Violence During Democratization and the Quality of Democratic Institutions[*]

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Abstract

This article investigates the impact of violent civil conflicts during the process of democratization on the institutional quality of the emerging democracies. We propose a theory of endogenous regime transition in which violent conflict can arise in equilibrium. Peaceful transitions lead to a social contract that provides all groups with political representation and leads to better protection of civil liberties than violent transitions. Empirical evidence from the third wave of democratization based on a difference-in-difference methodology supports the theoretical predictions. The findings suggest that, compared to peaceful transitions, violent conflicts during the democratic transition have persistent negative effects on the institutional quality of the emerging democracies.

JEL-classification: H10, O20, N10

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1   Introduction

The last decades have witnessed an unprecedented wave of democratization around the world. It is by now well documented that the transition to democracy follows different paths. In some countries like Ghana, El Salvador, Mozambique, Spain and Turkey, among others, democratization was essentially peaceful and paved the way to sizable extensions of civil rights and unprecedented political stability. In others, democratization was the result of violent social conflicts that were triggered by the uprising of the politically and economically deprived classes and fueled by failed attempts of repression. In Ethiopia, Indonesia, the Philippines or Nicaragua, for example, the transition was stained with blood and materialized in limited improvements in political freedom and electoral competition. The existence of different transition scenarios has been documented already before the third wave of democratic transitions.[1] The ongoing experiences in the Arab countries also display substantial heterogeneity in terms of civil violence. A central question related to this observation is: Do these different paths to democracy pave the way to similar improvements in the quality of democratic institutions in terms of political and economic liberties, or are there differences associated with the democratization scenario? After discussing at length the occurrence of violence during the democratic transitions, Huntington (1993) argues that one should expect that consensual, non-violent, transitions lead to better democracies, even though the role of violence is *a priori* not obvious.[2]

This paper presents a theoretical and empirical investigation of the role of violence during the transition to democracy for the quality of institutions in the emerging democracies in terms of the civil liberties granted to all members of society. While, as discussed below, there is a vast literature on the details and modes of transitions to democracy in economics and political science, the existing work has placed little emphasis on developing a unified framework that can encompass different democratization scenarios and generate testable implications regarding the consequences of different types of democratization. We propose a simple theoretical framework in which the occurrence of violence during democratization is the result of rational choices within a simple probabilistic conflict model.

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[1] Uruguay, Colombia and Venezuela experienced democratic transitions with substantial violence in the first half of the twentieth century while prototypical examples of historically peaceful transitions are the nordic countries before the second world war.

[2] On page 276 of his book, Huntington (1993) writes "On the one hand, it can be argued that a peaceful, consensual transition favors democratic consolidation. On the other hand, it could also be argued that a violent transition is likely to develop among most population groups a deep aversion to bloodshed and hence to generate a deeper commitment to democratic institutions and values." He also points out, however, that "Overall, it seems more plausible to hypothesize that a consensual, less violent transition provides a better basis". In a similar vein, he notes on page 207 that "Governments created by moderation and compromise ruled by moderation and compromise. Governments created by violence ruled by violence".

The politically (and economically) deprived segments of the population can trigger violent conflicts to obtain control over the state apparatus. A civil conflict is observed if the group ruling the state does not give up its power and responds by attempting a violent repression. Different transition scenarios can emerge in equilibrium, leading to democracies with different institutional quality: in one scenario the newly enfranchised majority gains control over the state apparatus and subsequently exploits it to extract rents by limiting political and economic liberties; in the other scenario, public policies in the emerging democracy are the result of a broader consensus among among all groups of the population. These different equilibrium configurations resemble the concepts of "mass democracy" (a popularly based dictatorship with the poor ruling over the rich) and "democracy" (where all groups are granted economic and political freedom), as described by Lipset (1959).

The democratic transition as well as the type of emerging democracy are determined endogenously. Democratization can either be peaceful (and consensual), or it may arise after a violent conflict. A democracy with high institutional quality, characterized by a high level of civil liberties, can emerge in equilibrium if, and only if, it is optimal for all groups. The model delivers a characterization of the conditions under which each democratization scenario takes place, and investigates the consequences of the transition scenario for the features of the emerging democracies. While peaceful transitions lead to improvements in political and economic liberties, this is not necessarily the case for violent transitions to democracy.

The main predictions of the theoretical analysis regard the consequences of democratization. Democratization *can* lead to better institutional quality and greater individual (economic and political) liberties. More importantly, however, the conditions under which democratization takes place are crucial for the institutional quality of the emerging democracy, rather than the transition itself. Democratization may not *per se* lead to institutional improvements, but potentially it plays an important instrumental role. These implications are consistent with the mixed empirical evidence on the causal effects relationship between development and democratization, as well as with the available findings that suggest an important role of historical factors, country specific characteristics and path dependence for democracy. The theory also supports the view that democratization can affect development indirectly by leading to more political and economic freedom but suggests that, empirically, it may be relevant to explicitly control for the transition scenario in terms of the level of violence during democratization. The paper therefore contributes to the literature on the structural (economic) determinants of democratization, as well as to the literature on the role of the contingencies of democratization studied in political science.[3]

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[3]The economic and political science literature on the determinants and contingencies of democratic transition is discussed in the next section.

The second part of the paper presents an empirical investigation of the hypothesis of a crucial role of the democratization scenario (in terms of violence) for the "quality" of the emerging democracy. We test this hypothesis using cross-country panel data that covers the democratic transitions of the third wave, in close reference to Huntington's conjecture. The identification of the effect of the democratization scenario on civil liberties exploits information on the different years of (permanent) democratization in panel data with country and time fixed effects. After documenting a positive average effect of democratization on civil liberties (using a difference in difference approach) we discriminate between violent and non-violent democratic transitions, and thereby provide a direct test of the theoretical prediction by explicitly allowing for a differential effect of violent and peaceful transitions to democracy on civil liberties.

The empirical results suggest that peaceful democratic transitions have a positive and significant effect on the quality of political and economic liberties. The effect of violent democratic transitions is significantly weaker or absent, however. The results are robust to several alternative specifications like the use of different definitions of violence and social conflicts, the inclusion of additional controls like the occurrence of civil conflicts in a particular year (on top of violence during democratization), the past level of civil liberties, the past level and growth of income, spatial contingencies, and the inclusion of region specific growth trends. The findings suggest that accounting for the hitherto largely unexplored role of the transition scenario in terms of violence during democratization may help explaining while some democracies fail in providing sizable improvements in political and economic liberties.

Section 2 provides a brief location of the contribution in the existing literature. Section 3 presents the theoretical model and the characterization of the politico-economic equilibria. Section 4 presents the results of an empirical investigation of the predictions regarding the democratization scenario in terms of violence during democratization. Section 5 concludes. Analytical derivations are relegated to the Appendix.

2   Related Literature

The focus of this study is on the process of democratization, and, in particular, on the different scenarios under which transitions to democracy occur, and their consequences. By now there is a fairly developed literature on the mechanisms behind democratization in political economy, on which our study builds. Theories where democracies arise under open conflict or in order to avoid open conflict include Acemoglu and Robinson (2000, 2001 and 2006), Conley and Temimi (2001) and Bertocchi and Spagat (2001). On the other hand, the emergence of peaceful transitions to democracy, mainly triggered for efficiency reasons, has been formalized by Bourguignon and Verdier (2000), Lizzeri and

Persico (2004), Llavador and Oxoby (2005), Fleck and Hanssen (2006), Jack and Lagunoff (2006a, 2006b), Gradstein (2007), Cervellati, Fortunato, and Sunde (2008) and Ghosal and Proto (2009). This paper complements the existing literature by providing a simple framework that can account for both types of transition scenarios. The only available theory that considers the endogenous emergence of different transition scenarios (although without admitting the possibility of open conflicts in equilibrium as studied in this paper) is Cervellati, Fortunato and Sunde (2012), where democratization under a broad consensus can serve as coordination device in a model with multiple equilibria. This study also complements a large literature in political science on the details and modes of democratization, see, e.g., O'Donnell and Schmitter (1986), Lynn (1990), Lynn and Schmitter (1991), Remmer (1990), Huntington (1993), Sorensen (1993), Doh (1994), Munck and Leff (1997) and Field (2004), among others.

Concerning the determinants of the specific transition scenario, the model predicts a key role of structural features, which are affected by geographic and historical country specific characteristics, such as the concentration of ownership of productive (natural) resources and the size of the ruling elites.[4] This also appears to be in line with evidence presented in the literature, which shows that inequality significantly increases the likelihood of observing violent civil conflicts, see, e.g., Fearon and Laitin (2003) and Collier and Hoeffler (2004), and Blattman and Miguel (2010) for a recent survey. This evidence is not confined to conflicts in the context of democratization during the Third Wave, however. The model also highlights that short term contingencies may affect the transition scenario by favoring insurgency, the repression ability of the rulers, or by affecting the costs and benefits of being in power.

Given the crucial role of violence during the transition to democracy, our model also relates to recent conceptual work by North, Wallis, and Weingast (2009) on the interplay between violence and social order in terms of restricted or universal political franchise and the transition between the two. Our analysis is mainly concerned with the consequences of the democratization scenario for the quality of the emerging democracies, and treats democracy as a binary concept to illustrate the transition to democracy. High quality democracies are modeled as a "social contract" since they require the active participation of all social groups. This view of democracy is similar to the concept of self-enforcing democracy proposed in political science by, e.g., Weingast (1997), Przeworski (2005,

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[4]For instance, Engerman and Sokoloff (2001) highlight the role of geography for the modes and types of agricultural production (in terms of crops and size of land ownership) and suggest that exogenous geographical features can explain the larger structural inequality, the larger concentration of political power and the lower levels of education in Latin America compared to the north of the United States. These arguments could be compatible with the violent transitions in many Latin American countries.

2006), and Fearon (2006). By pointing at the role of the democratization scenario, the paper also contributes to the literature on the question whether democratization triggers interstate (or civil) wars, see, Mansfield and Snyder (1995) or Ward and Gleditsch (1998), Cederman, Hug, and Wenger (2008), Cederman, Hug, and Krebs (2010), and Cervellati and Sunde (2014a, 2014b).

The findings of this paper are also informative for the literature on the determinants and consequences of democratization. The *modernization hypothesis* along the line of Lipset (1959) ascribes a central role to economic development, to a relatively large middle class and to a large importance of human capital, for the emergence of democracy. Evidence that increased income per capita favors democratization is provided by Przeworski and Limongi (1997), Barro (1999), and Przeworski et al. (2000), among others. The findings by Przeworski (2004) and Acemoglu et al. (2008), among others, suggest that the effect of income per capita is weak once time-invariant country characteristics are taken into account in form of country fixed effects. Cervellati, Jung, Vischer, and Sunde (2014) document, however, that the effect is highly heterogenous in countries with different (de)colonization histories.[5] The results of this paper suggest that structural features, such as income or inequality, drive the transition as well as the transition scenario. At the same time, the consequences of democratization depend crucially on the democratization scenario.[6]

The main implication is tested in the second part of the paper using a panel data approach on the sample of the third-wave of democratization. Detailed accounts of the emergence of violence in the different transition episodes are available especially for the third wave of democratization, see for instance the report by Freedom House (Karatnycky et al., 2005), but besides recent literature on political violence and the emergence of civil conflicts, see, e.g., Besley and Persson (2011), there is relatively little work on the implications of violence in the context of democratization. Our empirical analysis delivers the first estimate of the consequences of the democratization scenario in terms of

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[5]On the role of changing inequality, Huber, Rueschemeyer, and Stephens (1993) argue that capitalist development historically reduced the importance of land resources thereby eroding the economic and political power of the (landlord) elites. Boix and Stokes (2003) find that the economic prosperity goes hand in hand with the availability of human capital and the portion of farmers in the population, features that capture a reduction in income inequality. The findings of Barro (1991), Easterly (2001) Boix (2003) and Rogowski and MacRae (2008) also suggest an important role of inequality for institutional change but a weak, or absent, direct role of economic development for democratization. We refer to Cheibub and Vreeland (2010) for a comprehensive and critical discussion of the empirical literature on the relationship between development and democratization.

