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Abstract

This paper investigates the empirical role of violent conflicts for the causal effect of democracy on economic growth. Exploiting within-country variation to identify the effect of democratization during the "Third Wave", we find evidence that the effect of democratization is weaker than reported previously once one accounts for the incidence of conflict, while the incidence of conflict itself significantly reduces growth. The results show in turn that permanent democratic transitions significantly reduce the incidence and onset of conflict, which suggests that part of the positive growth effect of democratization arises because democratization reduces conflict incidence. When accounting for the role of violence during democratization, we find evidence that peaceful transitions to democracy have a significant positive effect on growth that is even larger than reported in the previous literature, while violent transitions to democracy have no, or even negative, effects on economic growth.

Keywords

Democratization, Armed Conict, Civil War, Economic Growth, Democratization Scenario, Peaceful Transition.

JEL Classification

O43; N10; N40

1 Introduction

The view that democratization brings about economic prosperity and peace finds large support in international politics. This view has often been advocated as rationale for actively supporting democratization in different countries of the world. In spite of the widespread popular and political support of this view, there is relatively little empirical evidence on the relationship between democratization and economic growth. There is even less empirical evidence for the role of conflict in this relationship, and how conflict interacts with democratization in affecting economic performance.

This paper contributes to the literature by presenting the results of an empirical analysis of the effects of democratization and violence, and of the interaction between the two, on economic growth. The analysis is motivated by the ongoing academic debate on the link between violence, democratization and growth. Democratic political institutions are typically thought to reduce or avoid social conflicts by facilitating the peaceful balancing of diverging interests among the different groups of society and by solving commitment problems about redistributive policies.[1] In view of this literature, democratization should reduce conflicts and thereby increase economic growth. It is also well documented that the democratization process itself might be the trigger of political violence. Violent conflicts during the transition to democracy may affect economic growth not only directly, but also indirectly by shaping the features or the institutions of the emerging democracies. In fact, the transitions to democracy have occurred under different scenarios, with peaceful transitions in some, and with transitions accompanied by openly violent social conflicts in other cases. The role of violence during democratization is, however, not obvious *a priori* as is nicely illustrated by Huntington's (1993) extensive discussion of the non-trivial interactions between violence and democratization during what he called the "third wave" of democratization. After arguing that violent democratization may be beneficial by developing a deeper aversion to bloodshed among the population, he concludes that it appears more plausible that consensual, peaceful transitions provide a better basis for the emerging democracies (Huntington, 1993, page 276). Several other authors have argued that the scenario under which democratization takes place, and in particular the level of violence during the democratic transition, may have important implications for the features of the emerging

[1] The role of democratization for the reduction of violence is considered one of the most important issues in political science, see Schwarzmantel (2010) for a recent survey. In economics, democratization has been shown to arise as solution to the commitment problems and revolutionary threats faced by the ruling elites, see, e.g., Acemoglu and Robinson (2001, 2006) and Keefer (2008).

democracies.[2] The view that the mode of the transition to democracy has persistent effects on the features of the emerging democracies is close in spirit to the idea that the democratic transition is a critical juncture in the institutional development of a country.[3] Taken together, these arguments suggest that democratization is expected to lead, on average, to more growth-friendly institutional environments, as well as to a reduction of growth-disrupting conflicts, while the level of violence during the transition might be particularly relevant for the future prospects of the emerging democracies. To the best of our knowledge, however, there exists no systematic empirical investigation of these hypotheses.

This paper provides evidence for the three distinct hypotheses that emerge naturally from the literature and follow the arguments discussed above. The first hypothesis is that violence may play an important role for economic growth, in particular in the context of democratization since the transitions may lead to conflict, but the emergence of democracy may help solving conflicts peacefully within an institutional framework, rather than by violence. Testing this hypothesis essentially implies replicating previous results in the literature while controlling explicitly for the occurrence of violent conflicts since, in line with the arguments discussed above, violent conflicts may be a relevant omitted variable. The analysis builds on the annual data and the difference-in-difference estimation strategy proposed by Papaioannou and Siourounis (2008) as benchmark and extends their specification to the explicit consideration of the incidence of violent social conflicts. The results confirm the finding of a positive average effect of democratization on growth, although controlling for current or past social conflict weakens the effect of democratization by about 15-25% and reduces its statistical significance. The incidence of violent social conflict itself exhibits a strong negative effect on economic growth of more than twice the size of the effect of a permanent democratization, regardless of the specification and sample. Restricting attention to internal conflict for the government rather than any conflict delivers weaker effects of democratization (at the order of 25-45%) and stronger effects of conflict (of around three times that of democratization). The findings suggest that accounting for civil conflicts is important for the estimation of the growth effects of democratization.

[2]The role of different transition scenarios to democracy, and in particular the role of violence, has been discussed mainly in political science. See Lynn (1990), Remmer (1990), Sorensen (1993), Doh (1994), Munck and Leff (1997) and Field (2004), among others.

[3]The importance of critical historical episodes in a country's development process has been recognized in political science for a long time, see Moore (1966). Recent empirical evidence in economics by Acemoglu et al. (2008, 2009) has cast doubts on the so called Aristotle-Lipset Modernization Hypothesis" (Lipset, 1959), according to which causality runs from income (growth) to democracy, and provides indirect evidence for the importance of "critical junctures".

The second hypothesis, which is closely related to the first, states that democratization reduces violent conflicts, with the implication that part of the positive effect of democratization on growth found in the previous literature might be due to the reduction of violence after democratization.[4] The second step of the analysis therefore investigates whether democratization reduces the incidence of violent social conflicts using again a difference-in-difference framework applied to annual data. The findings document that democratization has a significant negative effect on the incidence of a conflict, and on the probability of observing the onset of a conflict, in addition to the most important determinants of conflict found in the literature. Exploiting the heterogenous timing of democratization allows to qualify the available evidence on the weak and often insignificant effect of democracy on social conflicts.[5] Interestingly, the effect of democratization on civil conflicts is stronger when restricting attention to internal conflicts about the control over the government. This suggests that transitions to democracy are more effective in reducing the social struggles about the control of the government (compared to conflicts triggered by, e.g., attempts of secessions or for the control of territories).

The third hypothesis is about the possibility that violence during the democratic transition might play a role for the features of the emerging democracies and economic growth.[6] We test this hypothesis by estimating whether peaceful transitions have the same effect on economic growth as democracies that emerge from a violent conflict. This analysis refines the one from the first step by separately controlling for the effect of violent conflicts and the effect of violent democratization. The results suggest that the transition scenario plays an important role for the effects of democratization for economic growth. For the countries with a peaceful transition to democracy the effect of democratization on growth is positive, significant and quantitatively

[4]The role of democracy for conflict avoidance has received considerable research interest in the political science literature, although the test of this "democratic peace" hypothesis has mainly concerned international, rather than civil, conflicts. For instance, Ward and Gleditsch (1998) showed that democratization is associated with a lower probability of a country being engaged in war, regardless of whether as target or aggressor.

[5]Exceptions are Hegre et al. (2001) and Reynal-Querol (2005) that exploit cross-country variation and find that democracies are significantly less prone to civil wars. The results are also consistent with the findings by Brückner and Ciccone (2007) that adverse (income) shocks are less likely to lead to civil conflicts in democracies.

