers to the classification of the World Bank. There have been no multiple coups in Europe.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-21 COUPS D'ÉTAT AND ECONOMIC GROWTH—COUP CHARACTERISTICS AND BIOGRAPHIC INFORMATION OF THE COUP LEADER AND THE INCUMBENT, SAMPLE OF COUNTRY-YEARS WITH SINGLE COUPS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}							
	(1) Type of Coup	(2) Type of Coup	(3) Type of Coup	(4) Age of Coup Leader	(5) Civil Rank of Coup Leader	(6) Military Rank of Coup Leader	(7) Tenure of Incumbent
Civilian Coup$_{it}$	-0.186	0.001					
	(0.139)	(0.010)					
Military Coup$_{it}$	-0.187		-0.001				
	(0.138)		(0.010)				
Royal Coup$_{it}$		0.187	0.186				
		(0.138)	(0.139)				
Age of Coup Leader$_{it}$				-0.000			
				(0.000)			
Civil Rank Index$_{it}$					-0.006		
					(0.007)		
Military Rank Index$_{it}$						0.000	
						(0.001)	
Tenure of Incumbent$_{it}$							0.000
							(0.001)
Observations	397	397	397	397	397	397	239
Countries	101	101	101	101	101	101	78
R-Squared Overall	0.538	0.538	0.538	0.530	0.531	0.529	0.646
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The table considers country-year observations during which a coup took place. Data on the tenure of incumbents comes from the Database of Political Institutions (DPI).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-22 COUPS D'ÉTAT AND ECONOMIC GROWTH—COUP CHARACTERISTICS AND BIOGRAPHIC INFORMATION OF THE COUP LEADER AND THE INCUMBENT, SAMPLE OF COUNTRY-YEARS WITH SINGLE COUPS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}							
	(1) Type of Coup	(2) Type of Coup	(3) Type of Coup	(4) Age of Coup Leader	(5) Civil Rank of Coup Leader	(6) Military Rank of Coup Leader	(7) Tenure of Incumbent
Civilian Coup$_{it}$	-0.129	-0.014					
	(0.128)	(0.015)					
Military Coup$_{it}$	-0.143		-0.014				
	(0.123)		(0.015)				
Royal Coup$_{it}$		0.143	0.129				
		(0.123)	(0.128)				
Age of Coup Leader$_{it}$				0.000			
				(0.000)			
Civil Rank Index$_{it}$					-0.002		
					(0.008)		
Military Rank Index$_{it}$						-0.000	
						(0.002)	
Tenure of Incumbent$_{it}$							0.001
							(0.002)
Log(GDP^{pc})$(t-1)$	0.945***	0.945***	0.945***	0.937***	0.936***	0.937***	1.006***
	(0.092)	(0.092)	(0.092)	(0.092)	(0.091)	(0.092)	(0.107)
Log(GDP^{pc})$(t-2)$	-0.163	-0.163	-0.163	-0.166	-0.163	-0.163	-0.342*
	(0.161)	(0.161)	(0.161)	(0.161)	(0.160)	(0.164)	(0.189)
Log(GDP^{pc})$(t-3)$	0.164*	0.164*	0.164*	0.167*	0.167*	0.167*	0.168
	(0.098)	(0.098)	(0.098)	(0.097)	(0.096)	(0.096)	(0.172)
Log(GDP^{pc})$(t-4)$	-0.003	-0.003	-0.003	0.006	0.005	0.004	0.064
	(0.072)	(0.072)	(0.072)	(0.077)	(0.079)	(0.079)	(0.108)
Observations	370	370	370	370	370	370	237
Countries	96	96	96	96	96	96	76
R-Squared Overall	0.980	0.980	0.980	0.980	0.980	0.980	0.972
R-Squared Within	0.946	0.946	0.946	0.946	0.946	0.946	0.914
R-Squared Between	0.979	0.979	0.979	0.979	0.979	0.979	0.969
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GDP is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The table considers country-year observations during which a coup took place. Data on the tenure of incumbents comes from the Database of Political Institutions (DPI).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-23 COUPS D'ÉTAT AND ECONOMIC GROWTH—ALTERNATIVE ESTIMATION STRATEGIES