[6]This feature also distinguishes our model from the literature on democratization and conflict along the lines of Boix (2003) and Acemoglu and Robinson (2006), which is mainly concerned with the determinants of democratization, but remains silent about the consequences of the transition, and the emergence of different economic institutions under oligarchies and democracies.

violence for the overall institutional quality of the emerging democracies.[7] For the empirical application, we consider a dichotomic classification between democracies and non-democracies to identify the moment of regime transition following Papaioannou and Siourounis (2008). This conceptualization of democracy is consistent with the theoretical model, and we investigate the determinants of the quality of emerging democracies within this dichotomous classification, by accounting for different degrees of political and economic liberties. This distinction of the quality of the emerging democracy is also related to the consideration of a finer measure of regimes than non-democracy and democracy, as proposed by Epstein et al. (2006), Brownlee (2009), or Goldstone et al. (2010) in different contexts. In view of the empirical literature on the definition and measurement of regime changes the paper therefore stands halfway between a strictly dichotomous view of democracy (which is needed for the empirical identification) and a more detailed account of regime quality. See also Cheibub, Gandhi and Vreeland (2010) and references therein for a discussion of these issues.

3 A Theory of Democratization and Social Conflicts

3.1 Model Set Up

The purpose of the model is to capture the conceptual difference between the political regime, which refers to the group that is factually in power to make political decisions, and the institutional quality, in the sense of the existence of repression of one group by the other. Institutional quality reflects the level of exploitation of society to the benefit of the ruling group and the corresponding lack of economic and political freedom. A high institutional quality is modelled in terms of a "social contract", in which economic and political liberties of all groups in the population are protected, coupled with the absence of rent extraction by the group in power.

Consider an economy populated by a unit mass of individuals that belong to one of two groups, the Elite, E, and the People, P, with size $\gamma^E = \gamma \leq 1/2$ and $\gamma^P = 1 - \gamma$, respectively. In the following, $i = E, P$ denotes both an individual and the group to which the individual belongs. Each individual i has income y^i with $y^E \geq y^P$. The average (per-capita) income is

$$y = \gamma y^E + (1 - \gamma) y^P.$$

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[7]The results complement recent results by Cervellati and Sunde (2014a) who use a similar empirical framework and find evidence that the democratization scenario in terms of the violence involved in the transition has an effect on economic growth performance. In particular, they find that peaceful transitions to democracy have a positive effect on growth, while violent transitions have no or even negative growth effects.

Inequality, in terms of relative income of the individuals in the two groups, is denoted by

$$\lambda \equiv \frac{y^E}{y^P} \geq 1 \ . \tag{1}$$

There are two political regimes that are identified by whether (or not) public policies can be supported by a majority vote within the population. If the People (the majority) can rule, the regime is a *democracy*, while the regime is an *oligarchy* if the Elite (the minority) rules.[8] In terms of institutional quality, there are also two possible regimes. At the one extreme, the ruling group (which can be either the Elite or the People) can exploit the control of the state by limiting "civil", economic and political, liberties of the other group in order to extract rents from the economy. At the opposite extreme, both groups can agree to share the resources more evenly so that the ruling group does not exploit the state for (forceful and wasteful) rent extraction, and civil liberties of all groups are respected. The former configuration involves a lower institutional quality than the latter.[9]

The two institutional configurations are modelled as follows. Consider first a situation the ruler exploits the state apparatus to extract resources from the economy. The disposable income accruing to the ruling group i is given by

$$y^i + x \frac{\gamma^j y^j}{\gamma^i} \left(1 - \varphi\right) \ , \tag{2}$$

where x is the share of resources of the ruled group j that is appropriated by the ruling group i, while $\varphi \in (0,1)$ represents the share of income which is lost due to the rent-extraction activities.[10] Symmetrically, members of the *ruled* group j obtain a disposable income equal to

$$y^j(1 - x) \ . \tag{3}$$

This configuration, which reflects the absence of a social contract, can occur independently from the identity of the ruling group (and hence the political regime). Alternatively, both groups can share resources evenly. This situation reflects a social contract that emerges when all members of society can participate in the political decision process about the distribution of incomes. In this case, $y^j = y$ for all $j = \{E, P\}$.[11]

Whenever a group is ruled by the other, it has the possibility to revolt and engage in a violent conflict for the control of the government. The group that wins such a conflict has the power to rule

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[8]The empirical counterpart of this concept used in Section 4, is a dichotomic classification of countries into oligarchies and democracies that is based on the extent of the franchise and the prevalence of elections.

[9]The empirical counterpart used in Section 4 is the level of protection of civil (economic and political) liberties.

[10]An earlier version considered an alternative specification in which all groups pay the cost φ to reflect the idea that the absence of a social contract is likely to impose distortions on the entire society, beyond the costs associated with the rent extraction. The main results are qualitatively identical.

[11]This specification reflects the limit of a standard median voter model without distortions through taxation, see, e.g., Meltzer and Richard (1981) or Acemoglu and Robinson (2006).

over the other group. Alternatively, the winning group can offer a social contract. Consider a simple probabilistic set-up where, in case of conflict, each group wins with a probability

$$\pi^i = \frac{\gamma^i y^i}{y} \text{ for each } i = E, P \,. \tag{4}$$

The winning probability (4) is increasing in the share of income controlled by group i, $\gamma^i y^i$, which can be interpreted equivalently as conflict potential (e.g. the number of guns that can be bought and the number of gunners firing them).[12] Failed attempts to obtain control over the state apparatus by engaging in violent conflicts are costly. A ruled group that triggers an unsuccessful conflict looses a share $c \in [0, 1]$ of its income. This cost can be interpreted as either a direct cost associated with the defeat in an open struggle, or as resulting from the repression or retaliation by part of the ruling group. Technically, the existence of some costs for triggering and loosing conflicts ensures that violence does not emerge in equilibrium under all circumstances.[13]

The timing of decisions is as follows:

1. The incumbent ruling group decides whether to rule by limiting the civil liberties of the other group and extracting resources from the economy [thereby obtaining the predation income (2)], or to offer a social contract [with income y];

2. The ruled group decides whether to agree with the decision of the ruling group, or to disagree and threaten with a violent conflict;

3. In case of disagreement, the incumbent ruling group decides whether to transfer political power to the ruled or face a violent conflict;

4. In case of conflict [the outcome of which is determined by (4)]: the winner of the conflict represents the new ruling group. The new ruling group decides whether to rule by limiting the civil liberties of the other group and extracting resources from the economy [thereby obtaining the predation income (2)], or to offer a social contract [with income y];

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[12] The winning probability is modeled along the lines of standard Tullock-type conflict success functions in which the winning probability depends on relative, not absolute, resources devoted to conflict, see, e.g., Skaperdas (1996). For simplicity, we abstract from modeling endogenous fighting efforts. In the present application, the ratio form requires less assumptions and is more appropriate than alternative, additive specifications. In particular, conflict success is unaffected by level changes in income and a higher concentration of resources on the side of the rich has a weaker effect on conflict success than in the alternative possibility of an additive specification of the conflict success function. These features are consistent with warfare and conflict technologies observed for much of human history, including internal conflicts (see, e.g., Hwang, 2012, for a discussion of these issues and the different properties and similarities of the ratio and difference form of the conflict success function). The specification abstracts from the consideration of asymmetric winning probabilities related to the current allocation of de facto power. The results would change only quantitatively, but not qualitatively, by explicitly considering an advantage in conflict for the group controlling the state apparatus like, e.g., the army.

[13] To ensure that conflicts can emerge under certain conditions, but are not always a dominant strategy, the cost for loosing a conflict must be sufficiently large compared to the gain from expropriation (as discussed below).

5. The loser of the conflict (the new ruled group) decides whether to accept a social contract (if offered by the new ruler) or to be exploited [thereby obtaining payoff given in (3)].

This timing implies that, for a social contract to emerge in equilibrium, both groups need to agree in preferring it to a violent conflict or to ruling over the other group by force. This simple framework implies that the incentives to initiate a violent conflict depend on the probability of success, the allocation of income that will emerge after the end of the conflict and, therefore, the emergence (or lack) of a social contract. Consequently, the political regime (in the sense of which group has factual control over the state), the occurrence of violent conflicts, and the quality of institutions (in the sense of the existence of a social contract) are all jointly determined in equilibrium. As consequence of the definitions of the political and institutional regimes, democracies can either exhibit no social contract (reflecting Lipset's notion of a "mass democracy"), or constitute a regime with a social contract (representing a "democracy" proper in Lipset's sense), whereas a social contract cannot emerge in an oligarchy by assumption.[14]

We next characterize the sub-game perfect equilibrium of the game presented above, proceeding in steps. In Section 3.2 we first characterize the conditions under which both groups agree to a social contract. Next, in Section 3.3 we identify the conditions under which a threat of violent conflict is credible. Finally, in Section 3.4, we study different scenarios under which democracies can emerge, and their implications for the features of the emerging democracies. The analytical derivation of the relevant conditions is reported in Appendix A.

3.2   Social Contract Conditional on the Identity of the Ruler

Let us focus on the emergence of a social contract, conditional on the identity of the group in control of the state.[15]   Consider first the case in which the Elite are the ruler. They must compare the disposable income that they would receive under a social contract, y, to what they could obtain by ruling to extract resources from the economy. From (2) the Elite prefer a social contract if, and only if,

$$y^E + x\frac{(1-\gamma)}{\gamma}y^P(1-\varphi) \le y \,. \tag{5}$$

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[14]The purpose of this paper is to study the implications of the transition scenario for the institutional quality of emerging democracies, rather than comparing quality of democracies and oligarchies. The analysis therefore abstracts from investigating the conditions under which a social contract might emerge in oligarchies. The possibility of a social contract in oligarchy is considered in Cervellati, Fortunato, and Sunde (2008).

[15]This is equivalent to characterizing the conditions under which the social contract emerges in equilibrium under the support of both groups and without any credible threat of conflict.

For the People a social contract is better than being ruled if, and only if, $y^P (1 - x) \leq y$. The latter condition is always verified whenever (5) holds, since $y^E \geq y^P$, which implies that if an (unchallenged) ruling Elite finds the social contract profitable the same is true, *a fortiori*, also for the People.

Recalling that $\lambda = y^E / y^P$ denotes income inequality, condition (5) can be expressed as,[16]

$$\lambda \leq \overline{\Lambda}_E \equiv 1 - \frac{x (1 - \varphi)}{\gamma} \tag{6}$$

The function $\overline{\Lambda}_E$ represents the combinations of γ and λ for which the members of the Elite receive the same income by adhering to a democratic social contract or by ruling in its absence. They are obtained by solving condition (5) with equality. For any $\lambda > \overline{\Lambda}_E$, the Elite is better off by ruling even if this comes at the cost of imposing distortions on the economy.

Consider next the case in which the People are the ruling group. In this case, a social contract can emerge in equilibrium if, and only if,

$$y^P + x \frac{\gamma}{1 - \gamma} y^E (1 - \varphi) \leq y \tag{7}$$

and

$$y^E (1 - x) \leq y. \tag{8}$$

In this case, the observation that the people prefer a social contract does not automatically imply that the same is true for the Elite since the two groups face different trade-offs. Solving conditions (7) and (8) for λ gives the levels of income inequality for which the People, respectively the Elite, are indifferent between a situation with and without a social contract,[17]

$$\lambda \geq \underline{\Lambda}_P (\gamma) \equiv \frac{1}{1 - \frac{x}{1 - \gamma} (1 - \varphi)} \tag{9}$$

and

$$\lambda \leq \underline{\Lambda}_E (\gamma) \equiv \frac{1}{1 - \frac{x}{1 - \gamma}}. \tag{10}$$

The functions (6), (9) and (10), characterize the thresholds for the emergence of a social contract when the Elite and the People rule, respectively, and are depicted in Figure 1 below.