[6]Acemoglu and Robinson (2001, 2006) model endogenous democratization as a response the threat of conflicts. Other works, including Lizzeri and Persico (2004) and Gradstein (2007), provide efficiency rationales for democratization. These works are not designed for delivering predictions about the role of different transition scenarios, however. Cervellati, Fortunato, and Sunde (2008) provide a theory studying how democratization with and without binding threats of conflicts affect the rule of law in democracies. Cervellati, Fortunato, and Sunde (2011) model the emergence of violence as an equilibrium outcome of a strategic game and study the determinants and consequences of peaceful and violent democratization.

larger than the average (treatment) effect of democratization. The positive effect is, however, substantially lower or negative for the democracies emerging from violent conflicts. The findings indicate that these democracies do not grow significantly faster, or even grow slower, than countries that do not experience a democratization. The differential impact of violent and non violent transitions is largest when restricting attention to conflicts for the control of government. The findings also document that violent democratic transitions play a role which is different from the role of violent conflicts. All the results are robust to several robustness checks including different definitions of violence, different samples and the inclusion of several controls.

The present study complements the recent empirical literature on the relationship between democratization and growth. This literature has tried to overcome two central empirical problems in the estimation of the growth effect of democratization. The first is the conceptualization and measurement of democracy, and the precise identification of timing of democratization. The second concerns the identification of the causal effect of democracy, or democratization, on income growth. Recent empirical works address these empirical issues by exploiting within-country variation in democratization and its timing, by accounting for country and time fixed effects. The most relevant contributions in this line of research include Rodrik and Wacziarg (2005), Persson and Tabellini (2006) and Papaioannou and Siourounis (2008). These studies all find evidence of a significantly positive causal effect of democracy or democratization on economic growth.[7] The empirical analysis performed in this paper complements and extends this line of research by explicitly investigating the role of violent conflicts and the modes of regime transition for the relationship between democratization and growth.[8] The distinction of direct effects of democracy on growth from indirect effects represents an additional complication for the empirical identification of growth effects of democracy and democratization. Most of the recent literature has concentrated on the direct effect of democracy. Tavares and Wacziarg (2001) are exceptional in studying different channels through which democracy affects growth, including war casualties. To our knowledge, no study has investigated this channel by applying a within-country difference-in-difference approach based on annual data. Our study also provides a link of this empirical literature to the literature on the causes of civil conflicts. Recent find-

[7]Previous studies had difficulties in finding a significant causal effect of democracy, see, e.g., La Porta, Lopez-de Silanes, Shleifer, and Vishny (1999), or Cheibub and Vreeland (2011) for a recent survey.

[8]In related work, Persson and Tabellini (2006) argue that democracy, or democratization, may be too blunt a concept to detect effects on subsequent economic growth. While they point at the importance of economic liberalizations and the (constitutional) details of emerging democracies, the argument here is rather that the emergence of democracies should matter for growth but could be heterogenous depending on actual the transition scenario.

ings suggest that income fluctuations and institutions are among the most robust time-varying determinants of civil conflicts, see, e.g., Brückner and Ciccone (2007, 2010). While this literature has mainly used sub-Saharan African countries due to the availability of valid instruments for income fluctuations, our approach looks at the role of institutional change by applying an identification strategy based on panel techniques following Papaioannou and Siourounis (2008) and using a broader sample of countries. Our findings also complement the empirical political science literature on the relation between democracy, democratization and civil war, see, e.g., Gleditsch et al. (2008), Hegre et al. (2001), and Mansfield and Snyder (1995, 2005). While much of this literature has investigated the existence and linearity of an effect of static measures of democracy, or the quality of democracy, on conflict, there is little work on the causal effect of democratization on conflict incidence as presented in this paper, with work by Cederman, Hug, and Krebs (2010) as a notable exception.[9]

The paper is organized as follows. Section 2 introduces estimation strategy and the data. Section 3 presents the results and Section 4 concludes.

2 Empirical Model and Data

2.1 Estimation Strategy and Identification

The analysis adopts the data and the empirical model by Papaioannou and Siourounis (2008) as benchmark. As a first step, we investigate the effect of democratization and violent conflict on growth by estimating the model

$$g_{i,t} = \ln y_{i,t} - \ln y_{i,t-1} = \delta Democ_{i,t} + \zeta Conflict_{i,t} + \alpha_i + \eta_t + X'_{i,t-1}\Gamma + \varepsilon_{it} \,, \qquad (1)$$

where the dependent variable $g_{i,t}$ is the logarithmic growth rate of annual real per capita GDP, y in country i in year t. The estimation includes country and time fixed effects, α_i and η_t, respectively, to account for time-invariant country characteristics and for time trends that are common across countries. The coefficient of primary interest is δ, which captures the effect of democratization on growth, as *Democ* represents a binary variable that takes value 1 in the year of a permanent democratization episode as well as in all years thereafter, and 0 otherwise. Due to

[9] Cederman et al. (2010) are mainly concerned with methodological and data related problems regarding the measurement of democracy, and find a positive effect of democratization on conflict in the period of democratization. However, their analysis is based on a different identification strategy that essentially relies on cross-country variation, whereas our analysis is based on a difference-in-difference design. See also Cederman, Hug, and Wenger (2008) for a review the theoretical political science literature on this point.

the inclusion of country and year fixed effects, δ represents a treatment effect of democratization on the treated countries, in the sense of a difference-in-difference estimator that exploits a democratic transition in the respective countries as treatment (first difference) and compares it to the development in countries that do not experience a democratic transition, i.e., that stay democratic, autocratic or intermediate (second difference).[10] The second coefficient of primary interest is ζ, which estimates the effect of conflict in the respective year and country on growth. For robustness, we also estimate the model controlling for lagged conflict in addition to (or instead of) current conflict. Again, the coefficient has the interpretation of a treatment effect on the treated countries in terms of difference-in-differences. Finally, the vector X includes additional time-varying controls such as lagged growth and income, lagged changes and levels in investment, government consumption, and trade openness.[11] The error term, ε_{it}, is allowed to follow a country-specific autoregressive process. Standard errors account for heteroskedasticity clustered on the country-level.

Identification of causal effects in this context hinges on several critical assumptions. First, for the estimates to be unbiased, the reform variables (democratization and conflict) have to be strictly exogenous. Reverse causality is unlikely in the context of democratization due to results by Acemoglu et al. (2008, 2009) that suggest that the correlation between income and democracy essentially disappears once country and year fixed effects are accounted for, i.e., when exploiting within-country variation for identification. Non-randomness of democratization and different time trends could be another issue affecting identification and leading to biases in both directions, as discussed in detail by Papaioannou and Siourounis (2008). Replicating their analysis with conflict as additional variable is a natural starting point to investigate the robustness of their previous findings. The extensive specification of the estimation equation, including lags of the dependent variable and of the explanatory variables should also help to account for some of these potential confounds.

The second step of the analysis concerns the effects of democratization on conflict. We estimate a model

$$Conflict_{i,t} = \varphi Democ_{i,t-1} + \tilde{\alpha}_i + \tilde{\eta}_t + X'_{i,t-1}\tilde{\Gamma} + u_{it}\,, \tag{2}$$

where the dependent variable is the incidence or onset of a civil conflict in country i in year t. The primary coefficient of interest is φ, which reflects the effect of democratization *Democ* in

[10] The data by Papaioannou and Siourounis (2008) codify democratization events as full or partial democratization, depending on the quality of political institutions. Countries with neither fully democratic nor fully autocratic political institutions are coded as intermediate countries.