Dependent variables: GDP (per capita) growth, Δy_{it} and Logarithm of GDP (per capita), y_{it}								
	GDP in 1960 Quintiles × Year Effects		Alternative Lag Structure			Difference GMM	Han and Phillips Estimator	Nonparametric Estimations
	(1) *Panel DiD*	(2) *Dynamic Panel*	(3) *One Lag*	(4) *Two Lags*	(5) *Three Lags*	(6) *Dynamic Panel*	(7) *Dynamic Panel*	(8)
Coup_{it}	-0.021***	-0.026***	-0.030***	-0.032***	-0.030***	-0.028***	-0.020***	-0.023***
	(0.004)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.005)	(0.006)
$\text{Log}(\text{GDP}^{pc})(t-1)$		1.304***	0.953***	0.839***	0.840***	0.805***	0.869***	
		(0.025)	(0.006)	(0.071)	(0.073)	(0.076)	(0.167)	
$\text{Log}(\text{GDP}^{pc})(t-2)$		-0.014		0.117	0.141**	0.152**		
		(0.027)		(0.117)	(0.063)	(0.064)		
$\text{Log}(\text{GDP}^{pc})(t-3)$		-0.006			-0.024	0.005		
		(0.028)			(0.049)	(0.046)		
$\text{Log}(\text{GDP}^{pc})(t-4)$		0.060***				-0.025		
		(0.017)				(0.044)		
Observations	6,415	6,178	9,709	9,529	9,349	8,989	9,709	9,889
Countries	144	144	180	180	180	180	180	180
R-Squared Overall	0.175	0.944	0.990	0.990	0.990		0.999	
R-Squared Within		0.960	0.951	0.951	0.950			
R-Squared Between		0.999	0.999	0.999	0.999			
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GDP (1960) × Year Effects	Yes	Yes	No	No	No	No	No	No