All the Λ functions are upward sloping in the (γ, λ)-space since, everything else equal, a larger γ implies a higher per capita income in democracies, y, which makes a democratic social contract acceptable to all groups for higher levels of income inequality, λ. The previous analysis also implies

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[16]The derivation of the function $\overline{\Lambda}_E (\gamma)$ and is reported in Appendix A.

[17]The formal derivation of $\underline{\Lambda}_P$ and $\underline{\Lambda}_E$ is relegated to Appendix A. The function $\underline{\Lambda}_E$ lies above $\overline{\Lambda}_E$ since for any given level of inequality λ the net income that the members of the Elite obtain when they are ruled by the People is strictly lower than the one they obtain when they have the control of the state apparatus.

Figure 1: Equilibrium Social Contract and Identity of Ruler
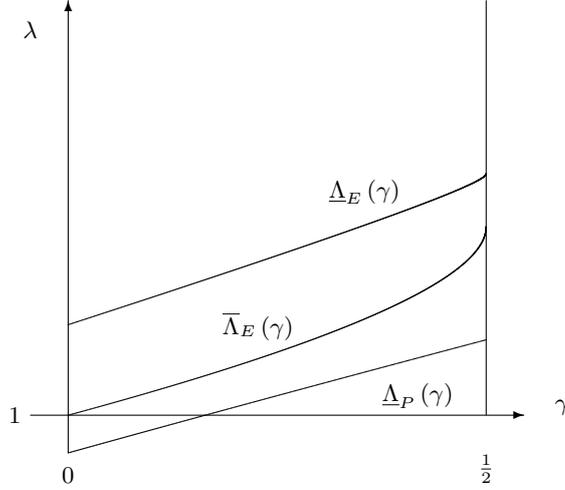
that, for any given γ, a social contract can be sustained for intermediate inequality, λ. If inequality is too low, i.e., $\lambda < \underline{\Lambda}_P(\gamma)$, then the People prefer ruling and extracting resources from the economy to sharing average income. If inequality is large, i.e. $\lambda > \underline{\Lambda}_E(\gamma)$ the Elite prefer facing the income losses of a coercive state apparatus controlled by the People to adhering to a social contract.

Proposition 1 (Emergence of Social Contract Conditional on Ruler's Identity). *In the absence of any credible threat of conflict, a social contract emerges in equilibrium if, and only if,*

- $\lambda \leq \overline{\Lambda}_E(\gamma)$ *when the Elite are the ruling group;*

- $\underline{\Lambda}_P(\gamma) \leq \lambda \leq \underline{\Lambda}_E(\gamma)$ *when the People are the ruling group.*

3.3 Credible Threats of Conflict

We now characterize the incentives of the People for triggering a conflict.[18] A ruling Elite faces a credible threat if, and only if, the payoff that the People expect from engaging in a violent conflict is higher than the payoff they would obtain by acquiescing to be ruled. The decisions to engage in a conflict are fully rational and forward looking.[19] The expected payoff of the people depends on whether, in case of success, the new equilibrium involves a social contract or only a change in the identity of the ruler group.

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[18]The main purpose of the model is the analysis of the different scenarios of democratic transitions. To this end we abstract from analyzing the credible threats of a minority elite to a ruling majority, even though this would be a straightforward extension.

[19]We therefore restrict attention to equilibria in which expectations are correct ex-post which implies restricting attention to the sub-game perfect Nash equilibria of the game described in the previous section.

Recall that $c \in [0,1]$ is the cost of loosing a violent conflict, π^E is the winning probability of the Elite (given in (4)), x is the share of income that the ruling group can expropriate and φ is the distortion associated to rent extraction. If the People expect to erect a "mass democracy" and rule in the absence of a social contract then it is optimal for them to trigger a conflict if, and only if,

$$\pi^E y^P(1-x)(1-c) + \left(1 - \pi^E\right)\left[y^P + x\frac{\gamma y^E}{1 - \gamma}(1 - \varphi)\right] > y^P(1-x). \tag{11}$$

Using again the definition of λ, this can be re-written as

$$\lambda \leq \Upsilon(\gamma) \equiv \frac{(1-\gamma)}{\gamma}\frac{x}{c(1-x) - x(1-\varphi)}. \tag{12}$$

The function $\Upsilon(\gamma)$ describes the combinations of γ and λ for which the People are indifferent between accepting the rule of the Elite and initiating a conflict in order to be the new ruler.[20] Notice that the function $\Upsilon(\gamma)$ is positive if, and only if the cost of a lost conflict is large enough, $c > [x/(1-x)](1-\varphi)$, since otherwise a conflict would always pay off in expectation.

If, on the other hand, the People expect a social contract to be implemented after a successful struggle, then triggering a conflict is optimal if, and only if,

$$\pi^E y^P(1-x)(1-c) + \left(1 - \pi^E\right)y > y^P(1-x), \tag{13}$$

which can be expressed as,

$$\lambda \geq \Psi(\gamma) \equiv \frac{[1 - \frac{x}{\gamma}]}{[1 - \frac{c(1-x)}{(1-\gamma)}]}.$$

The function $\Psi(\gamma)$ describes the combinations of γ and λ for which the People are indifferent between accepting the rule of the Elite and initiating a conflict to implement a social contract.[21]

Proposition 2 (Credible Threat of Violent Conflicts). *The threat of a violent conflict by the People against the ruling Elite is credible if, and only if, in case of success in conflict*

- $\lambda \leq \Upsilon(\gamma)$ *when the People expect to rule in the absence of a social contract after the conflict;*

- $\lambda \geq \Psi(\gamma)$ *when a social contract is expected to emerge after the conflict.*

The functions Υ and Ψ are depicted in Figure 2. For the People, the probability of winning a conflict decreases with the size of the Elite γ, and with the level of income inequality λ. Consequently, a larger γ implies a reduction in the expected gain from triggering a conflict, leading to a lower level of income inequality λ for which the members of the People are indifferent between triggering a violent conflict and accepting the rule of the Elite. The function $\Upsilon(\gamma)$ is therefore decreasing in γ.

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[20]The function $\Upsilon(\gamma)$ is derived in the Appendix.

[21]The function $\Psi(\gamma)$ is derived in the Appendix.

Figure 2: Credible Threats of Violent Conflict
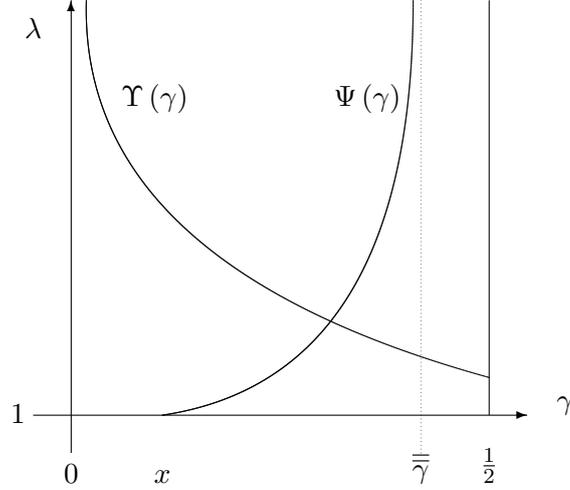
In contrast, the function $\Psi(\gamma)$ is monotonically increasing in γ in the range $x < \gamma < \overline{\overline{\gamma}}$. The reason is that a democratic social contract with progressive redistribution becomes more appealing for the People when the level of income inequality λ increases so that the People are willing to run the risk of a violent conflict for higher levels of γ (and therefore a lower winning probabilities). Nonetheless, if the elite is large enough (i.e. if $\gamma > \overline{\overline{\gamma}}$) then the Elite is too strong and conflict is never credible if the People expect a social contract.[22]

3.4 Democratization Scenario and Social Conflict

From Proposition 1, if the Elite are the rulers then no social contract can emerge in democracies above the locus $\overline{\Lambda}_E(\gamma)$. From Proposition 2, in this region the threat of a violent conflict is credible only below the locus $\Upsilon(\gamma)$. Hence in the area above the two loci $\overline{\Lambda}_E(\gamma)$ and $\Upsilon(\gamma)$ an oligarchic Elite in control of the state has no incentives to implement a democratic social contract and, at the same time, faces no credible threat of loosing their power by means of violent conflicts. The elite may also succeed in an open conflict and maintain their oligarchy.

Proposition 3 (Oligarchy as Equilibrium). *An oligarchy of the Elite emerges in equilibrium,*

 a) *if the elite is unchallenged:* $\lambda > \max\{\Upsilon(\gamma), \overline{\Lambda}_E(\gamma)\}$;

 b) *or if the elite is challenged:* $\gamma \leq \overline{\gamma}$, $\lambda < \Upsilon(\gamma)$ *and* $\lambda > \overline{\Lambda}_E(\gamma)$, *and the Elite prevail in conflict.*

There is no change in the regime if the Elite has no incentive to initiate a transition to a social contract under democracy and is not challenged in a conflict, as indicated by scenario a), or prevails in a conflict as indicated by scenario b).

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[22]See Appendix A for the derivation of the threshold $\overline{\overline{\gamma}}$ that represents a vertical asymptote.

Let us assume that the economy is initially characterized by an unchallenged oligarchy of the Elite. Let us consider the (comparative static) exercise of a reduction in λ for given γ (which, in terms of the $\{\gamma, \lambda\}$ space, implies postulating a shock to λ along a vertical trajectory).[23] Such a reduction in income inequality can lead to a transition to democracy which is either peaceful or the result of a violent conflict (triggered and won by the disenfranchised People).

Denote by $\underline{\gamma} \equiv [x(1-x)]/[c(1-x) + x\varphi]$ the unique level of γ at which the two functions Υ and $\underline{\Lambda}_E$ cross and by $\overline{\gamma} \equiv x/c$ the unique level of γ at which $\underline{\Lambda}_E$ and Ψ cross.[24] We have the following main results.

Proposition 4 (Democratization, Violent Conflicts, and the Social Contract)**.** *Consider an economy in an Oligarchic equilibrium as characterized in Proposition 3. A reduction in income inequality λ can then lead to democratization under the following scenarios:*

  a) *a* peaceful *transition to a democracy that is characterized by a social contract: if $\gamma \geq \overline{\gamma}$ and λ is such that $\lambda < \overline{\Lambda}_E(\gamma)$ and $\lambda > \underline{\Lambda}_P(\gamma)$.*

  b) *a* violent *transition to a democracy that is characterized by a social contract: if the People prevail in conflict and $\underline{\gamma} \leq \gamma \leq \overline{\gamma}$, λ falls below $\Upsilon(\gamma)$ and satisfies $\underline{\Lambda}_P(\gamma) \leq \lambda \leq \underline{\Lambda}_E(\gamma)$.*

  c) *a* violent *transition to a "mass democracy" that is not characterized by aa social contract: if the People prevail in conflict and*

  c1) *$\gamma < \underline{\gamma}$, and λ is such that $\lambda < \Upsilon(\gamma)$ and $\underline{\Lambda}_E(\gamma) \leq \lambda$;*

  c2) *λ is such that $\lambda < \Upsilon(\gamma)$, $\lambda < \underline{\Lambda}_P(\gamma)$.*

The thresholds $\underline{\gamma}$ and $\overline{\gamma}$ are depicted in Figure 3, which also summarizes the full taxonomy of democratization characterized in Proposition 4.[25]

Proposition 4 implies different transition scenarios, with different implications for the quality of institutions in terms of a social contract. If $\gamma > \overline{\gamma}$ then the Elite is better off under a democratic social contract as soon as $\lambda \leq \underline{\Lambda}_E(\gamma))$ when the People are the ruling group, but only when $\lambda \leq \overline{\Lambda}_E(\gamma)$ when the Elite rule. As long as $\Upsilon(\gamma) \leq \lambda < \Psi(\gamma)$ the threat of conflict is not credible and the Elite

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[23]Alternatively, one could assume a monotonic decline in income inequality to illustrate a gradual development process. The Supplementary Material presents a simple production economy where subsequent generations of individuals with the same population structure (γ) experience a reduction in income inequality due to a process of skill biased technical change.