[11] The specification essentially follows Papaioannou and Siourounis (2008).

terms of a difference-in-difference effect due to the inclusion of country and year fixed effects. As before, *Democ* represents a binary variable that takes value 1 in the year of a permanent democratization episode as well as in all years thereafter, and 0 otherwise. Concerning the identification of a causal effect of democratization on conflict, similar arguments apply as before. To account for the typical determinants of violent conflicts that have been found relevant in the empirical literature, the vector X includes additional time-varying controls such as lagged growth and income. More extensive specifications also include lagged changes and levels in investment, government consumption, and trade openness. For robustness, we also include lagged conflicts as control variables in some specifications. Time-invariant determinants like natural resource dependence or ethnic polarization are accounted for by the inclusion of country fixed effects $\tilde{\alpha}_i$, while year fixed effects account for global time trends such as the increase in the incidence of civil war after the end of the cold war. This implies that the specification includes the major determinants of civil war and conflict identified in the empirical literature, see, e.g., Fearon and Laitin (2003), Collier and Hoeffler (2004), Montalvo and Reynal-Querol (2005), Blattman and Miguel (2010) and Ciccone (2011). The error term, u_{it}, is allowed to follow a country-specific autoregressive process. Standard errors account for heteroskedasticity clustered on the country-level.

The third step of our analysis estimates the growth effect of democratization while distinguishing between violent and non-violent transitions to democracy. The estimated model is

$$g_{i,t} = \ln y_{i,t} - \ln y_{i,t-1} = \beta D_{i,t} + \gamma V_{i,t} + \alpha_i + \eta_t + \Gamma X'_{i,t-1}(+\zeta Conflict_{i,t}) + \varepsilon_{it} \,, \qquad (3)$$

where again $g_{i,t}$ is the growth rate of annual real per capita GDP, y in country i in year t. The first coefficient of interest in this model is β, the effect of a peaceful democratization, reflected by a binary indicator variable $D_{i,t}$ that takes value 1 in the year of a permanent democratization episode as well as in all years after that. The second coefficient of interest is γ, the effect of a democratic transition that was accompanied by violent conflict, reflected by a binary indicator $V_{i,t}$ that takes value 1 in the year of a permanent democratization episode in which armed conflict was observed, as well as in all years after that. Additional controls include country fixed effects α_i and year fixed effects η_t that account for time-invariant country characteristics and global time trends, respectively, as well as additional time-varying controls captured by X, like lagged growth rates and income levels, current or lagged conflict, investment, government consumption, income and trade openness.

Due to the inclusion of country and time fixed effects, this model also represents a difference-in-difference setting in which coefficient β reflects an average treatment effect of (peaceful) de-

mocratization on growth of the "treated" group of countries relative to control countries that remain undemocratic or remain democratic in a particular year. The distinction of violent transitions to democracy as subgroup of all democratization experiences represents a refinement of the model in terms of an additional difference. In other words, the distinction between all transitions to democracy, D, and the subset of transitions that was associated with violent conflict, V, implies a difference-in-difference-in-difference interpretation of the coefficient γ, since V is essentially capturing the interaction between democratization and conflict in the year of democratization. The null hypothesis is therefore $\gamma = 0$, i.e., that violence during democratization does not represent an element that is relevant from the perspective of the critical junctures hypothesis.

2.2 Data

For estimation, we use the annual cross-country panel data for 174 countries over the period 1960-2005 compiled by Papaioannou and Siourounis (2008). The analysis is based on the binary democratization indicator that is derived from a new coding of available data sources such as the Freedom House and Polity IV Project democracy indices. A detailed chronology of democratization events can be found in their Table 1. The data on GDP per capita and other control variables are from the World Bank's World Development Indicators.[12]

The data set is extended to the consideration of information on civil conflicts provided by the UCDP/PRIO Armed Conflict Dataset version 4 (2010) including data for the period 1946-2009. This data goes back to Gleditsch et al. (2002), and has been updated by Harbom and Wallensteen (2010).[13] We use three different definitions of violent conflict. The least restrictive definition is whether there has been any incident of armed conflict leading to more than 25 battle-related deaths.[14] There are 782 country-year observations (14.5%) with conflict incidence of any type in the data set. An alternative definition confines conflicts to be internal (without intervention from other states) or internationalized internal armed conflicts, disregarding extrasystemic or interstate armed conflicts. A third definition focuses on the reason for the conflict, restricting

[12] See `http://www.res.org.uk/economic/ta/tahome.asp` and the Data Appendix of Papaioannou and Siourounis (2008) for the data and a detailed description. The data also distinguish between full and partial democratization events depending on whether the Polity indicator of the quality of the emerging political institutions exceeds +7 and the Freedom House status is 'free'.

[13] See `http://www.pcr.uu.se/research/UCDP/data_and_publications/datasets.htm` for a detailed data description. The data are restricted to the period 1960-2005 for consistency.

[14] For a detailed discussion of the UCDP/PRIO Definitions of armed conflicts, see `http://www.pcr.uu.se/database/definitions_all.htm`.

attention to conflicts about government (rather than territory). This last definition constitutes a strict subset of internal conflicts. The data contain 432 country-year observations (8%) with internal conflict about the government. In the third part of the analysis, we use the observation of conflict incidence in the year of democratization or in the year before to code the transition scenario as violent.[15] For robustness, we also investigate the role of conflict intensity, defining high intensity as conflicts with more than 1,000 battle-related deaths in a given year. We also use the coding of democratization events provided by the Freedom House (Karatnycky et al., 2005), which documents the demographic transitions of the Third Wave according to the driving forces behind the transition. This data set also includes a classification of the democratization events regarding the level of violence that was involved with the respective transition to democracy. Democratic transitions are classified using an indicator of the level of violence that can take four values: no violence, little violence, significant violence and high violence.[16] We present results using a binary indicator of the observation of significant or high violence compared to no or little violence, or a binary indicator of high violence, respectively. This allows to focus attention on violence that was explicitly related to the transition to democracy, and to examine the robustness of the results with respect to the use of an alternative data source.

3 Results

3.1 Democratization, Violence, and Growth

The first step of the analysis is to investigate the implications of explicitly controlling for the occurrence of violent conflicts when gauging the causal effects of democratization on income growth. Table 1 presents the estimation results of the empirical model (1). Panel A presents results for the baseline specification including income controls (in terms of lagged growth and lagged income levels) for three different samples considered by Papaioannou and Siourounis (2008).[17] Panel B presents results for an extended specification that, in addition to lagged

[15] The share of violent democratization on the total in the sample varies from around 10 % for the more restrictive definition to about 20 % for the broadest one.

[16] According to the Freedom House classification, about 40 % of the countries in the data set experience democratic transitions with at least significant violence, and about 17 % of the countries observed democratic transitions with the highest level of violence.