Notes: Table reports the results on the effect of coups d'état on economic growth estimated with alternative estimation strategies. Columns (1)–(2) interact the quintile of the distribution of per capita GDP in 1960 with year effects to account for differences in the growth path of GDP. Columns (3)–(5) use alternative specifications to model GDP dynamics in the full dynamic panel data model. Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Columns (6)–(8) employ alternative estimating strategies, including difference GMM (Column 6), the Han and Phillips estimator (Han and Phillips, 2010, Column 7), and nonparametric kernel regressions with Li–Racine kernel and bootstrapped standard errors (Column 8). The reported effects in Column (8) are averages of contrasts of factor covariates. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-24 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR TRANSITION INTO AUTOCRACY, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}				
	All Observations (incl. Transitions)			Transitions excluded
	(1)	(2)	(3)	(4)
Transition to Autocracy (after Coup)	-0.020***	-0.000	0.001	
	(0.007)	(0.008)	(0.008)	
Coup_{it}		-0.021***	-0.021***	-0.022***
		(0.004)	(0.004)	(0.004)
Democracy_{it}			0.003	
			(0.003)	
Observations	9,709	9,709	9,709	9,665
Countries	180	180	180	180
R-squared Overall	0.105	0.109	0.110	0.109
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Transition to Autocracy (after Coup)" is a dummy variable that is 1 if a democratic country becomes autocratic after a coup d'état and 0 otherwise. Column "Transition excluded" excludes country-year observations in which coups led to a transition to autocracy.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-25 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR TRANSITION INTO AUTOCRACY, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}	All Observations (incl. Transitions)			Transitions excluded
	(1)	(2)	(3)	(4)
Transition to Autocracy (after Coup)	-0.028***	-0.001	0.002	
	(0.011)	(0.012)	(0.012)	
Coup_{it}		-0.030***	-0.029***	-0.030***
		(0.007)	(0.007)	(0.008)
Democracy_{it}			0.008	
			(0.006)	
$\text{Log}(\text{GDP}^{pc})(t-1)$	0.829***	0.827***	0.827***	0.827***
	(0.072)	(0.072)	(0.072)	(0.072)
$\text{Log}(\text{GDP}^{pc})(t-2)$	0.155***	0.155***	0.155***	0.155***
	(0.066)	(0.066)	(0.066)	(0.066)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.002	0.002	0.002	0.002
	(0.047)	(0.047)	(0.047)	(0.047)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.030	-0.029	-0.029	-0.029
	(0.045)	(0.044)	(0.044)	(0.045)
Observations	9,169	9,169	9,169	9,126
Countries	180	180	180	180
R-squared Overall	0.990	0.990	0.990	0.990
R-squared Within	0.949	0.949	0.949	0.948
R-squared Between	0.999	0.999	0.999	0.999
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Transition to Autocracy (after Coup)" is a dummy variable that is 1 if a democratic country becomes autocratic after a coup d'état and 0 otherwise. Column "Transition excluded" excludes country-year observations in which coups led to a transition to autocracy.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-26 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR TRANSITION INTO DEMOCRACY, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}				
	All Observations (incl. Transitions)			Transitions excluded
	(1)	(2)	(3)	(4)
Transition to Democracy (after Coup)	-0.026*	-0.006	-0.008	
	(0.016)	(0.016)	(0.015)	
Coup_{it}		-0.021***	-0.021***	-0.022***
		(0.004)	(0.004)	(0.004)
Democracy_{it}			0.003	
			(0.003)	
Observations	9,709	9,709	9,709	9,702
Countries	180	180	180	180
R-squared Overall	0.105	0.109	0.110	0.109
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Transition to Democracy (after Coup)" is a dummy variable that is 1 if an autocratic country becomes democratic after a coup d'état and 0 otherwise. Column "Transition excluded" excludes country-year observations in which coups led to a transition to democracy.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-27 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR TRANSITION INTO DEMOCRACY, DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}	All Observations (incl. Transitions)			Transitions excluded
	(1)	(2)	(3)	(4)
Transition to Democracy (after Coup)	-0.010	0.018	0.013	
	(0.017)	(0.018)	(0.018)	
Coup_{it}		-0.030***	-0.029***	-0.030***
		(0.007)	(0.007)	(0.008)
Democracy_{it}			0.008	
			(0.005)	
$\text{Log}(\text{GDP}^{pc})(t-1)$	0.829***	0.827***	0.827***	0.827***
	(0.072)	(0.072)	(0.072)	(0.072)
$\text{Log}(\text{GDP}^{pc})(t-2)$	0.155**	0.155**	0.155**	0.155**
	(0.066)	(0.066)	(0.066)	(0.066)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.002	0.002	0.002	0.002
	(0.047)	(0.047)	(0.047)	(0.047)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.030	-0.029	-0.029	-0.029
	(0.045)	(0.044)	(0.044)	(0.045)
Observations	9,169	9,169	9,169	9,162
Countries	180	180	180	180
R-squared Overall	0.990	0.990	0.990	0.990
R-squared Within	0.948	0.949	0.949	0.949
R-squared Between	0.999	0.999	0.999	0.999
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Transition to Democracy (after Coup)" is a dummy variable that is 1 if an autocratic country becomes democratic after a coup d'état and 0 otherwise. Column "Transition excluded" excludes country-year observations in which coups led to a transition to democracy.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-28 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR GOVERNMENT CHANGE, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}	All Observations (incl. Gov. Changes)			Gov. Changes excluded
	(1)	(2)	(3)	(4)
Government Change$_{it}$ × Coup$_{it}$	-0.043***	-0.025*	-0.013	
	(0.012)	(0.013)	(0.014)	
Coup$_{it}$		-0.019***	-0.019***	-0.014***
		(0.006)	(0.006)	(0.004)
Government Change$_{it}$			-0.015***	
			(0.003)	
Observations	7,295	7,295	7,295	6,318
Countries	180	180	180	180
R-squared Overall	0.125	0.127	0.133	0.133
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Government Change" is a dummy variable that is 1 if there was a (regular or irregular) change in government in a particular year, and 0 otherwise. Column "Gov. Changes excluded" excludes country-year observations in which a government change (regular or irregular) took place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-29 COUPS D'ÉTAT AND ECONOMIC GROWTH—CONTROLLING FOR GOVERNMENT CHANGE, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}	All Observations (incl. Gov. Changes)			Gov. Changes excluded
	(1)	(2)	(3)	(4)
Government Change$_{it}$ × Coup$_{it}$	-0.046***	-0.019	-0.007	
	(0.017)	(0.019)	(0.019)	
Coup$_{it}$		-0.029***	-0.029***	-0.026**
		(0.011)	(0.011)	(0.011)
Government Change$_{it}$			-0.014***	
			(0.004)	
Log(GDP^{pc})$(t-1)$	0.823***	0.822***	0.821***	0.805***
	(0.077)	(0.076)	(0.076)	(0.076)
Log(GDP^{pc})$(t-2)$	0.159**	0.159**	0.159**	0.170**
	(0.072)	(0.072)	(0.072)	(0.073)
Log(GDP^{pc})$(t-3)$	-0.020	-0.020	-0.020	-0.015
	(0.052)	(0.052)	(0.052)	(0.053)
Log(GDP^{pc})$(t-4)$	-0.024	-0.023	-0.023	-0.020
	(0.048)	(0.048)	(0.048)	(0.051)
Observations	7,217	7,217	7,217	6,263
Countries	180	180	180	180
R-squared Overall	0.990	0.990	0.990	0.989
R-squared Overall	0.918	0.919	0.919	0.915
R-squared Between	0.999	0.999	0.999	0.999
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of dynamic panel data estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état and democracy is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year. The variable "Government Change" is a dummy variable that is 1 if there was a (regular or irregular) change in government in a particular year, and 0 otherwise. Column "Gov. Changes excluded" excludes country-year observations in which a government change (regular or irregular) took place.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-30 COUPS D'ÉTAT AND ECONOMIC GROWTH—PRE-COUP DYNAMICS IN POLITICAL INSTITUTIONS, PANEL DIFFERENCE-IN-DIFFERENCES MODEL