[24]The thresholds for democratization and the different transition scenario are characterized in Appendix A.

[25]For illustration purposes, Proposition 4 considers the case of exogenous changes in λ. Recall that if the people are the ruler a social contract can be sustained only if $\underline{\Lambda}_E(\gamma) \leq \lambda \leq \underline{\Lambda}_P(\gamma)$ from Proposition 1. Hence, if the reduction in inequality leads to a λ inside (outside) that region, a social contract can (cannot) be sustained.

rules unchallenged. In this region, the Elite therefore finds it profitable to support a democratic social contract when $\lambda \leq \overline{\Lambda}_E(\gamma)$ (depicted as a bold line for $\gamma > \underline{\gamma}$ in Figure 3. In this case, scenario a), the Elite finds it more profitable to have a social contract in place even if they could retain the control of the state apparatus and rule unchallenged since no threat of conflict is credible. The reason is that inequality (and the implicit cost of a democratic social contract) is sufficiently low compared to the distortions associated with resource extraction, φ. Under these conditions, the best option for the Elite is to agree to a peaceful transition. Since, from Proposition 1, this is the best option also for the People, a democratic social contract emerges with the support and consensus of all social groups.

If $\gamma \in (\underline{\gamma}, \overline{\gamma})$, the Elite would accept a democratic social contract as soon as $\lambda \leq \underline{\Lambda}_E(\gamma)$, but only if the People are the rulers. From Proposition 2 the Elite faces a credible threat of conflict as soon as $\lambda \leq \underline{\Lambda}_E(\gamma)$. In these conditions, from Proposition 1, the Elite anticipates that if the conflict is lost they will be offered a social contract since this is the best option for the People (as long as $\lambda > \underline{\Lambda}_P(\gamma)$ also the People prefer a social contract to rule in its absence). The Elite also know that, being defeated, they will accept. This is reflected in scenario b). In turn, if they win the conflict, they will continue to rule in an oligarchy as noted in Proposition 3. Notice that the mere threat of conflict is not sufficient to induce the Elite to give up their power without fighting (as shown formally in Appendix A). Hence, the Elite agrees to a democratic social contract *only* after loosing *de facto* power in a violent conflict. The occurrence of an open violent conflict therefore represents a necessary condition for the emergence of a democracy implementing a social contract in this region of γ.[26] Consequently, in this transition scenario the ruling Elite are not willing to voluntarily give up the power but, if defeated, they accept to settle in a democratic social contract.

If $\gamma < \underline{\gamma}$, the threat of conflict becomes credible only when $\lambda \leq \Upsilon(\gamma)$ since for larger λ the Elite is too strong and engaging in a violent uncertain conflict is not profitable for the People. The ruling Elite is unwilling to give up power to avoid an open struggle under these conditions also when facing a credible threat of conflict (as shown formally in the Appendix A). For $\gamma < \underline{\gamma}$, a reduction in inequality λ below $\Upsilon(\gamma)$ eventually leads to violent social conflict which, in case of success of the People, leads to a change in the control over the state apparatus. Despite the fact that the new regime ensures political power to the majority of previously disenfranchised People it *does not* lead to a social contract, however, because from Proposition 1, the Elite is not willing to accept a social contract even after a defeat as long as $\lambda \geq \underline{\Lambda}_E(\gamma)$. The emerging equilibrium political regime is a "mass democracy" since the majority has both *de jure* power of voting and the *de facto* control of

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[26]Notice that this prediction is different from the predictions by Acemoglu and Robinson (2006) where the mere credible threat of conflict is sufficient to induce democratization so that, in equilibrium, no social conflict should be ever observed.

Figure 3: Democratization, Violence and the Social Contract
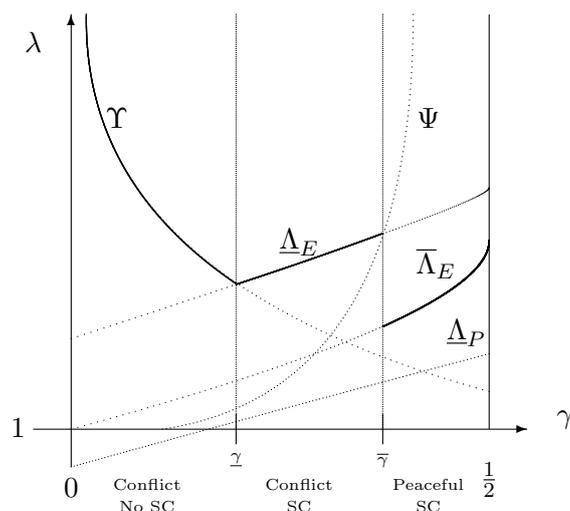
the state apparatus. Nonetheless, it fails to implement a social contract since the new rulers prefer to substitute the old ruler and extract rents. This is reflected in scenario c1). Any substantial drop in inequality λ that leads the People to prefer a conflict and, in case they prevail, prefer an extractive rule over the (former) Elite, will trigger a transition to such a "mass democracy" if they indeed prevail, as suggested in scenario c2).

3.5 Discussion

Before turning to the investigation of the empirical relevance of the predictions some comments are in order. The taxonomy of democratization scenarios, and the implications for the quality of emerging democracies, do not depend on the actual assumptions about the changes in income inequality. Nor do they depend on the assumption of a stable Elite share, γ. The assumption of an exogenous, random, reduction in inequality (λ) was chosen to simplify the exposition. The predictions concerning the different types of democratization are unaffected by this assumption of the evolution of inequality being stochastic. The implication is that the very occurrence of democratization, and its actual timing, are random and depend on exogenous forces driving the change in λ. While useful in the following empirical implementation, this assumption is mainly illustrative. Alternatively, one could assume a monotonic decline in λ due to a development process that reduces inequality, the the consequence that democratization is eventually inevitable and its timing is deterministic. This is justified by the focus of the paper on democratization and the role of different scenarios for the quality of democracy, instead of the breakdown of democracy or the growth consequences of democratization. Nevertheless, the framework is sufficiently flexible to be extended in these directions.

Similarly, alternative assumptions about γ can reflect different aspects of the redistributive conflict

in a country, including the size of the elite, or the importance and distribution of natural resources that are unequally distributed.[27] While the analysis so far did not consider any random variable affecting the conflict potential of the two groups or changes in the perceived probability that the conflict will be successful, it is easy to show that the thresholds affecting the democratization scenario can shift depending on random contingencies that temporarily affect the conflict potential, or their perception, by each group.

Moreover, studying the effects of a one-time random change in λ allows for considering the role of the democratization scenario for the stability and the consolidation of democracies. In terms of stability of democracies, notice that the Elite has no incentives to attempt regaining the control of the state apparatus after a peaceful democratization since the transition to democracy takes place in the absence of any threat of conflict by part of the disenfranchised. Peaceful transitions should therefore lead not only to more inclusive but also to more stable democracies. This is not the case after a violent transition that occurs because the Elite did not accept to give up power voluntarily. Only under particular conditions, characterized by scenario b) in Proposition 4, does a violent democratization lead to a social contract. After a violent transition to a "mass democracy", as reflected in scenario c) of Proposition 4, attempts by the former ruling group to regain the power should be expected, since the Elite strictly prefers to regain exclusive power.[28]

4 Empirical Relevance

Despite its simplicity, the theory delivers several predictions about the determinants and consequences of democratization. The previous analysis has two main empirical implications. First, the model suggests that structural features of the economy determine the level of redistributive tension, and hence the likelihood of democratization and the emergence of a particular transition scenario. These features include inequality and the population composition in terms of the population shares of the respective groups, but not the level of income *per se*. A second, more novel, prediction of the model concerns the consequences of democratization. The transition scenario is of primary importance for the features of the emerging democracies. A different transition scenario can lead to completely different consequences of democratization, even when the structural features of the economy are the same

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[27]In fact, elite size and inequality are intimately linked in any model of redistributive conflict with two groups, see, e.g., Acemoglu and Robinson (2001, 2006).

[28]These considerations resemble Lipset's view of the "system of beliefs, legitimizing the democratic system" that is a basic requirement for a stable democracy, noting that "if a political system is not characterized by a value system allowing the peaceful "play" of power – the adherence by the "outs" to decisions made by "ins" and the recognition by "ins" of the rights of the "outs"– there can be no stable democracy" (Lipset, 1959, p. 71).

and controlled for. This unexplored empirical implication concerns the crucial role of the transition scenario, in terms of violence during democratization (or its absence), for the institutional quality of the emerging democracies. Importantly, this prediction applies even (and in particular) when accounting for country-specific features like the size of the elite or other parameters (such as x and φ), which should not play any role for the consequences of democratization above and beyond the transition scenario.[29]

4.1 Data

We test the empirical validity of these two predictions by investigating the role of the democratization scenario using data for the "third wave" of democratization (Huntington, 1993). The analysis exploits the different years of democratization in the countries that democratized after 1970 to isolate the role of democratization. The choice of this sample is driven by several considerations. First, data availability for the third wave of democratization allows for an empirical analysis based on rich panel data to study the dynamics around the democratic transition. Second, this sample has been analyzed in many studies in political science and political economy, such that our empirical analysis complements existing studies on the same data. And finally, much of the analysis was motivated by Huntington's conjectures on the role of violence during the democratic transition. To test his conjectures, it appears natural to focus on the same set of countries.

As main dependent variable of interest we use the Civil Liberties index provided by Freedom House as measure of institutional quality, for which data are available for the period 1972-2003.[30] The Civil Liberties index provides summary information about relevant indicators that relate to the concept of social contract and the quality of democratic institutions that has been modeled in the theory. These include information on political liberties as well as economic liberties and protection against expropriation by the state.[31] The index of civil liberties therefore represents a good overall proxy of the institutional quality of democracy in the spirit of the modeling of a social contract as related to the absence of exploitation of the ruled group. The index takes values from 1 to 7, with 1 representing the most free and 7 representing the least free. Countries with a rating of 1 generally have an established

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[29]Proposition 4 implies, for instance, that for any $\gamma \geq \overline{\gamma}$, a social contract emerges irrespective of the actual levels of γ, the ability to extract resources x and the distortions φ in the absence of a social contract.

[30]Alternative measures of institutional quality in terms of rule of law, law and order, and of measures against corruption are provided by ICRG. These measures could also be suitable to test the predictions of the theory but cannot be used for our purposes since the empirical strategy exploits democratization events starting in the early 1970s, while the ICRG data only go back to 1984.