[17] The sample "20 obs." keeps only countries with at least 20 time-series observations for the dependent variable to minimize the bias due to the joint presence of country-fixed effects and the lagged dependent variable. The sample "20 obs.; no socialist" drops former socialist countries, for which pre-transitional data quality might be questionable.

growth and income levels, includes current and lagged values of investment, life expectancy, government spending and trade share as additional controls. The first columns in each block of the panels replicate the results from Papaioannou and Siourounis (2008).[18]

In the full sample, democratization has a positive effect on growth of around 1-1.2 % per year. The other columns present estimation results when conflicts in terms of the incidence of any conflict, any internal conflict, or any internal conflict about the government, respectively, are added as additional control. Throughout all specifications, two main results emerge. First, the incidence of conflict exerts a significant negative effect on growth. Not surprisingly, countries in which violent conflicts are happening are not growing as fast as countries without conflicts. This effect is sizable, and is about two to three times larger than the effect of democratization. Second, the effect of democratization becomes somewhat smaller when conflicts are accounted for in the estimation. The size of the effect falls by 15-25 % compared to the benchmark specifications without conflict controls. The growth effect of democratization is weakest, and in some cases even insignificant, when controlling for the incidence of internal conflicts about the government. Likewise, internal conflicts about the government appear to have the strongest negative effect on growth in all specifications, compared to the alternative conflict definitions, of around -3%. These findings are robust to the inclusion of additional controls and are also similar across the different samples.

As a robustness check, we also replicated the analysis for different degrees of democratization (full, partial and borderline democratization, as well as reverse transitions). Table 2 contains the respective results for distinguishing full from partial democratization events (Panel A), and for distinguishing all sorts of democratization events (Panel B). The results confirm the finding that democratization has a positive effect on growth. In particular, the results suggest that full democratization events exert a positive growth effect, whereas partial democratization have no or little effect on growth. The results in Panel B also indicate that reverse transitions from democracy to non-democratic rule have a negative effect on growth. More importantly, we find, throughout all specifications, that the incidence of conflict, or the incidence of internal conflict for government, exhibit significantly negative effects on growth, conditional on the democratization

[18]The specifications in Columns (1), (5) and (9) of Panel A of Table 1 replicate those in Table 2 Columns (4), (6) and (8) in Papaioannou and Siourounis (2008), respectively; the specification in Columns (9) of Panel B replicates the specification in Table 3 Column (6) of Papaioannou and Siourounis (2008). The specification of the models in panel B corresponds to the most extensive specification of Papaioannou and Siourounis (2008). The results are qualitative similar for specifications that only include some of these controls and are available upon request.

event. As before, inclusion of conflict incidence as control variable reduces the effect of the democratization event by about one fourth.

The results suggest that conflict incidence exerts a significant negative effect on economic growth, while controlling for conflict reduces the effect of democratization. To interpret these results recall that, according to the arguments discussed above, part of the positive effect of democratization on growth may work precisely through a reduction in the incidence of civil conflicts. Furthermore, it may be the case that the average effect of democratization hides relevant heterogeneity between peaceful and violent regime changes. We investigate these two hypotheses in turn in the following subsections.

3.2 The effect of Democratization on Conflicts

Table 3 presents the estimation results of the model (2). The dependent variable in Panel A is conflict incidence according to the different definitions. The estimation results correspond to a specification with country and year fixed effects and controls for lagged growth (up to two lags) and lagged income levels (up to three years) across the full sample and the restricted sample. The samples and specifications are identical to the corresponding estimates in Table 1 for direct comparability. Panel B displays the estimation results for the same specification, but using conflict onset rather than incidence for the different definitions of conflict, as dependent variable.

The results for Panel A show that, as one should expect, countries that experienced a conflict in the past year are more likely to have an incidence of conflict in the current year throughout all conflict definitions. More interesting is the finding that democratization has a negative effect on conflict incidence throughout but this effect is only significant when considering the incidence of internal conflict about the government as dependent variable. Compared to an unconditional probability of conflict incidence of this type of 14 %, the effect is large since it corresponds to a reduction in conflict incidence of 3 to 6 percentage points, or 20 to 40 %. Part of the effect of democratization on the reduction of internal conflict is likely explained by the fact that some democratic transitions effectively coincide with the end of civil conflict about the government. This is unlikely to be full story, however, since the results also document a reduction in the onset of future civil conflicts, as discussed next.

An alternative measure for the occurrence of conflict is the onset of a conflict. Since social conflict might potentially last for several years investigating whether democratization reduces conflict onsets might even be a more relevant measure than conflict incidence. The results

in Panel B display the corresponding estimation results. These results show a negative effect of past conflict on conflict onset, which is to be expected given the coding of conflicts.[19] More interestingly, democratization exhibits a significant negative effect on the propensity of observing the onset of a new conflict in a country. Again, the effect is strongest when considering internal conflicts for government. The results suggest that democratization is particularly effective in reducing the incidence and onset of conflicts aimed at controlling the government. The results in Table 1 document that these conflicts have the largest negative effects on income growth.

3.3 Democratization and Growth: Violent Transitions as Critical Junctures

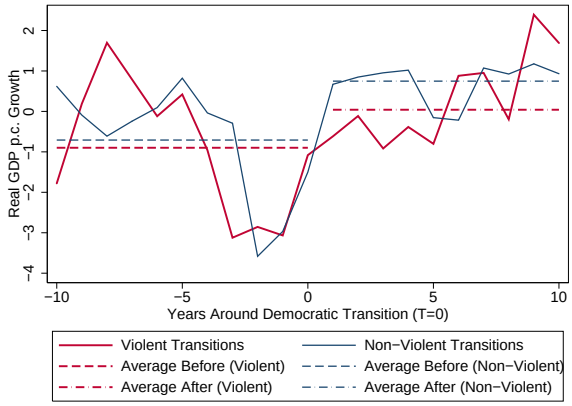
Taken together, these results so far suggest that part of the growth effect of democratization might be driven by the fact that democracies reduce the risk of conflict for government, which itself has been found to have detrimental effects on economic growth. The results do not account for the role of different transition scenario, however. In light of arguments presented in the literature, the moment of democratization is a critical juncture for the emergence of the new institutions and the modes of democratization and, in particular, the level of violence during the transition may key for the prospects of the emerging democracy.

A first indication that this might indeed be the case follows from Figure 1. The figure plots the average yearly growth rate of real GDP per capita in a 20-year window around democratization. The growth rates are demeaned across countries, which effectively eliminates common time trends across countries. Compared to the average across all countries, growth is slightly slower before the democratization, slows down during the democratic transition, and increases to a higher growth rate after democratization. There appears to be a difference in this pattern between countries that exhibit a violent transition to democracy and countries with a peaceful transition experience. Before democratization, both groups of countries have similar growth rates on average. After democratization, countries with a peaceful transition have higher average growth rates than countries with a violent transition. The Figure is purely suggestive, however, since except for common time trends, the plots do not control for any other observable differences across the two groups of countries, including contemporaneous conflicts and differences in past economic performance.

In order to test the hypothesis of democratization as a critical juncture and account for

[19]The onset of a conflict refers to the beginning of a conflict for a particular purpose among specific interest groups in a country. A country can experience the onset of a new conflict in a given year even if there was a conflict incidence in the past year if these conflicts are different in terms of purpose or the groups involved. See also Harbom and Wallensteen (2010).