Dependent variable: GDP (per capita) growth, Δy_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.026***	-0.022***	-0.025***	-0.021***	-0.021***	
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	
Single Coup_{it}						-0.021***
						(0.004)
$\text{Multiple Coups}_{it}$					-0.001	-0.022
					(0.016)	(0.016)
Political Institutions $(t-1)$	-0.008	-0.009	-0.004	-0.004	-0.004	-0.004
	(0.008)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)
Political Institutions $(t-2)$	0.014	0.013	0.012	0.010	0.010	0.010
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Political Institutions $(t-3)$	-0.003	-0.004	-0.004	-0.004	-0.004	-0.004
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)
Political Institutions $(t-4)$	0.006	0.007	0.002	0.003	0.003	0.003
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)
Observations	7,784	7,784	7,784	7,784	7,784	7,784
Countries	170	170	170	170	170	170
R-Squared Overall	0.012	0.078	0.056	0.122	0.122	0.122
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 1). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The quality of political institutions is measured based on the continuous democracy indicator compiled by Gründler and Krieger (2016, 2018, 2019).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-31 COUPS D'ÉTAT AND ECONOMIC GROWTH—PRE-COUP DYNAMICS IN POLITICAL INSTITUTIONS, FULL DYNAMIC PANEL DATA MODEL

Dependent variable: Logarithm of GDP (per capita), y_{it}						
	(1)	(2)	(3)	(4)	(5)	(6)
Coup_{it}	-0.035***	-0.031***	-0.032***	-0.027***	-0.028***	
	(0.008)	(0.008)	(0.007)	(0.008)	(0.008)	
Single Coup_{it}						-0.028***
						(0.008)
$\text{Multiple Coups}_{it}$					-0.021	-0.008
					(0.015)	(0.013)
Political Institutions $(t-1)$	0.000	0.004	0.005	-0.005	-0.005	-0.005
	(0.012)	(0.011)	(0.013)	(0.011)	(0.011)	(0.011)
Political Institutions $(t-2)$	0.006	0.005	0.001	-0.001	-0.001	0.001
	(0.013)	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)
Political Institutions $(t-3)$	-0.005	-0.005	-0.007	-0.009	-0.009	-0.009
	(0.012)	(0.012)	(0.011)	(0.011)	(0.011)	(0.011)
Political Institutions $(t-4)$	0.017	0.025**	0.013	0.008	0.008	0.008
	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)
$\text{Log}(\text{GDP}^{pc})(t-1)$	1.057***	1.015***	1.043***	0.984***	0.984***	0.984***
	(0.041)	(0.043)	(0.041)	(0.044)	(0.044)	(0.044)
$\text{Log}(\text{GDP}^{pc})(t-2)$	-0.003	0.001	0.014	0.015	0.015	0.015
	(0.034)	(0.032)	(0.033)	(0.030)	(0.030)	(0.030)
$\text{Log}(\text{GDP}^{pc})(t-3)$	0.019	0.022	0.010	0.011	0.012	0.012
	(0.022)	(0.022)	(0.024)	(0.023)	(0.023)	(0.023)
$\text{Log}(\text{GDP}^{pc})(t-4)$	-0.080***	-0.077***	-0.072***	-0.068***	-0.068***	-0.068***
	(0.014)	(0.015)	(0.014)	(0.014)	(0.014)	(0.014)
Observations	7,784	7,784	7,784	7,784	7,784	7,784
Countries	170	170	170	170	170	170
R-Squared Overall	0.994	0.994	0.994	0.994	0.994	0.994
R-Squared Within	0.957	0.958	0.960	0.961	0.961	0.961
R-Squared Between	0.999	0.999	0.999	0.999	0.999	0.999
Country Fixed Effects	No	Yes	No	Yes	Yes	Yes
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences estimations on the effect of coups d'état on economic growth (Equation 2). Robust standard errors (adjusted for clustering by countries) are reported in parentheses. Per capita GDP growth is measured in 2011 US-Dollar, data on coups d'état is from Bjørnskov and Rode (2019). The variable "Coup" denotes whether a coup has taken place at a given year, "Single Coup" only considers country-year observations with one coup in a given year, and "Multiple Coups" considers country-year observations with multiple coups in a given year. The quality of political institutions is measured based on the continuous democracy indicator compiled by Gründler and Krieger (2016, 2018, 2019).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-32 COUPS D'ÉTAT AND ECONOMIC GROWTH—RESULTS ON THE SUB-NATIONAL LEVEL, ACCOUNTING FOR SUB-NATIONAL CONFLICT