[31]The index is based on 15 sub-items on freedom of expression and belief (4 items), associational and organizational rights (3 items), rule of law (4 items), and personal autonomy and individual rights (4 items).

and equitable rule of law with free economic activity, a rating of 2 indicates some deficiencies, ratings of 3, 4, or 5 may indicate partial compliance with the elements of civil liberties, countries with a rating of 6 enjoy partial rights and restricted business activity, and a rating of 7 indicates virtually no freedom.[32]

The data on democratization events and the year of democratization is taken from Papaioannou and Siourounis (2008), who developed a binary democratization indicator from an improved coding of existing democratization data sources for the third wave. The coding of democratic transition is based on relevant changes in political freedom leading to free and contested elections.[33] All results are robust to using alternative classifications of democratic transitions from the Freedom House, the Polity-IV data, or from Golder (2005).[34]

Data on the extent of violence during the democratic transition are collected from different sources. As benchmark we use the data from the UCDP/PRIO Armed Conflict Dataset and from Freedom House.[35] Using the PRIO data, violence is coded as binary variable if a country experiences any incidence of civil conflict in a given year with more than 25 battle related deaths. This definition of conflict includes internal and internationalized social conflicts (which may include also interventions from international organizations or foreign countries). A more restrictive measure focuses on internal conflicts. An alternative data source for violence during the process of democratization is the Freedom House dataset by Karatnycky (2005) that codes the violence during the democratic transition in four different intensities: nonviolent, mostly nonviolent, significant violence, and high violence. In the empirical analysis, we present results that exploit the variation across all four levels of intensity, as well as binary variables indicating significant or high violence during the transition. For robustness, we also classified any regime transitions, distinguishing between successful, failed and temporary

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[32]According to Freedom House a poor rating for a country "is not necessarily a comment on the intentions of the government, but may indicate real restrictions on liberty caused by non-governmental terror.", which represents a suitable definition of institutional quality to test the model predictions where good quality democracies are reflected by a social contract requiring widespread adherence from all the different interest groups in the society.

[33]The classification follows the conceptualization of Munck and Verkuilen (2002) and uses sizable changes in the Freedom House Political Rights index or in the Polity indicators together with information from political, historical and election databases. To identify permanent democratic transition it further uses information on constitutional changes and imposes a five-year stability condition. We refer to Papaioannou and Siourounis (2008) for a detailed description of the methodology used for the classification. A detailed chronology of democratization events can be found in Table 1 of their paper.

[34]Details are available upon request.

[35]The UCDP/PRIO Armed Conflict Dataset is the version v.4-2010, 1946 – 2009, based on and updated by Harbom and Wallensteen (2010). The data and a detailed data description are available at http://www.pcr.uu.se/research/UCDP/data_and_publications/datasets.htm. The alternative data source is the Freedom House Study edited by Karatnycky (2005).

transitions following the classification by Freund and Jaud (2012). Violent transitions were coded similarly to the baseline. The data on income inequality (in form of Gini indices) is taken from the World Income Inequality Database (WIID).

The benchmark data set consists of an unbalanced sample of 173 countries over the period 1972-2003 for which we have 4,934 country-year observations. There are 61 permanent democratization events on which the main analysis is based.[36] The civil liberties index is bounded between 1 and 7, with a mean of 4.02 (standard deviation 1.94). Table 1 presents the summary statistics of the variables of interest. A look at the raw correlations reveals that democratization (in terms of a binary variable that takes value 0 in all years before and 1 in all years after democratization) is associated with a greater degree of civil liberties, while armed conflict has the opposite correlation.[37] There also appears to be a negative (but fairly small) negative correlation between democratization and armed conflict. Considering income variables, it turns out that higher growth and larger income are associated with better civil liberties, and less conflict, and there is a weak correlation with democratization.

Table 1: Descriptive Statistics for Baseline Variables

	Obs.	Mean	Std. Dev.
Institutional Quality	4,934	4.024	1.944
Democratization	4,934	0.168	0.374
Violent Democratization	4,934	0.024	0.153
Conflict Incidence	4,934	0.168	0.374
Incidence of Internal Conflict	4,934	0.169	0.374
GDP p.c. growth $(t-1)$	4,275	1.157	6.286
GDP p.c. growth $(t-2)$	4,275	1.167	6.451
log GDP p.c. $(t-3)$	4,275	7.429	1.579

Notes: Country-year observations for the unbalanced baseline sample with 173 countries and 61 democratization events, 11 of which are violent. Institutional quality is measured on a scale from 1 (high institutional quality) to 7 (low institutional quality). GDP p.c. growth $(t-1)$ is the difference in log GDP per capita between $t-1$ and $t-2$.

4.2 Inequality and the Democratization Scenario

In terms of determinants of the transition scenario, the model predicts some features to be relevant. From Proposition 4, the democratization scenario depends on the structure of the population, reflected by γ, as well as the parameters x, φ and c, which capture the rent-extraction ability of the ruler, the distortions associated with the lack of a social contract and the cost of failed conflicts, respectively. These parameters are likely to be related to both, time invariant, country specific features and time

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[36]See Papaioannou and Siourounis (2008) for details on the definition of permanent democratization.

[37]Details are reported in the correlation Table 7 in the Appendix.

variant (and possibly stochastic) short term contingencies like economic shocks related to production or external shocks related to the international context. Consequently, while the model suggests an important role of time invariant country specific characteristics, it also suggests that both the transition scenario and its timing are likely to be strongly affected by short term contingencies and random events like changes in income per capita that also affect inequality.[38]

Table 2 reports the results of cross-country regressions with one observation per country. The dependent variable in a linear probability framework is a binary indicator variable of a violent transition, which is regressed on different measures of inequality before the transition, as well as other controls. To account for the role of pre-transitional inequality for the democratization scenario we consider income inequality in the five year period before the democratic transition in each country. We also control for GDP per capita (data from the World Development Indicators), for the presence of Ethnic Tensions (ICRG) and for Ethno-linguistic and Religious Polarization (Montalvo and Reynal-Querol, 2005).[39] For a small subset of the countries, we also have access to proxies for land inequality constructed by Muller and Seligson (1987), which measure the share of agricultural population without land around 1970, that is, before the third wave of democratization began.

The results in Table 2 indicate that higher inequality before the transition is associated with a significantly higher likelihood of a violent transition. The findings are robust to the inclusion of the level of civil liberties before the democratic transition and additional controls.[40] Interestingly, once inequality is controlled for neither income per capita nor civil liberties before the transition appear to be significant determinants of the likelihood of violence during the democratic transition. This suggests that there is no direct effect of civil liberties on the transition scenario. Column (6) provides some indication that also the share of landless is related to the likelihood of violence, although these results should be interpreted with caution given the restricted sample size.

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[38] For instance the recent evidence by Brückner and Ciccone (2011) and Brückner, Ciccone, and Tesei (2011) documents the role of negative income shocks and oil price variations for triggering democratic transitions. Miguel, Satyanath, and Sergenti (2004) and Brückner and Ciccone (2010) find that negative income shocks (instrumented by changes in precipitation) and changes in the international commodity prices, respectively, affect the likelihood of observing civil conflicts in Sub-Saharan Africa.

[39] The measure of Ethnic Tensions is taken from ICRG; lower scores indicate countries where ethnic tensions are high because opposing groups are intolerant and unwilling to compromise, while higher scores indicate countries where tensions are minimal. All ethnic tension and polarization variables are time invariant.

[40] The specification in columns (3) and (4) is identical, but column (4) presents results restricted on the sample of countries for which additional information civil liberties before the transition, ethnic tensions, and GDP, is available, i.e., restricting to countries contained in the estimation sample of columns (4) and (5).

Table 2: Violence During the Democratic Transition

Dependent Variable:	Violent Transition (0/1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Inequality before Transition (Gini)	0.018*** [0.004]	0.017*** [0.004]	0.015*** [0.005]	0.014** [0.006]	0.026*** [0.007]	
Share of Landless						0.025*** [0.007]
Civil Liberties (pre-transition)		0.017 [0.034]	0.055 [0.039]	0.03 [0.073]	0.004 [0.061]	0.160* [0.087]
log per capita GDP (pre-transition)			-0.038 [0.023]	0.007 [0.033]	-0.026 [0.036]	-0.011 [0.038]
Ethnic Tensions (ICRG)				-0.075 [0.075]		
Ethnic Polarization (MRQ)					-0.596* [0.331]	
Religious Polarization (MRQ)					0.076 [0.258]	
Constant	-0.239 [0.167]	-0.252 [0.167]	-0.09 [0.223]	-0.008 [0.530]	-0.243 [0.352]	-0.373 [0.399]
Observations	61	60	60	33	39	23
adjusted R-squared	0.192	0.19	0.225	0.176	0.254	0.291

Notes: Dependent variable is binary, coefficients are OLS estimates, standard errors in parentheses. *, **, *** denotes significance on the 10%, 5% and 1% level, respectively. Countries with democratization driven by external intervention are excluded.

It is important to notice that, strictly speaking, the results of Table 2 cannot be directly interpreted in light of the theoretical taxonomy, which characterizes the occurrence of violent conflicts as a function of structural inequality (the variable γ capturing the concentration in the control of natural resources or the size of the elite in the model) and not income inequality measured by a Gini Index. The results are, nonetheless, suggestive since it can be shown that a similar taxonomy emerges in terms of Gini Indices.[41]

This preliminary analysis documents that the potential role of inequality as determinant of violence during democratization is broadly in line with the theoretical implications as well as with the previous results in the literature. Moreover, civil liberties do not appear to have a strong impact on the transition scenario. These results should be taken as suggestive, however, since the small sample size and the reliance on cross-country variation prevents a more detailed and robust analysis that accounts for unobserved heterogeneity by including country and year fixed effects.[42]

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[41]The iso-Gini curves are upwards sloping in the (γ, λ) space since higher λ and lower γ increase the Gini index. To maintain a constant Gini, a higher λ must be compensated by a lower γ.

[42]The main problem is that the main explanatory variable of interest, income inequality, exhibits little variation over time and is available in 5-year intervals, which essentially prevents exploiting within-country variation.

4.3 Violence during Democratization and the Quality of Democratic Institutions

The main testable hypothesis can be directly derived from Proposition 4 and refers to the consequences of violent and non-violent democratic transitions for the institutional quality of emerging democracies: *Democracies that emerge after a violent social conflict are less likely to lead to high quality democracies with a high degree of Civil (economic and political) Liberties.* To our knowledge, this implication has not been investigated empirically in the literature.

A look at the raw data provides a first impression about the empirical relevance of this hypothesis. Figure 4 plots the evolution of average civil liberties over the ten years before and after a permanent democratization. The plot distinguishes between countries that exhibited a transition to democracy that was accompanied by violent conflict in the year before or in the year of the transition, and countries in which the transition to democracy was peaceful.[43] Recall that a higher value of the index implies worse civil liberties. The overall pattern in both groups is similar and displays a sizable reduction around the year of democratization. Before democratization, civil liberties are worse on average (as indicated by the positive level of the demeaned index) but they substantially improve around democratization (as indicated by the negative values of the index). This pattern of civil liberties after democratization is to be expected since the classification used to identify the year of democratization requires a sufficiently large change in the political freedom and the presence of free and contested elections. Even if the dichotomous classification of democratization and the index of civil liberties do not capture the very same information, we should expect that the dichotomous classification of democratization is correlated with changes in the (non dichotomous) measure of the quality of civil liberties.

The main interest lies in testing the hypothesis that the transition scenario may have long lasting effects on the quality of the emerging democracy, however. Figure 4 suggests that this could be indeed the case. There is essentially no difference in the index of civil liberties across countries with violent and non violent transitions before democratization (as indicated by the very close horizontal dashed lines). This is in line with the findings of Table 2, where, conditional on inequality, the quality of civil liberties before the transition does not predict the transition scenario. After democratization, however, there is a clear difference in the level of civil liberties. After a non-violent democratization, civil liberties are about one index point better than average, corresponding to an improvement of about 1.5 index points. With a mean (standard deviation) of the index of civil liberties of 4.02 (1.94) in the sample, a transition to democracy improves the civil liberties by about three quarters of a standard

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[43]The civil liberties are time demeaned to capture global trends in civil liberties and then averaged over the respective pre- and post-transitional periods.