Figure 1: Violence and Growth Around the Period of a Permanent Democratic Transition



The figure plots the evolution of time-demeaned levels of growth in real GDP per capita (growth rate in real GDP per capita in a country minus the average level of growth for that year) in the ten years before and after a permanent democratic transition. See Section 2 for details on the data sources and definitions.

potential heterogeneity across the two groups of countries, we investigate the role of violence during democratization by estimating the empirical model specified in (3). Table 4 presents the respective estimation results. The different panels reflect different samples. Panel A includes results for the effects of democratization on growth based on the full sample. Panel B presents estimates that are based on all countries excluding those with less than 20 observations of the dependent variable to minimize the bias due to the joint presence of country-fixed effects and the lagged dependent variable. Panel C presents estimates based on a sample that also excludes former socialist countries. The results in columns (1) and (2) present the estimation results for the specification with only lagged income and growth controls, and for a more extensive specification that includes investment, life expectancy, government spending and trade share as additional controls, respectively.[20]

Accounting for violence during the transition as opposed to peaceful transitions in the remaining columns reveals an even higher treatment effect of democratization in the absence of violence, but a significant negative effect of violent transitions. The average effect of democratization documented in Table 1 does not discriminate between peaceful and violent democratization. The results in Table 4 essentially decompose this average effect by explicitly accounting for the different different transition scenarios. This becomes clear by observing that that the

[20]The coefficient estimates in these two columns again represent the "unconditional" and "conditional" effects of democratization in the terminology of the study by Papaioannou and Siourounis (2008). The results in Columns (1) of Panels (B) and (C) replicate their results in Table 2 columns (6) and (8), respectively, while the result in Column (2) of Panel C replicates those in Table 3 column (6).

specification in column (2) of Panel A in Table 4 is identical to specification in column (1) of Panel B in Table 1. The specifications in columns (3) and (5) of Panel A in Table 4 present results for the same specification with the only difference of allowing for a differential effect of peaceful and violent democratization. The result in column (5) suggests that the average effect of 1.2 % results from a (larger) positive effect of 1.54 % for peaceful transitions to democracy as well as a negative effect of -1.85 for violent transitions. This implies a net negative effect on growth of violent transitions of about -0.3 %. When restricting to conflict for government, the results imply even more pronounced differences in the growth effect of democratization. While peaceful transitions accelerate growth by around 1.4 %, the (net) effect of violent transitions is similar in magnitude but opposite in sign (1.38 - 2.8). This discussion also suggests that the positive average effect of democratization emerges since there are fewer violent transitions than peaceful transitions in the sample. It is also worth noting that the effect of violent transitions appear different from the effect of violence *per se*. As a matter of fact, the point estimates of the effect of violent conflicts is barely affected by the explicit consideration of the transition scenario. The results in column (2) Panel B of Table 1 show an average effect of democratization of about 1 %, as well as a negative effect of civil conflict of -1.73 %. The corresponding specification that accounts for the transition mode is reported in column (6) Panel A of Table 4. The negative direct effect of conflict is essentially the same with -1.75 %. Similar results emerge when restricting attention to conflicts for governments and for different different sub-samples.

The analysis of the different specifications and samples confirm a differential role of violent and peaceful transitions. A peaceful transition accelerates growth in the range of 1.2-1.5 % per year, while a violent transition reduces this effect by 1.5-2 % per year in the full sample when all conflicts are considered (columns (3)-(6)). This means that countries that experience incidences of conflict during democratization do not grow faster than the control countries. The result is essentially unchanged when controlling for armed conflict in a given year or in one of the two years before (columns (4) and (6)). When restricting violent transitions to internal conflicts that concern the government as opposed to territory during the democratization, the detrimental growth effect of violent transitions (and of conflict per se) becomes even larger. We find that, compared to peaceful democratization experiences with positive growth effects of 1-1.3 %, a violent transition reduces growth by 2-3.8 %. This means that countries that democratize under civil war, i.e., conflicts for government, actually grow less than the control group of countries that do not democratize (or that remain democracies).[21]

[21]The null of no growth effect can be rejected at the 5% level.

The results are qualitatively and quantitatively unchanged when restricting attention to the sample with more reliable information on the dependent variable or excluding socialist countries: democratization has a significant positive effect on growth if the transition occurs in the absence of conflict. If the transition is accompanied by violence, the effect is negative and growth in these countries is not faster than in control countries, or is slower. These results are robust to including higher order lags for conflicts as additional controls as reported in Table 5.

The differential average affect of democratization that emerges from Figure 1 is therefore consistently confirmed by the regression analysis. The figure suggests that countries democratizing violently suffer from larger reduction in growth rates in the five years after the transition. Nonetheless the average difference in growth is persistent and appears significant even over a the ten years horizon after democratization. The regression analysis confirms that the differential effect of democratization is persistent and robust to the explicit consideration of several controls. To interpret these findings, recall that the sample is restricted to permanent democratic transitions. If violent transition are less likely to consolidate and stabilize into permanent democracies then the episodes of violent movements towards democracy would be under-represented in the sample. If this is the case then the estimated impact of violence during democratization is very likely a conservative estimate of the differential negative effect of violence.

Additional results show that the detrimental effect of violent transitions to democracy is even larger when restricting attention to conflicts with high intensity (more than 1,000 battle-related casualties). In particular, for instance, Columns (1)-(4) of Table 6 show that when restricting attention to armed conflict with high intensity only, the any conflict slows down growth by 2-3 percentage points. Violent transitions involving a high intensity conflict have an even more negative growth effect than any conflict. When distinguishing high and intermediate intensity conflicts (where intermediate intensity includes conflicts with at least 25, but not more than 1,000 battle-related casualties), a similar picture emerges. While democratic transitions with intermediate conflicts involve no growth effects compared to the control group (since the coefficient estimates of democratization and violent democratization are almost identical in size), we find that democratic transitions that involve a high intensity of conflict have a significant negative effect on growth. Also the direct effect of conflict on growth is more negative the higher the intensity of conflict.

The PRIO Data on civil conflicts do not confine specific attention to violent struggles for democratization. The results so far have been based on a classification of regime transition that corresponds to an interaction effect between democratization and a violent conflict in the year

of democratization irrespective of whether the violent struggles is the result of a popular upraise and attempts repressing it. Moreover, the conflict measure is based on the number of battle-related deaths exceeding a conventional threshold. An alternative classification of violent regime transition is available from Freedom House (Karatnycky et al., 2005), which documents the democratic transitions of the Third Wave according to the driving forces behind the transition and the level of violence that was involved in the democratization event. The coding classifies democratic transitions according to an indicator of the level of violence that can take four values: no violence, little violence, significant violence and high violence. Using these alternative data therefore allows to test the robustness of the previous results to a definition of conflicts that is specifically related to democratization and uses different thresholds for violence. In order to classify countries with a binary indicator to obtain comparable results, we code democratic transitions to be violent if the level of violence during the transition was significant or high violence, or alternatively, only if the level of violence was high. As additional control, we add the incidence of civil conflict in some columns.

Table 7 presents the corresponding results. The results confirm the earlier findings. In particular, they document a significant difference in growth effects of peaceful and violent democratization events, with peaceful transitions to democracy exhibiting a significant positive growth effect, whereas violent transitions have no or even a negative effect on growth.[22] The results presented in Tables 4 and 7 confirm the previous finding on the important role of the democratization scenario for the economic performance of the emerging democracy. Violence during the transition is found to be crucial for the growth prospects of emerging democracies.