Dependent variables: Growth rate (Δy_{irt}) and log (y_{irt}) of GRP (per capita)				
	Panel Diff-in-Diff Model		Dynamic Panel Data Model	
	(1) *All Regions*	(2) *Coup Regions Excluded*	(3) *All Regions*	(4) *Coup Regions Excluded*
Coup_{irt}	-0.018***		-0.015***	
	(0.006)		(0.008)	
$\text{Coup}^{c}_{irt,r\neq\tilde{r}}$		-0.022***		-0.019***
		(0.006)		(0.007)
Conflict_{irt}	-0.008**	-0.008**	-0.006*	-0.006*
	(0.003)	(0.003)	(0.003)	(0.003)
$\text{Log(GRP)}^{pc}(t-1)$			0.815***	0.814***
			(0.075)	(0.076)
$\text{Log(GRP)}^{pc}(t-2)$			0.168**	0.169**
			(0.073)	(0.073)
$\text{Log(GRP)}^{pc}(t-3)$			-0.043	-0.042
			(0.045)	(0.045)
$\text{Log(GRP)}^{pc}(t-4)$			-0.065	-0.065
			(0.040)	(0.040)
Observations	51,727	51,655	43,707	43,650
Sub-national units	2,660	2,660	2,659	2,659
R-Squared Overall	0.300	0.301	0.935	0.935
F Stat	83.23	79.77	810.2	811.5
Sub-National Unit Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences models (Columns 1–2) and dynamic panel data estimations (Columns 3–4) on the effect of coups d'état on economic growth at the sub-national level. Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GRP is measured in real terms, data on coups d'état is geocoded by sub-national units using the coups listed in Bjørnskov and Rode (2019). Due to restrictions availability of sub-national GRP estimates, the models include the period 1992–2012. Sub-national regions are first-level administrative areas (ADM1). The dummy variable for conflict is constructed using the UCDP Georeferenced Event Dataset of Sundberg and Melander (2013).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-33 COUPS D'ÉTAT AND ECONOMIC GROWTH—RESULTS ON THE SUB-NATIONAL LEVEL, ACCOUNTING FOR SUB-NATIONAL HUMAN CAPITAL