Figure 4: Civil Liberties around the Period of a Permanent Democratic Transition
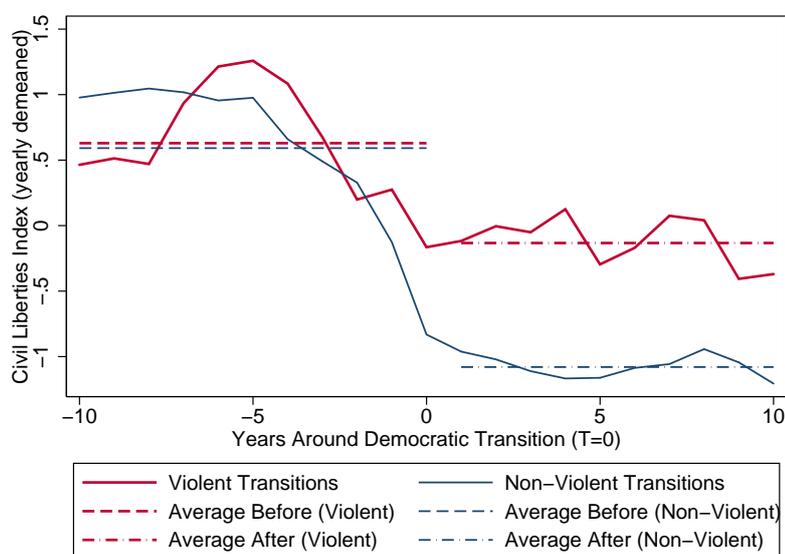
The figure plots the evolution of time-demeaned levels of civil liberties (level of civil liberty index in a country minus the average level of civil liberties for that year) in the ten years before and after a permanent democratic transition. See Section 4 for details on the data sources and definitions.

deviation. Countries with violent transition experience a much less pronounced improvement in civil liberties than countries with a peaceful transition to democracy, with an improvement of about half an index point or a quarter of a standard deviation. It is interesting that the effect of violence during democratization is long lasting and does not appear to vanish during the decade after the transition. Consequently, while the average improvement in civil liberties reflects an almost tautological fact, it is interesting to see the time pattern, the quantitative extent of the improvement, and in particular the difference that the democratization scenario appears to make.

The figure therefore provides a first shred of evidence pointing towards the relevance of the transition scenario. It should be noted, however, that this graphical illustration only includes countries that eventually democratize during the observation period and it is, therefore, not informative on the effect of democratization compared to countries that do not democratize in the observation period. Moreover, the data reflect averages that only account for the overall time pattern in these countries, but that do not control for any other potentially relevant covariates.

In order to test the theoretical hypothesis more structurally, we devise an empirical strategy that follows closely the theoretical predictions. Since the year of democratization differs across third-wave democracies, we can exploit variation across countries and over time. In particular, we estimate the

empirical specification,

$$Q_{i,t} = \delta Democ_{i,t} + \zeta ViolentDemoc_{i,t} + \alpha_i + \eta_t + X'_{i,t}\Gamma + \varepsilon_{it} \,, \tag{14}$$

where the dependent variable $Q_{i,t}$ reflects the institutional quality in terms of the extent of civil liberties in country i in year t. The variables $Democ$ and $ViolentDemoc$ represent binary variables that take value 1 in the year of, and all years after, a permanent democratization episode or a permanent democratization episode that does involve civil conflict, respectively. X is a vector of additional controls that include an indicator of civil conflict in country i in year t or $t-1$ to control for direct effects of violence, income controls (in terms of levels, growth rates, and region-specific trends) to account for economic influences that may matter for institutional improvements, as well as institutional quality in the past, $Q_{i,t-1}$, in some specifications. The specification also 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. In the estimation, standard errors allow for clustering on the country level and are robust to cross-sectional heterogeneity and within-country serial autocorrelation of the error term.

The coefficients of primary interest are δ, which captures the effect of democratization, and ζ, which estimates the distinct effect of democratization when it is associated with a violent conflict. Due to the inclusion of country and year fixed effects, δ represents 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 transition, i.e., that stay democratic or autocratic (second difference). In addition, ζ represents a further treatment effect of violence during the transition on this effect. In other words, ζ reflects a triple-difference (difference-in-difference-in-differences) estimator that indicates how the democratization effect varies when the democratic transition is associated with civil conflict.[44]

The empirical model (14) is specified closely along the lines of the theoretical prediction, according to which the major determinant of institutional quality after democratization is the transition scenario. As consequence of Proposition 4, the level of time invariant characteristics (like, e.g., γ, x or φ) or

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[44]A causal interpretation of the effects δ and ζ requires several critical assumptions to be satisfied. First, for the estimates to be unbiased, the reform variables (peaceful and violent democratization, respectively) have to be strictly exogenous conditional on the observable characteristics. Country fixed effects and year fixed effects, as well as additional controls in the vector X should account for the main influences predicted by the theory. Reverse causality is unlikely in the context of institutional quality, that is typically determined by the political regime and, in particular, democratization, see e.g. Giavazzi and Tabellini (2005). To account for a possible direct role of past civil liberties we also test an extensive specification of equation (14), by including lags of the dependent variable. This should help accounting for this potential confound. The test of the model implications does not hinge on a causal interpretation, however.

changes in income or income inequality (λ) over time do not matter for the emergence of a social contract, that is, for the level of civil liberties, beyond their role in influencing the democratization scenario. The empirical specification (14) explicitly accounts for the potential direct role of time invariant country characteristics, like, e.g., γ, by including country fixed effects, while potential direct effects of economic development, including technological change, economic development and λ, are captured by the time-varying controls X. Recall at this stage that the testable hypothesis refers to the consequences of the transition scenario. It is important to note that a test of this hypothesis does not require exogenous variation in income inequality or the population share of the elite, since these factors play no role for the consequences of democratization beyond determining the transition scenario. Hence, controlling for them in the empirical specification is all that is required. This way, the identification of the coefficients of interest, δ and ζ, exploits variation in the transition scenario conditional on country specific characteristics, which is exactly the variation that is interesting from the perspective of testing the theoretical prediction. Restricting the sample to permanent democratization events is a conservative choice in this context, given that the stability criterion already eliminates countries that revert to non-democracy very quickly.

The main empirical results are presented in Table 3. Column (1) reports the effect of democratization on institutional quality, using the most parsimonious specification of the empirical model (14) with only country and year fixed effects as additional controls. Democratization, regardless of whether it was associated with violence or not, has a significant negative effect on the civil liberties index. Recalling that the index takes larger values for worse protection of civil liberties the result implies, as expected, that democratization leads to improved civil liberties. Column (2) presents the main result regarding the role of the democratization scenario. The estimates suggest that a peaceful democratization has a significant negative effect on the civil liberties index. In contrast, violent democratization (where violence is measured as any incidence of conflict in the year of, or prior to, democratization, based on information from the PRIO data) has a significant positive coefficient. This suggests that the improvement in institutional quality was weaker (and about half as large) in countries that democratized under a violent scenario, compared to countries that experienced a peaceful transition to democracy. In terms of quantitative significance, a peaceful democratization improves civil liberties considerably, by about one standard deviation, whereas the improvement is only about half that in countries with violent democratization. To account for a potential direct effect of conflict on institutional quality, Column (3) presents the respective results with armed conflict as additional control. As one might expect, the occurrence of a social conflict in a certain period reduces civil liberties. A more interesting observation is that on top of controlling for armed conflicts in each period, the

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occurrence of violence during the democratic transition persistently and significantly reduces civil liberties compared to peaceful transitions to democracy, leaving the main results effectively unchanged.[45] Column (4) presents results for a specification that accounts for potential correlations between institutional quality and the transition to democracy by including past civil liberties (lagged by one year) as additional regressor. The results for this specifications reveal that the distinct effects of peaceful and violent democratization remain statistically significant and quantitatively almost identical.[46] The finding emerges consistently when adding controls for armed conflict and past institutional quality jointly, as suggested by the results in Column (5), or for an extended specification that also includes income controls (in terms of growth in GDP per capita lagged by one and two years, as well as log GDP per capita lagged by three years, and region-specific trends in growth of GDP per capita), as in Column (6). Throughout all specifications, the results show a substantially larger improvement in civil liberties after a peaceful democratization. At the same time, violent transitions exhibit a deterioration of institutional quality compared to countries with a peaceful transition to democracy. Moreover, in view of the finding of no effect of civil liberties on the transition scenario in Table 2, the similarity of the effects suggests that reverse causality should not be a major concern.

Table 4 presents results for the Freedom House classification of violence during the democratic transition in third wave democracies, see Karatnycky (2005). Columns (1) and (2) present results when distinguishing between transitions with significant or high violence from transitions with no or modest violence. Again, democratic transitions with little or no violence imply a significant improvement in institutional quality in terms of the civil liberties index, as indicated by the negative coefficient. Violent transitions, on the other hand, have a significantly worse effect on institutional quality. Columns (3) and (4) display the results when using all four levels of violence coded in the Freedom House data set, where democratic transitions with no violence at all represent the reference group. Consistent with the previous results, democratic transitions with no violence imply a significant improvement of institutional quality (in terms of a reduction of the civil liberties index). The effect is similar

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[45]Note that controlling for current and past conflicts accounts for the fact that civil conflict is often persistent or recurrent and might lead to a direct restriction of civil liberties, e.g., in the presence of terrorist acts. The effect of interest, the heterogeneous effects of democratization under peaceful and violent transitions, is essentially unaffected.

[46]Adding the lagged dependent variable as explanatory variable implies a reduction in the number of observations that can be used for estimation. For comparability with the results in Column (1), the long-run (steady state) effect of peaceful democratization in a specification with $Q_{i,t} = \gamma Q_{i,t-1} + \delta Democ_{i,t} + ...$ is given by $\delta/(1-\gamma)$. This implies that the estimates of the (long-run) effects implied by columns (2) and (4) are quantitatively very similar: -1.982 in column (2) compared to -2.074 = -0.504/(1-0.757) in column (4). Similar comments apply to the effect of violent democratization with 1.015 compared to 1.094=0.266/(1-0.757).

Table 3: Democratization, Conflict, and Institutional Quality

Dependent Variable	Institutional Quality					
	(1)	(2)	(3)	(4)	(5)	(6)
(Peaceful) Democratization	-1.807***	-1.982***	-1.964***	-0.504***	-0.493***	-0.448***
	[0.181]	[0.203]	[0.203]	[0.071]	[0.070]	[0.071]
Violent Democratization		1.015***	1.042***	0.266***	0.289***	0.223***
		[0.309]	[0.319]	[0.077]	[0.076]	[0.079]
Armed Conflict			0.213**		0.156***	0.196***
			[0.101]		[0.041]	[0.044]
Institutional Quality (lag)				0.757***	0.756***	0.733***
				[0.016]	[0.016]	[0.017]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	No	No	No	No	No	Yes
Region-specific Growth Trend	No	No	No	No	No	Yes
Observations	4,934	4,934	4,934	4,766	4,766	4,157
R-squared	0.855	0.858	0.859	0.945	0.945	0.941

Notes: OLS Fixed effects regression estimates, 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. Dependent variable is the Freedom House Civil Liberties Index on a scale of 1 to 7, with higher values corresponding to worse institutional quality. Conflict refers to any incidence of armed conflict. Classification of transition scenario based on data from PRIO, see section 4.1 for details. Income controls include growth in GDP per capita (lagged by one and by two years), as well as log GDP per capita lagged by three years. Region specific trends in GDP per capita growth for eight world regions (Western Europe, Eastern Europe and Central Asis, North America, Latin America, Africa, Middle-East, East Asia Pacific, South Asia) are included were indicated.

in countries with little or some violence during the transition, but much weaker in countries with high violence during the transition. The results are confirmed when restricting attention to a fully balanced panel (that reduces sample size substantially), and when accounting for spatial dependencies in democratic quality, as documented in Table 5.[47]

Finally, Table 6 presents the results from additional robustness checks. Columns (1) and (2) document the robustness of the results to alternative specifications that treat democratization as predetermined, not contemporaneous. Alternatively, the specifications in Columns (3) and (4) restrict attention to internal conflicts about government, instead of accounting for all conflicts.[48] Columns (5) and (6) report results for alternative classifications of the transition scenario, accounting for whether the democratization was successful, temporary, or a failure, based on the classification by Freund

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[47]The estimation of the spatial lag model requires restricting attention to a fully balanced estimation sample.