4 Conclusions

This paper has provided novel evidence on the interactions between violence, democratization and economic performance based on data from the third wave of democratization. In particular, the results confirm the existence of a positive average treatment effect of democratization on growth, but they also suggest that violent conflicts, and in particular conflicts for the control of the government, have a first order negative effect on economic growth. The effect of

[22]Recall that, as before, the coefficient on violent democratization reflects an interaction effect that corresponds to the additional growth effect of violent democratization compared to peaceful democratization. The fact that the coefficient is negative and of about the same magnitude as the democratization coefficient signifies that there is no growth effect in violent transitions, since the positive effect of democratization is canceled out by the occurrence of violence. In some cases, the negative effect of violent transitions is even larger in magnitude than the effect of democratization, which indicates an overall negative effect on growth.

democratization appears smaller in magnitude than reported in the literature once conflicts are controlled for in the empirical specification, potentially because democratization accelerates growth partly through reducing the likelihood of violence. Finally, and in line with the view that the moment of democratization represents a critical juncture of institutional development, the empirical findings show that the scenario under which the democratization takes place has important implications for the growth effects of democratization. This implies that not only the democratic transition may matter for growth, but that also the mode of this transition may have important implications for the economic performance of the emerging democracies.

The results complement and qualify findings in the recent empirical literature that point at a positive average effect of democratization on growth. In particular, the results indicate that the growth effect of democratization may actually be even larger that what previously thought, but only if the transition to democracy is not accompanied by excessive violence. The evidence presented in this paper, despite being based on data from the third wave of democratization, might be insightful not only in an historical perspective, but might be also relevant in light of the current democratization experiences in Northern African and Arabian countries, where the scenarios of regime change and, in particular, the violence associated with the transition to democracy, differ substantially across countries. Taking the evidence from the third wave seriously, one may expect different future prospects for the emerging democracies in the region.

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Table 1: **Permanent Democratization, Conflict, and Growth**

Panel A: Baseline Specification

Sample	Full				20 obs.				20 obs.; no socialist			
Type of Armed Conflict:		All	Internal	Government		All	Internal	Government		All	Internal	Government
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democratization	1.441***	1.247**	1.181**	1.083**	1.157***	0.891**	0.833**	0.724	0.959***	0.753**	0.704**	0.533
	[0.006]	[0.015]	[0.022]	[0.044]	[0.006]	[0.029]	[0.048]	[0.103]	[0.002]	[0.019]	[0.037]	[0.131]
Armed Conflict		-2.247***	-2.572***	-3.135***		-2.231***	-2.398***	-3.119***		-1.967***	-2.163***	-3.154***
		[0.001]	[0.001]	[0.001]		[0.001]	[0.001]	[0.001]		[0.001]	[0.002]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5410	5410	5410	5410	4772	4772	4772	4772	4555	4555	4555	4555
R-squared	0.169	0.177	0.18	0.18	0.25	0.259	0.261	0.262	0.23	0.237	0.239	0.243

Panel B: Extended Specification (Additional Controls)

Sample	Full				20 obs.				20 obs.; no socialist			
Type of Armed Conflict:		All	Internal	Government		All	Internal	Government		All	Internal	Government
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democratization	1.205**	0.995**	0.967**	0.947**	1.139**	0.943**	0.927**	0.873*	0.833**	0.698**	0.680*	0.583
	[0.011]	[0.031]	[0.036]	[0.041]	[0.014]	[0.034]	[0.038]	[0.056]	[0.019]	[0.050]	[0.057]	[0.103]
Armed Conflict		-1.729***	-1.806***	-2.082***		-1.505***	-1.527***	-1.981***		-1.176***	-1.236***	-1.920***
		[0.001]	[0.001]	[0.001]		[0.001]	[0.001]	[0.001]		[0.001]	[0.001]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4689	4689	4689	4689	4369	4369	4369	4369	4183	4183	4183	4183
R-squared	0.236	0.242	0.243	0.242	0.214	0.220	0.220	0.220	0.203	0.207	0.207	0.210

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. The sample in columns (1)-(4) includes all countries; the sample in columns (5)-(8) only keeps countries with at least 20 observations for the dependent variable; the sample in columns (9)-(12) only keeps countries with at least 20 observations for the dependent variable, excluding socialist countries; see also Papaioannou and Siourounis (2008) for details. Income controls in Panel A include lagged growth (1 and 2 lags), three-year lagged income level, and region-specific time trends; income controls in Panel B include lagged growth, two-year lagged income level, and region-specific time trends. The specifications in Panel B also include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share. The specifications in Columns (1)-(4), (5)-(8) and (9)-(12) of Panel A replicate those in Table 2 Columns (4), (6) and (8) in Papaioannou and Siourounis (2008), respectively; the specification in Columns (9)-(12) of Panel B replicate those in Table 3 Column (6) in Papaioannou and Siourounis (2008).

Table 2: **Permanent Democratization, Conflict, and Growth**

Panel A: Baseline Specification

Sample	Full						20 obs.					
Type of Armed Conflict:		All	Government		All	Government		All	Government		All	Government
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Full Democratization	0.900**	0.745*	0.65	0.999**	0.870*	0.862*	1.010**	0.858**	0.743*	1.042**	0.930**	0.901**
	[0.044]	[0.096]	[0.147]	[0.038]	[0.067]	[0.067]	[0.020]	[0.047]	[0.090]	[0.021]	[0.038]	[0.042]
Partial Democratization	1.357*	0.906	0.665	1.562*	1.215	1.099	1.470*	0.963	0.683	1.322	0.966	0.819
	[0.080]	[0.248]	[0.434]	[0.092]	[0.184]	[0.246]	[0.082]	[0.254]	[0.467]	[0.159]	[0.286]	[0.394]
Armed Conflict		-2.327***	-3.084***		-1.719***	-2.069***		-2.227***	-3.122***		-1.503***	-1.986***
		[0.001]	[0.001]		[0.001]	[0.001]		[0.001]	[0.002]		[0.001]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Observations	5144	5144	5144	4689	4689	4689	4772	4772	4772	4369	4369	4369
R-squared	0.289	0.298	0.3	0.334	0.34	0.339	0.25	0.259	0.262	0.308	0.313	0.313

Panel B: Extended Specification (Additional Controls)

Sample	Full						20 obs.					
Type of Armed Conflict:	All	Internal	Government	All	Internal	Government	All	Internal	Government	All	Internal	Government
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Full Democratization	0.911**	0.758*	0.671	0.984**	0.858*	0.856*	1.026**	0.876**	0.769*	1.032**	0.923**	0.899**
	[0.043]	[0.091]	[0.137]	[0.0412]	[0.0723]	[0.0703]	[0.0185]	[0.0430]	[0.0810]	[0.023]	[0.041]	[0.044]
Partial Democratization	1.374*	0.927	0.694	1.538*	1.196	1.086	1.500*	0.996	0.724	1.305	0.954	0.812
	[0.078]	[0.239]	[0.416]	[0.0980]	[0.192]	[0.253]	[0.0777]	[0.240]	[0.442]	[0.166]	[0.294]	[0.399]
Borderline Democratization	0.511	0.61	1.147	-0.131	-0.029	0.322	0.672	0.754	1.303	-0.007	0.075	0.425
	[0.568]	[0.592]	[0.334]	[0.815]	[0.967]	[0.664]	[0.443]	[0.495]	[0.267]	[0.989]	[0.907]	[0.539]
Reverse Transition	-0.528	-0.558	-0.894*	-1.308***	-1.303***	-1.535***	-0.386	-0.423	-0.768	-1.109**	-1.106**	-1.322**
	[0.285]	[0.265]	[0.0539]	[0.002]	[0.003]	[0.001]	[0.456]	[0.422]	[0.113]	[0.039]	[0.046]	[0.014]
Armed Conflict		-2.331***	-3.141***		-1.719***	-2.106***		-2.231***	-3.188***		-1.505***	-2.026***
		[0.001]	[0.001]		[0.001]	[0.001]		[0.001]	[0.001]		[0.001]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Observations	5144	5144	5144	4689	4689	4689	4772	4772	4772	4369	4369	4369
R-squared	0.289	0.298	0.3	0.334	0.34	0.34	0.25	0.259	0.263	0.308	0.313	0.314

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. Full Democratization, Partial Democratization, Borderline Democratization and Reverse Transition are binary indicators that take value one in the year and all subsequent years in countries that experience the corresponding transition, see Table 1 of Papaioannou and Siourounis (2008) for details of the classification. The sample in columns (1)-(6) includes all countries; the sample in columns (7)-(12) only keeps countries with at least 20 observations for the dependent variable; see also Papaioannou and Siourounis (2008) for details. Income controls include lagged growth (1 and 2 lags), three-year lagged income level, and region-specific time trends; Other controls also include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share.