Dependent variables: Growth rate (Δy_{irt}) and log (y_{irt}) of GRP (per capita)				
	Panel Diff-in-Diff Model		Dynamic Panel Data Model	
	(1) *All Regions*	(2) *Coup Regions Excluded*	(3) *All Regions*	(4) *Coup Regions Excluded*
Coup_{irt}	-0.022***		-0.022***	
	(0.006)		(0.006)	
$\text{Coup}^{c}_{irt,r\neq\tilde{r}}$		-0.019***		-0.020***
		(0.006)		(0.006)
$\text{Human Capital}_{irt}$	0.036	0.036	0.028	0.028
	(0.043)	(0.043)	(0.024)	(0.024)
$\text{Log(GRP)}^{pc}(t-1)$			0.896***	0.895***
			(0.041)	(0.041)
$\text{Log(GRP)}^{pc}(t-2)$			0.112**	0.112**
			(0.052)	(0.052)
$\text{Log(GRP)}^{pc}(t-3)$			-0.073	-0.072
			(0.051)	(0.051)
$\text{Log(GRP)}^{pc}(t-4)$			-0.045	-0.045
			(0.042)	(0.042)
Observations	45,646	45,594	38,660	38,619
Sub-national units	2,315	2,315	2,315	2,315
R-Squared Overall	0.342	0.343	0.948	0.948
F Stat	96.83	91.80	1244.8	1306.5
Sub-National Unit Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes

Notes: Table reports the results of panel difference-in-differences models (Columns 1–2) and dynamic panel data estimations (Columns 3–4) on the effect of coups d'état on economic growth at the sub-national level. Robust standard errors (adjusted for clustering by countries) are reported in parentheses. The log of per capita GRP is measured in real terms, data on coups d'état is geocoded by sub-national units using the coups listed in Bjørnskov and Rode (2019). Due to restrictions availability of sub-national GRP estimates, the models include the period 1992–2012. Sub-national regions are first-level administrative areas (ADM1). Human capital is constructed using the UCDP Georeferenced Event Dataset of Sundberg and Melander (2013).

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

Table B-34 EFFECTS OF COUPS D'ÉTAT ON THE HOUSEHOLD-LEVEL—THE INFLUENCE ON PERCEPTIONS AND PREFERENCES

	Expectations: Future will be bleak		Confidence in Government		Attitudes towards Democracy	
	(1) *Reduced*	(2) *Controls*	(3) *Reduced*	(4) *Controls*	(5) *Reduced*	(6) *Controls*
Coup_{it}	0.446***	0.447***	-0.055***	-0.052***	-0.134**	-0.111**
	(0.027)	(0.027)	(0.014)	(0.014)	(0.053)	(0.053)
$\text{Income decile}_{ith}$		-0.001		0.003***		0.012***
		(0.001)		(0.001)		(0.003)
Age_{ith}		-0.001		-0.004***		0.013***
		(0.001)		(0.001)		(0.002)
Age squared_{ith}		0.000		0.000***		-0.000***
		(0.000)		(0.000)		(0.000)
Student_{ith}		-0.031***		0.004		0.079***
		(0.010)		(0.008)		(0.024)
Retired_{ith}		0.035***		-0.021***		-0.049**
		(0.010)		(0.008)		(0.022)
Education_{ith}		0.003***		-0.018***		0.089***
		(0.001)		(0.001)		(0.003)
Unemployed_{ith}		0.013		-0.054***		-0.053**
		(0.009)		(0.007)		(0.021)
Households	41,390	41,390	226,995	226,995	131,820	131,820
Countries	45	85	85	85	79	79
R-Squared	0.172	0.173	0.130	0.135	0.075	0.085
F Stat	303.3	257.3	532.1	515.1	149.7	161.2
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Table reports estimations on the effect of coup d'états on the household level, with robust standard errors (adjusted for heteroskedasticity) in parentheses. Household-level data is taken from the World Value Survey (WVS). We include all observations for which data on coups and data on household characteristics are available. Our combined dataset covers a maximum of 254,079 households in 85 countries observed between 1981 and 2016. Expectations about the future are taken from question V50, where individuals are asked *"For each of the following pairs of statements, please tell me which one comes closest to your own views: Humanity has a bright future versus humanity has a bleak future"*. We construct a dummy that assumes a value of 1 if individuals answer that the future will be bleak, and zero otherwise. Confidence in government is measured using question V115 (V138, V153, V142, and V289 in earlier waves). The question asks people *"I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?"*. We re-code the variable so that higher values reflect greater confidence in government. Attitudes towards democracy are measured on a ten-scale ladder running from 1 to 10. Information stems from question V140 (V162 in earlier waves) where respondents are asked *"How important is it for you to live in a country that is governed democratically? On this scale where 1 means it is 'not at all important' and 10 means 'absolutely important' what position would you choose?"*.

*** Significant at the 1 percent level,
** Significant at the 5 percent level,
* Significant at the 10 percent level

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