[48]While the more general conflict definition includes internationalized internal armed conflicts that occur between the government of a state and internal opposition groups with potential intervention from other states, the more restrictive definition refers to internal armed conflicts between the government of a state and internal opposition groups without any intervention from other states.

Table 4: Democratization Scenario: Institutional Quality Freedom House Transition Data

Dependent Variable	Institutional Quality			
	(1)	(2)	(3)	(4)
(Peaceful) Democratization	-1.932***	-0.456***	-2.128***	-0.509***
	[0.209]	[0.068]	[0.289]	[0.090]
Violent Democratization	0.720***	0.163*		
	[0.258]	[0.087]		
Modest Violence During Transition			0.357	0.207
			[0.446]	[0.164]
Significant Violence During Transition			0.454	0.047
			[0.508]	[0.132]
High Violence During Transition			0.917***	0.217**
			[0.325]	[0.101]
Institutional Quality (lag)		0.738***		0.738***
		[0.017]		[0.017]
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Income Controls	No	Yes	No	Yes
Region-specific Growth Trend	No	Yes	No	Yes
Observations	4,934	4,157	4,934	4,157
R-squared	0.857	0.941	0.857	0.941

Notes: OLS Fixed effects regression estimates, 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. Dependent variable is the Freedom House Civil Liberties Index on a scale of 1 to 7, with higher values corresponding to worse institutional quality. The classification of transitions follows Karatnycky (2005). See also notes of Table 3 and section 4.1 for details.

Table 5: Robustness: Balanced Sample and Spatial Dependencies

Dependent Variable	Institutional Quality					
	(1)	(2)	(3)	(4)	(5)	(6)
(Peaceful) Democratization	-2.019***	-2.035***	-2.008***	-2.024***	-0.391***	-0.400***
	[0.262]	[0.059]	[0.260]	[0.059]	[0.071]	[0.043]
Violent Democratization	0.837**	0.769***	0.862**	0.790***	0.228***	0.204***
	[0.367]	[0.122]	[0.379]	[0.122]	[0.077]	[0.075]
Armed Conflict			0.245*	0.281***	0.186***	0.196***
			[0.127]	[0.050]	[0.047]	[0.031]
Institutional Quality (lag)					0.783***	0.784***
					[0.017]	[0.011]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Inst. Quality (neighbors)	No	Yes	No	Yes	No	Yes
Observations	3,200	3,200	3,200	3,200	3,000	3,000
Adj. R-squared	0.869	0.867	0.872	0.868	0.954	0.953
Moran's I		0.059		0.059		-0.007
p-value		0.001		0.001		0.672

Notes: OLS Fixed effects regression estimates, 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. Dependent variable is the Freedom House Civil Liberties Index on a scale of 1 to 7, with higher values corresponding to worse institutional quality.

Table 6: Robustness: Predetermined Democratization, Internal Conflicts, Alternative Transitions

Dependent Variable	**Institutional Quality**					
	Predetermined Democratization		Internal Conflicts Only		Alternative Transitions	
	(1)	(2)	(3)	(4)	(5)	(6)
(Peaceful) Democratization	-1.851***	-0.279***	-1.962***	-0.448***		
	[0.200]	[0.057]	[0.203]	[0.071]		
Violent Democratization	0.934***	0.227***	0.860**	0.223***		
	[0.290]	[0.078]	[0.383]	[0.079]		
Armed Conflict		0.197***		0.196***		
		[0.043]		[0.044]		
Institutional Quality (lag)		0.762***		0.733***		
		[0.017]		[0.017]		
Successful					-0.541***	-0.629***
					[0.102]	[0.127]
Violent Successful						0.301**
						[0.127]
Temporary					-0.299***	-0.334***
					[0.072]	[0.081]
Violent Temporary						0.078
						[0.178]
Failed					0.064	0.066
					[0.090]	[0.091]
Violent Failed						0.003
						[0.232]
Armed Conflict					0.201***	0.202***
					[0.047]	[0.046]
Institutional Quality (lag)					0.722***	0.717***
					[0.023]	[0.024]
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Income Controls	No	Yes	No	Yes	Yes	Yes
Observations	4,891	4,154	4,934	4,157	3,811	3,811
Adj. R-squared	0.853	0.94	0.857	0.941	0.934	0.935

Notes: OLS Fixed effects regression estimates, 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. Dependent variable is the Freedom House Civil Liberties Index on a scale of 1 to 7, with higher values corresponding to worse institutional quality. Income controls in panel B include growth in GDP per capita (lagged by one and by two years), as well as log GDP lagged by three years. Columns (1) and (2): Democratization and Violent Democratization are measured as of $t-1$. Columns (3) and (4): Violence during democratization is coded by restricting attention to internal civil conflicts only. Columns (5) and (6): Transitions coded following the classification by Freund and Jaud (2012) in combination with the baseline classification of violent transitions based on PRIO data, see also section 4.1 for details.

and Jaud (2012). While successful transitions improve institutional quality significantly, the effect is smaller (albeit still significant) for temporary transitions, while no effect is detected for failed transitions. Throughout, however, the effect on institutional quality is stronger if the respective transition was peaceful, rather than violent.

Additional unreported robustness checks reveal that these results are robust to using alternative codings of democratization events following the classifications of Freedom House, Polity IV, or Golder (2005). The distinct effect of violent transition scenarios for the subsequent civil liberties also arises when distinguishing full and partial democratization events according to the definition of Papaioannou and Siourounis (2008).[49] Using the same empirical strategy to quantify the dynamics of the democratization effects as Papaioannou and Siourounis, it turns out that the transition scenario also has substantial long-run consequences for civil liberties.[50] Finally, the results are qualitatively identical when applying alternative estimation methods.[51]

5   Concluding Remarks

This paper has investigated the question why some democracies exhibit low institutional quality in terms of individual civil liberties in the political and economic domains. The results suggest that part of the answer to this unsettled question can be found by considering the different scenarios under which these democracies emerged initially. In particular, the level of violence during the transition can help explaining part of the persistent differences in the quality of civil liberties in the emerging democracies.

A simple theoretical model has been developed to study the different democratization scenarios within a unified framework. The theory characterizes the conditions under which democratization involves violence, and the consequences of violence during the transition for the quality of the emerging democracies. The politico-economic equilibrium is a non-democratic regime that persists as long as it represents the best option for the ruling elite that, at the same time, has to be sufficiently strong to retain power. Endogenous democratization emerges peacefully or following an open conflict, depending on the relative power and the relative economic incentives of the different groups. The transition scenario has important implications for the institutional quality of the emerging democracy in terms of the emergence of a social contract, which reflects the absence of exploitation of some groups of society to the benefit of the group in power, and the presence of voluntary redistribution among the different groups of society. Violent transitions are less likely to lead to such a social contract with high

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[49]This distinction uses variation in the improvement in democratic quality and effectively delivers a trichotomous measure of political regimes. The results are available upon request and deliver quantitatively almost identical effects of violent transitions.

[50]The specification uses indicator variables for three year intervals around the transition. The results, which are available upon request, show that the effect is strongest for the indicator that takes value 1 in the fourth, fifth and sixth year after the transition, and for the indicator that captures the long-run effects after the sixth year.

[51]In particular, the results are qualitatively similar when estimating fixed effects ordered logit models using the methodology proposed by Baetschmann, Staub, and Winkelmann (2011). Results are available upon request.

institutional quality than peaceful transitions. This testable hypothesis has been investigated using cross-country panel regressions that exploit information on the different timing of democratization in countries of the third wave of democratization. The results document that the effect of democratization on civil liberties is significantly (and persistently) weaker in countries that experienced violent, rather than peaceful, transitions. The results are robust to controlling for the occurrence of violent conflicts (beyond violence during democratization), for lagged values of civil liberties, and for and several other relevant covariates.

The analysis suggests some potentially interesting avenues for future research. The transition scenario may have a persistent effect on other outcomes like the effectiveness of public policies, the level of redistribution, or the degree of political corruption. A related direction for future research relates to the empirical implications of the transition scenario for the stability and consolidation of democracy. Democracies that emerge out of violence may also be less stable. This possibility has not been tested in the empirical analysis, which exploits the timing of permanent transitions to democracy. Finally, the model and the empirical analysis have used a dichotomous representation of political regimes and type of transition (violent and peaceful). Recent research suggests the emergence and consolidation of hybrid regimes, which could also be related to the different democratization scenario.

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Appendix A: Analytical Derivations and Proofs

Proof of Proposition 1 and Characterization of the Functions $\overline{\Lambda}_E(\gamma)$, $\underline{\Lambda}_P(\gamma)$ and $\underline{\Lambda}_E(\gamma)$. Consider an economy ruled by the Elite. Recall that the payoffs of the different groups are given by

$$\widetilde{y}^E = y^E + x\frac{(1-\gamma)}{\gamma}y^P(1-\varphi)$$

and

$$\widetilde{y}^P = y^P(1-x) \ .$$

The Elite prefers a social contract under democracy rather than being the ruling group if, and only if, income inequality is low enough and the social contract is sufficiently efficiently enhancing, that is *iff*

$$y^E + x\frac{(1-\gamma)}{\gamma}y^P(1-\varphi) \leq \gamma y^E + (1-\gamma)y^P$$

which, rearranging, can be expressed as

$$\lambda \leq \overline{\Lambda}_E(\gamma) \equiv \frac{(1-\gamma)}{\gamma}\frac{(\gamma - x(1-\varphi))}{(1-\gamma)} = 1 - \frac{x(1-\varphi)}{\gamma} \tag{15}$$

The function $\overline{\Lambda}_E$ is increasing in γ. Also notice that the people always prefer a social contract under democracy to be ruled by the Elite since it is always true that $y^P(1-x) \leq y$ since $y^P < y$ and $(1-x) < 1$. Therefore, when the Elite is ruling, condition (15) is both necessary and sufficient to make the social contract sustainable.

Consider next the derivation of the functions $\underline{\Lambda}_P(\gamma)$ and $\underline{\Lambda}_E(\gamma)$. From the perspective of the People, a democratic social contract is preferred to being the ruler if, and only if,

$$y^P + x\frac{\gamma}{1-\gamma}y^E(1-\varphi) \leq \gamma y^E + (1-\gamma)y^P \ .$$

Rearranging one gets,

$$\lambda \geq \underline{\Lambda}_P(\gamma) \equiv \frac{(1-\gamma)}{(1-\gamma) - x(1-\varphi)} = \frac{1}{1 - \frac{x}{1-\gamma}(1-\varphi)} \tag{16}$$

which is also increasing in γ. To check whether a social contract is feasible we also have to investigate the preferences of the other group. The Elite prefers a democratic social contract to being ruled by the People in the absence of a social contract if, and only if,

$$y^E(1-x) \leq \gamma y^E + (1-\gamma)y^P$$

which can be expressed as,

$$\lambda \leq \underline{\Lambda}_E(\gamma) \equiv \frac{1-\gamma}{1-\gamma-x} = \frac{1}{1 - \frac{x}{1-\gamma}} \ . \tag{17}$$

This function is also increasing in γ. Notice that, since $0 < \varphi < 1$, the function $\overline{\Lambda}_E(\gamma)$ always lies above $\underline{\Lambda}_P(\gamma)$.