Table 3: **Permanent Democratization and Conflict**

Dependent Variable	**Panel A: Incidence of Conflict**											
Sample	Full						20 obs.					
Type of Armed Conflict:	All		Internal		Government		All		Internal		Government	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democratization	-0.035		-0.046*		-0.059***		-0.037		-0.041		-0.059***	
	[0.129]		[0.057]		[0.002]		[0.154]		[0.137]		[0.008]	
Democratization (Lag)		-0.035		-0.034		-0.050***		-0.033		-0.027		-0.043**
		[0.120]		[0.145]		[0.006]		[0.198]		[0.293]		[0.031]
Armed Conflict (Lag)	0.585***	0.588***	0.560***	0.563***	0.528***	0.531***	0.603***	0.606***	0.582***	0.586***	0.541***	0.546***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5288	5250	5288	5250	5288	5250	4369	4348	4369	4348	4369	4348
R-squared	0.669	0.67	0.637	0.638	0.573	0.575	0.687	0.657	0.595	0.688	0.658	0.597
Dependent Variable	**Panel B: Onset of Conflict**											
Sample	Full						20 obs.					
Type of Armed Conflict:	All		Internal		Government		All		Internal		Government	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Democratization	-0.028*		-0.022*		-0.029***		-0.031**		-0.022		-0.033***	
	[0.067]		[0.086]		[0.001]		[0.050]		[0.113]		[0.001]	
Democratization (Lag)		-0.034**		-0.025*		-0.032***		-0.033**		-0.02		-0.028***
		[0.017]		[0.056]		[0.001]		[0.038]		[0.169]		[0.004]
Armed Conflict (Lag)	-0.089***	-0.088***	-0.072***	-0.071***	-0.078***	-0.079***	-0.089***	-0.089***	-0.068***	-0.068***	-0.077***	-0.076***
	[0.0017]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4948	4913	4948	4913	4948	4913	4105	4086	4105	4086	4105	4086
R-squared	0.119	0.119	0.097	0.096	0.066	0.067	0.119	0.124	0.096	0.099	0.067	0.066

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. The sample in columns (1)-(6) includes all countries; the sample in columns (7)-(12) only keeps countries with at least 20 observations for economic growth consistent with the sample in columns (5)-(8) of Table 1 and Papaioannou and Siourounis (2008). Income controls include lagged growth and two-year lagged income level.

Table 4: **Violent Democratization and Growth**

Panel A: Full Sample

Type of Armed Conflict:			All				Internal Conflict for Government			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	1.060**	1.205**	1.367***	1.120**	1.541***	1.351**	1.223***	0.895**	1.383***	1.158**
	[0.012]	[0.012]	[0.004]	[0.014]	[0.006]	[0.012]	[0.005]	[0.034]	[0.006]	[0.014]
Violent Democratization			-1.543**	-1.607*	-1.851**	-1.975*	-1.981*	-3.130**	-2.798*	-3.611*
			[0.026]	[0.053]	[0.045]	[0.054]	[0.063]	[0.028]	[0.096]	[0.063]
Armed Conflict				-2.339***		-1.750***		-3.221***		-2.229***
				[0.001]		[0.001]		[0.001]		[0.001]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	5144	4689	5144	5144	4689	4689	5144	5144	4689	4689
R-squared	0.190	0.236	0.289	0.298	0.335	0.341	0.289	0.301	0.335	0.341

Panel B: All Countries with at least 20 obs.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	1.157***	1.139**	1.493***	1.242***	1.477***	1.304**	1.338***	0.976**	1.331***	1.094**
	[0.006]	[0.016]	[0.002]	[0.007]	[0.008]	[0.013]	[0.003]	[0.025]	[0.006]	[0.0183]
Violent Democratization			-1.698**	-1.786**	-1.845**	-1.990**	-2.482**	-3.806***	-3.345**	-4.316**
			[0.015]	[0.031]	[0.036]	[0.043]	[0.011]	[0.006]	[0.035]	[0.018]
Armed Conflict				-2.242***		-1.533***		-3.295***		-2.183***
				[0.001]		[0.001]		[0.001]		[0.001]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	4772	4369	4772	4772	4369	4369	4772	4772	4369	4369
R-squared	0.25	0.214	0.251	0.26	0.309	0.314	0.251	0.264	0.309	0.316

Panel C: All Countries with at least 20 obs.; no socialist countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	0.959***	0.833**	1.224***	1.042***	1.076***	0.968**	1.091***	0.742**	1.011***	0.798**
	[0.002]	[0.021]	[0.001]	[0.003]	[0.008]	[[0.015]	[0.001]	[0.022]	[0.005]	[0.020]
Violent Democratization			-1.200**	-1.314*	-1.197*	-1.34	-2.049**	-3.592**	-2.783**	-3.727**
			[0.0337]	[0.059]	[0.098]	[0.101]	[0.028]	[0.015]	[0.047]	[0.023]
Armed Conflict				-1.979***		-1.200***		-3.315***		-2.097***
				[0.001]		[0.002]		[0.002]		[0.001]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	4555	4183	4555	4555	4183	4183	4555	4555	4183	4183
R-squared	0.23	0.203	0.23	0.238	0.297	0.3	0.23	0.245	0.298	0.305

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. The samples include all countries (panel A), all countries excluding those with less than 20 observations for the dependent variable to minimize the bias arising from the joint presence of country-fixed effects and the lagged dependent variable (panel B), and all countries excluding those with less than 20 observations or socialist countries (panel C); see Papaioannou and Siourounis (2008) for details. All specifications include country and year fixed effects, as well as lagged growth, two-year lagged income level and region-specific time trends. Specifications with no "other controls" include growth lagged by one and two periods and three-year lagged income levels. Other controls include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share. Column 1 Panel B corresponds to Table 2 Column (6) in Papaioannou and Siourounis (2008); Column 1 Panel C corresponds to Table 2 Column (8) in Papaioannou and Siourounis (2008); Column 2 Panel C corresponds to Table 3 Column (6) in Papaioannou and Siourounis (2008).

Table 5: **Violent Democratization and Growth Robustness: Additional Conflict Controls**

Panel A: Full Sample

Type of Armed Conflict:			All				Internal Conflict for Government			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	1.060**	1.205**	1.367***	1.186***	1.541***	1.408***	1.223***	0.943**	1.383***	1.214**
	[0.012]	[0.012]	[0.004]	[0.009]	[0.006]	[0.010]	[0.005]	[0.023]	[0.006]	[0.010]
Violent Democratization			-1.543**	-1.656**	-1.851**	-2.000**	-1.981*	-3.105**	-2.798*	-3.564*
			[0.026]	[0.0404]	[0.045]	[0.048]	[0.063]	[0.027]	[0.096]	[0.064]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conflict Controls	No	No	No	Yes	No	Yes	No	Yes	No	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	5144	4689	5144	5144	4689	4689	5144	5144	4689	4689
R-squared	0.289	0.334	0.289	0.299	0.335	0.341	0.289	0.302	0.335	0.342

Panel B: All Countries with at least 20 obs.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	1.157***	1.139**	1.493***	1.315***	1.477***	1.374***	1.338***	1.023**	1.331***	1.145**
	[0.006]	[0.016]	[0.002]	[0.004]	[0.008]	[0.01]	[0.003]	[0.016]	[0.006]	[0.013]
Violent Democratization			-1.698**	-1.861**	-1.845**	-2.028**	-2.482**	-3.795***	-3.345**	-4.290**
			[0.015]	[0.019]	[0.036]	[0.034]	[0.011]	[0.005]	[0.035]	[0.018]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conflict Controls	No	No	No	Yes	No	Yes	No	Yes	No	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	4772	4369	4772	4772	4369	4369	4772	4772	4369	4369
R-squared	0.25	0.308	0.251	0.261	0.309	0.315	0.251	0.266	0.309	0.317

Panel C: All Countries with at least 20 obs.; no socialist countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Democratization	0.959***	0.833**	1.224***	1.106***	1.076***	1.033**	1.091***	0.800**	1.011***	0.862**
	[0.002]	[0.021]	[0.001]	[0.001]	[0.008]	[0.011]	[0.001]	[0.011]	[0.005]	[0.013]
Violent Democratization			-1.200**	-1.385**	-1.197*	-1.370*	-2.049**	-3.546**	-2.783**	-3.666**
			[0.0337]	[0.037]	[0.098]	[0.082]	[0.028]	[0.014]	[0.047]	[0.023]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conflict Controls	No	No	No	Yes	No	Yes	No	Yes	No	Yes
Other Controls	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
Observations	4555	4183	4555	4555	4183	4183	4555	4555	4183	4183
R-squared	0.23	0.297	0.23	0.239	0.297	0.302	0.23	0.247	0.298	0.306

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. The samples include all countries (panel A), all countries excluding those with less than 20 observations for the dependent variable to minimize the bias arising from the joint presence of country-fixed effects and the lagged dependent variable (panel B), and all countries excluding those with less than 20 observations or socialist countries (panel C); see Papaioannou and Siourounis (2008) for details. All specifications include country and year fixed effects, as well as lagged growth, two-year lagged income level and region-specific time trends. Specifications with no "other controls" include growth lagged by one and two periods and three-year lagged income levels. Conflict controls include indicators for current, lagged and twice lagged conflict of the respective type. Other controls include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share. Column 1 Panel B corresponds to Table 2 Column (6) in Papaioannou and Siourounis (2008); Column 1 Panel C corresponds to Table 2 Column (8) in Papaioannou and Siourounis (2008); Column 2 Panel C corresponds to Table 3 Column (6) in Papaioannou and Siourounis (2008).

Table 6: **Violent Democratization and Growth: Different Levels of Violence**

Type of Armed Conflict	Any Incidence of Conflict							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democratization	1.236***	1.195**	1.025**	1.042**	1.495***	1.449***	1.210***	1.273**
	[0.005]	[0.014]	[0.022]	[0.032]	[0.002]	[0.00696]	[0.009]	[0.013]
Violent Democratization	-2.535**	-1.818	-2.613**	-1.877	-2.896***	-2.241*	-2.556***	-2.052*
(high intensity)	[0.0208]	[0.169]	[0.019]	[0.159]	[0.004]	[0.0562]	[0.008]	[0.068]
Armed Conflict			-3.191***	-2.084***			-3.943***	-2.671***
(high intensity)			[0.001]	[0.001]			[0.001]	[0.001]
Violent Democratization					-1.491*	-1.817*	-1.938**	-2.189*
(low intensity)					[0.053]	[0.0969]	[0.046]	[0.060]
Armed Conflict							-1.618***	-1.146**
(low intensity)							[0.001]	[0.013]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	4772	4369	4772	4369	4772	4369	4772	4369
R-squared	0.251	0.215	0.259	0.219	0.251	0.216	0.264	0.223

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. Sample is all countries with at least 20 observations for dependent variable; see Papaioannou and Siourounis (2008) for details. All specifications include country and year fixed effects, as well as lagged growth, two-year lagged income level and region-specific time trends. Specifications with no "other controls" include growth lagged by one and two periods and three-year lagged income levels. Other controls include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share.

Table 7: **Violent Democratization and Growth: Freedom House Data on Scenario**

	Panel A: Full Sample							
Violence at Transition:	Significant/High				High			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democratization	1.602***	1.606**	1.486***	1.504**	1.329***	1.535***	1.132***	1.369***
	[0.005]	[0.012]	[0.006]	[0.013]	[0.003]	[0.004]	[0.007]	[0.007]
Violent Democratization	-1.249*	-0.934	-1.597**	-1.199	-1.459**	-1.856**	-1.819**	-2.141**
	[0.052]	[0.214]	[0.016]	[0.114]	[0.042]	[0.048]	[0.025]	[0.031]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conflict Controls	No	No	Yes	Yes	No	No	Yes	Yes
Other Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	5144	4689	5144	4689	5144	4689	5144	4689
R-squared	0.191	0.236	0.202	0.243	0.191	0.237	0.202	0.244
	Panel B: All Countries with at least 20 obs.							
Violence at Transition:	Significant/High				High			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democratization	1.774***	1.747**	1.658***	1.650**	1.498***	1.498***	1.294***	1.343***
	[0.005]	[0.012]	[0.005]	[0.012]	[0.002]	[0.006]	[0.004]	[0.009]
Violent Democratization	-1.385**	-1.388*	-1.742**	-1.635**	-1.794***	-1.924**	-2.165***	-2.183**
	[0.038]	[0.058]	[0.012]	[0.029]	[0.005]	[0.028]	[0.003]	[0.018]
Lagged Growth and Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Conflict Controls	No	No	Yes	Yes	No	No	Yes	Yes
Other Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	4772	4369	4772	4369	4772	4369	4772	4369
R-squared	0.157	0.216	0.167	0.221	0.157	0.216	0.167	0.222

Notes: p-values based on robust standard errors that allow for country-specific first-order serial correlation and heteroskedasticity in brackets. *, **, *** denote significance at the 10-, 5-, 1-Percent level, respectively. Violence during the transition reflects a binary variable reflecting the violence according to Freedom House (Karatnycky et al., 2005), which codes democratic transitions according to no violence, little violence, significant violence and high violence. The binary indicator takes value 1 if the transition showed significant or high violence (columns 1-4) or high violence (columns 5-8). The samples include all countries (panel A), all countries excluding those with less than 20 observations for the dependent variable to minimize the bias arising from the joint presence of country-fixed effects and the lagged dependent variable (panel B); see Papaioannou and Siourounis (2008) for details. All specifications include country and year fixed effects, as well as lagged growth, two-year lagged income level and region-specific time trends. Specifications with no "other controls" include growth lagged by one and two periods and three-year lagged income levels. Conflict controls include indicators for current, lagged and twice lagged conflict of the respective type. Other controls include current and lagged changes as well as two-year lagged levels of investment, life expectancy, government spending and trade share.