Proof of Proposition 2 and Derivation of the Functions $\Upsilon(\gamma)$ and $\Psi(\gamma)$. We need to characterize the conditions under which it is optimal for the people to engage in a violent conflict to attempt getting in control of the state apparatus. Consider first the case in which, being successful, the People expect to rule in the absence of a social contract. In this case starting a conflict is profitable (in expectation) if, and only if,

$$\pi^E[y^P(1-x)(1-c)] + (1-\pi^E)[y^P + x\frac{\gamma y^E}{1-\gamma}(1-\varphi)] \geq y^P(1-x) \ .$$

Rearranging one gets

$$\pi^E[(1-x)(1-c)] + \left(1 - \pi^E\right)[1 + x\frac{\gamma\lambda}{1-\gamma}(1-\varphi)] \geq (1-x) . \tag{18}$$

Using the definition of π^E from (4)

$$\pi^E = \frac{\gamma y^E}{y} = \frac{\gamma\lambda}{\gamma\lambda + (1-\gamma)} \quad \text{and} \quad \left(1 - \pi^E\right) = \frac{(1-\gamma)y^P}{y} = \frac{(1-\gamma)}{\gamma\lambda + (1-\gamma)} . \tag{19}$$

Substituting (19) in (18)

$$\gamma\lambda\left[(1-x)(1-c)\right] + (1-\gamma)\left[1 + x\frac{\gamma\lambda}{1-\gamma}(1-\varphi)\right] \geq (1-x)\left[\gamma\lambda + (1-\gamma)\right]$$
$$\gamma\lambda\left[(1-x)(1-c)\right] + \left[1 - \gamma + x\gamma\lambda(1-\varphi)\right] \geq (1-x)\left[\gamma\lambda + (1-\gamma)\right]$$
$$(1-\gamma)x \geq \lambda\gamma[c(1-x) - x(1-\varphi)] \tag{20}$$

If the cost of conflict is sufficiently large, that is if $c > \frac{x}{1-x}(1-\varphi)$, we can rearrange this as

$$\lambda \leq \Upsilon(\gamma) \equiv \frac{(1-\gamma)}{\gamma}\frac{x}{c(1-x) - x(1-\varphi)} . \tag{21}$$

Notice that the function $\Upsilon(\gamma)$ is positive if, and only if, $c > \frac{x}{1-x}(1-\varphi)$ since otherwise a conflict always pays-off in expectations. The function $\Upsilon(\gamma)$ is decreasing in γ.

Finally consider the case in which the People expect a social contract to be in place in democracy. In this case triggering a conflict is optimal if, and only if,

$$\pi^E[y^P(1-x)(1-c)] + \left(1 - \pi^E\right)y \geq y^P(1-x)$$

or, using again the definition of π^E, from (19),

$$\gamma\lambda(1-x)(1-c) + (1-\gamma)\left[\gamma\lambda + (1-\gamma)\right] \geq (1-x)\left[\gamma\lambda + (1-\gamma)\right]$$

and rearranging,

$$\gamma\lambda[(1-\gamma) - c(1-x)] \geq (1-\gamma)\left[\gamma - x\right] . \tag{22}$$

If $(1-c) - (\gamma-x) > 0$ rewrite (22) as,

$$\lambda \geq \Psi(\gamma) \equiv \frac{[1 - \frac{x}{\gamma}]}{[1 - \frac{c(1-x)}{(1-\gamma)}]} .$$

Notice that for $\gamma < x$ the condition always holds. For $\gamma > x$ (but still not too large so that $(1-c) - (\gamma-x) > 0$) $\Psi(\gamma)$ is an increasing function of γ with a vertical asymptote at $\overline{\overline{\gamma}} = (1-c) + x$ (that is the level of γ obtained solving $(1-c) - (\gamma-x) = 0$). Finally if $(1-c) - (\gamma-x) < 0$, that is if $\gamma > \overline{\overline{\gamma}}$, then the condition (22) never holds and for the People it is never optimal to trigger a conflict if they expect a social contract under democracy.

Derivation of the Thresholds $\underline{\gamma}$ and $\overline{\gamma}$. Recall that $\underline{\gamma}$ denotes the level of γ such that $\underline{\Lambda}_E(\gamma) = \Upsilon(\gamma)$ that is, such that,

$$\frac{1-\gamma}{1-\gamma-x} = \frac{(1-\gamma)}{\gamma}\frac{x}{c(1-x) - x(1-\varphi)} .$$

Solving for γ gives

$$\underline{\gamma} \equiv \frac{x(1-x)}{c(1-x) + x\varphi} . \tag{23}$$

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Symmetrically, $\overline{\gamma}$ is the level of γ such that $\underline{\Lambda}_E(\gamma) = \Psi(\gamma)$, that is, such that

$$\frac{1-\gamma}{1-\gamma-x} = \frac{(1-\gamma)[\gamma-x]}{\gamma[(1-\gamma) - c(1-x)]} .$$

Solving for γ gives

$$\overline{\gamma} \equiv \frac{x}{c} , \tag{24}$$

where $\underline{\gamma} < \overline{\gamma}$ because $0 < x^2 \varphi$.

Proof of Proposition 4. The characterization of the parametric ranges for the different democratization scenario immediately follows from Propositions 1, 2 and 3. What is left to be shown is that it is not optimal for the Elite to offer democratization when the threat that the People trigger a conflict gets binding.

Depending on whether $\gamma \leq \underline{\gamma}$ or $\underline{\gamma} \leq \gamma \leq \overline{\gamma}$ the Elite rationally anticipates that the People will not (respectively will) offer a democratic social contract. If $\gamma \leq \underline{\gamma}$ then in case of successful conflict, the People will rule in the absence of a social contract. Anticipating this, the Elite will fight the conflict when they face a credible threat since it is always the case that

$$\pi^E[y^E + x\frac{(1-\gamma)y^P}{\gamma}(1-\varphi)] + \left(1 - \pi^E\right)y^E(1-x) > y^E(1-x) . \tag{25}$$

If $\underline{\gamma} \leq \gamma \leq \overline{\gamma}$ then a social contract emerges if the People win the conflict since, as discussed in Section 3, both groups have incentives to adhere to it ex-post (once the People get to control the state). The expected payoff of conflict for the Elite is larger than the payoff for accommodating democratization (that is to give up as soon as the threat of conflict is credible) if, and only if,

$$\pi^E[y^E + x\frac{(1-\gamma)y^P}{\gamma}(1-\varphi)] + \left(1 - \pi^E\right)y \geq y , \tag{26}$$

which is always verified. Consequently the Elite do not give up in the face of (the shadow) of conflict and democratization can be enforced by the People only by winning an open fight.

Table 7: **Correlation Table**

	Civil Liberties	Demo	Conflicts	Conflict (Internal)	GDP Growth $(t-1)$	GDP Growth $(t-2)$
Civil Liberties	1.0000					
Democratization	-0.2695	1.0000				
Armed Conflict	0.2408	-0.0599	1.0000			
Armed Conflict (Internal)	0.2270	-0.0692	0.9457	1.0000		
GDP p.c. Growth $(t-1)$	-0.0869	0.0049	-0.0731	-0.0973	1.0000	
GDP p.c. Growth $(t-2)$	-0.0864	-0.0279	-0.0503	-0.0761	0.4121	1.0000
GDP p.c. $(t-3)$	-0.6235	-0.0192	-0.2183	-0.1948	0.0535	0.0637

Data sources: Freedom House, Papaioannou and Siourounis (2008), UCDP/PRIO, and Karatnycky (2005); Number of observations: 4,934 for benchmark sample with civil liberties, democratization and conflict, 4,275 for sample with income controls. See data description for details.

Appendix: Not For Publication / For Publication in Online Supporting Material

Appendix B: A Simple Production Economy

Income Production and Income Distribution. To illustrate the source of income inequality and its change over time, consider the following simple extension of the model to a production economy. The economy is characterized by subsequent generations of individuals. Each generation of individuals t has size $L \equiv 1$ and has a stock of natural resources (or land) $N_t = N$, human capital H_t and labor $L_t = 1$ at its disposal. Factors of production are used in the aggregate production function $Y_t = Y(A_t H_t, L, N)$ where A_t denotes a human capital augmenting productivity parameter.

All agents are endowed with h_t units of human capital and one unit of (homogeneous) labor, but all available natural resources N are equally distributed only among the members of the elite E, so that $n_t^E = N/\gamma$, while for the people $n_t^P = 0$. The assumption that the people own no land is without loss of generality. All that is required for the analysis is some inequality in terms of resource endowments between elite and people. Factor incomes from supplying endowments to the market are given by $y_t^i = w_t + r_t h_t^i + \rho_t n^i$ for all $i = E, P$. Factor prices are determined on the market and equal marginal productivity: $w_t = \partial Y_t / \partial L$, $r_t = \partial Y_t / \partial H_t$ and $\rho_t = \partial Y_t / \partial N$.

Since the Elite controls (a larger share of) natural resources we have $y_t^E \geq y_t^P$, $\forall t$. As engine of economic growth and of changes in income inequality, we consider a reduced form endogenous technological progress that depends on the stock of human capital. In particular, we consider $A_t = A_{t-1}(1 + a(H_{t-1}))$ with $a(H_{t-1})$ being a (weakly) monotonically increasing function, $a'(\cdot) \geq 0$. This formulation is in line with the endogenous growth literature where the human capital acquired by one generation exerts an externality on productivity of the next generation, see, e.g., Nelson and Phelps (1966). Any formulation implying a positive relationship between human capital and technological progress is equivalent for the results.

Finally, assume that human capital and natural resources are substitutes. Then the available stock of human capital in a given generation indirectly makes human capital a more important source of income, relative to natural resources, in the next generation. The technical progress therefore leads to a reduction in income inequality (as discussed in more details below) across generations which is associated with a process of erosion of the conflict potential of the Elite. An example of a neoclassical production function satisfying these assumptions is $Y_t = (A_t H_t + N)^\alpha (L_t)^{1-\alpha}$, with $0 < \alpha < 1$. Equivalently one could adopt a technology with one commodity being produced in two sectors, with labor being optimally allocated across sectors like, e.g., $Y_t = Y_t^T + Y_t^M = N^\alpha L_t^{T1-\alpha} + (A_t H_t)^\alpha (L_t^M)^{1-\alpha}$, where sector T is natural resource intensive while sector M is human capital intensive.

Reduction in Income Inequality. The assumed substitutability between human capital H and natural resources N in the aggregate production function and the dynamics of the technological progress imply that the rents to natural resources decrease during the process of development. For example, in the case of the previously cited production function $Y_t = (A_t H_t + N)^\alpha (L_t)^{1-\alpha}$, with $0 < \alpha < 1$, the rents on natural resources, are given by $\rho_t = \alpha (A_t H_t + N)^{\alpha-1} L^{1-\alpha}$ so that $\partial \rho_t / \partial A_t < 0$ and $\lim_{A \to \infty} \rho_t = 0$.

The share of income produced by (and distributed to the owners of) natural resources decreases overtime and eventually converges to zero, unlike the shares of income produced by labor and human capital. As a result, income inequality decreases overtime and vanishes in the limit,

Lemma 1. *Income inequality λ_t decreases monotonically overtime with $\lim_{t \to \infty} \lambda_t = 1$.*

Consider a sufficiently underdeveloped economy, that is, an economy where the productivity of human capital A_t is sufficiently low so that natural resources represent an important source of income.

Notice that since the Elite is assumed to control a relatively larger share of natural resources than the People, one can make relative income of the groups λ large by making the productivity of human capital sufficiently small. From Proposition 3 an economy with a large enough inequality is characterized by an oligarchy ruling unchallenged.

The subsequent increase in the importance of human capital reduces income inequality from Lemma 1. This implies that for a given γ, the development of the economy takes place on a vertical trajectory in the $\{\gamma, \lambda\}$ space as postulated in Section 3.4.