

Inequality, Coup-Proofing and Civil Wars*

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Abstract

Does inequality increase the risk of civil war? This paper posits that inequality affects civil wars and other forms of political violence through two pathways: (1) it heightens the risk of political violence by fueling distributive conflicts; and (2) it reduces coup-proofing, which, in turn, increases the capacity of the military to fight insurgents. Combining these effects implies that the net effect of inequality on civil war is ambiguous. Although unequal countries are more unstable, political violence rarely takes the form of wars because such countries have strong militaries. Inequality, however, breeds other forms of political violence, in particular those in which violence is instigated by the military (e.g., coups). In such instances, the two effects of inequality reinforce each other. Using data on 148 countries between 1960 and 2008, I find that inequality increases the overall risk of irregular leader removal but that its effect differs across different forms of violence. In particular, while inequality fosters coups, it has no discernible effect on the likelihood of civil war onset. I also provide evidence consistent with my causal mechanisms: (1) inequality creates greater threat to the rulers by fueling political instability; (2) inequality reduces coup-proofing; and (3) coup-proofing increases the likelihood of civil war.

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Does inequality increase the risk of civil war? While inequality has been found to increase the likelihood that a country experiences diverse forms of political violence, such as riots, demonstrations and revolutions (Alesina and Perotti 1996; Roe and Siegel 2011), empirical studies about the effect of inequality on civil war onset have been largely inconclusive (e.g., see Collier and Hoeffler 2004; Fearon and Laitin 2003).¹ The lack of consistent relationship between inequality and civil war challenges the expectations of a celebrated literature which predicts that inequality should make civil war more likely notably because it fuels distributive conflicts (e.g., Davies 1962; Gurr 1970).

One of the main explanations for these ambiguous results is that 'greed' (or opportunity) is a better predictor of conflict than 'grievances' (or motivation) (e.g., Collier and Hoeffler 2004).² However, inequality does not only capture grievances. For example, at any income level, increasing inequality decreases the opportunity cost of potential recruits – who are typically members of the lower class. This, in turn, reduces the cost that political entrepreneurs – who are often (albeit not always) members of the economic elites – must pay to finance a rebellion. Hence, inequality creates both motives *and* opportunities for insurgency.

I provide and test an explanation that accounts both for the absence of a consistent relationship between inequality and civil war, and for the strong (positive) effect of inequality on other forms of political violence. I posit that interclass inequality³ – defined as inequality between the masses and the economic elites – affects civil wars and other forms of political violence through two pathways. First, as expected by previous authors, inequality heightens the risks of political violence – including in the form of civil wars – by generating conflicts over the distribution of resources. I refer to this as inequality's direct effect.

Second, inequality has also an indirect effect, which operates through its influence on the structure of the military. This effect builds on the important work of Svoboda (2012, 2013), who argues that unequal countries tend to have stronger militaries. Rulers of such countries are more likely to face threats from the population, which forces them to delegate more power to the military in order to quell unrest.⁴ This logic further suggests

¹One exception is the literature focusing on horizontal inequality (e.g., Cederman et al 2011). These studies are discussed in more detail below.

²Others have suggested that the weak results are due to measurement error or to the poor quality of inequality data (e.g., Lichbach 1989).

³Throughout the paper, I use 'inequality' as shorthand for 'interclass inequality.'

⁴Such threats may – but usually do not – take the form of civil wars. In autocracies,

that inequality reduces the ability of rulers to coup-proof, since such tactics reduce the capacity of the military to repress.

Inequality's indirect effect has *different* implications on different forms of political violence. On the one hand, having a strong military reduces the likelihood of violence when, as for civil wars, the military is the main agent that fights *against* those that initiate violence. Militaries that are not weakened by coup-proofing and that have the capacity to intervene domestically are also better at fighting civil wars, which deters potential insurgents. Thus, inequality has two confounding effects on civil wars. It increases the propensity for conflict (direct effect) while simultaneously increasing the capacity of the military to fight insurgents (indirect effect); leading to an ambiguous net relationship.

On the other hand, inequality should have a particularly strong positive effect on forms of violence that are *instigated* by the military, such as military coups. In such instances, the two effects of inequality reinforce each other: inequality simultaneously stirs distributional conflicts (direct effect) and increases the capacity of the military to mount coups (indirect effect). Inequality also stirs political violence whenever the military is not the main actor fighting against those that initiate violence (e.g., demonstrations). This suggests that, although highly unequal countries are on average more unstable, threats to the regime rarely take the form of civil wars because such countries have strong militaries. This argument helps to explain why many unequal countries are more prone to coups than civil wars. For example, between 1950 and 2006, Bolivia – one of the world's most unequal countries – experienced nine successful and three failed coups but not a single civil war.⁵

This paper thus contributes to the small but growing literature that treats the risks of coups and civil wars as related threats to the regime (e.g., Roessler 2011; Bodea, Elbadawi and Houle 2015). As pointed out by Fearon (2004), "both coups and peripheral insurgencies are strategies for using violence to take power" (p.289). Similarly, Roessler (2011) argues that "coups and insurgencies represent alternative antiregime technologies" (p.303). This paper suggests that as inequality increases, challengers become more likely to opt for coups as opposed to insurgencies.

I test this argument with a dataset covering up to 148 countries between 1960 and 2008. Using three indicators of inequality, I first show that inequality increases the likelihood of inequality can, for example, accentuate pressures for democratization.

⁵Bolivia experienced multiple small conflicts during that period, but none of them attained the threshold of a full-blown civil war (as defined by the Political Instability Task Force, see below).

irregular leader removals. I then turn to different forms of challenges to the regime. I find that while inequality increases the likelihood of coups, it has no discernible effect on that of civil war. Finally, I examine the causal mechanisms driving the aggregate relationships. Consistent with my argument, I find that: (1) inequality creates greater threats to rulers by fueling political instability; (2) inequality reduces the use of coup-proofing; and (3) coup-proofing increases the likelihood of civil war. These findings suggest that the weak effect of inequality on civil wars may at least partially be explained by its effect on coup-proofing.

Apart from providing an answer to the puzzle discussed above, I contribute to the literature in multiple ways. First, I contribute to the empirical literature on the effect of inequality on political violence. For example, this paper is the first to test the effect of inequality on irregular leader removals. Previous studies have only looked at particular means through which rulers can be unconstitutionally ousted, such as coups, civil wars or revolutions. Moreover, as discussed below, some recent empirical studies have found that inequality breeds civil war (e.g., Bartusevičius 2014; Baten and Mumme 2013). My empirical findings on the effect of inequality on civil wars contribute to this ongoing debate. My tests differ from previous ones notably because they use measures of inequality that are more theoretically relevant.

Furthermore, few authors have tested the effect of inequality on coups. Svoblik (2012, 2013) finds that there is an inverted U-shaped relationship between inequality and coups, but his analysis is restricted to autocracies. Collier and Hoeffler (2005) test the effect of inequality on coups but their sample is limited to sub-Saharan Africa. Some authors show that inequality increases the likelihood of democratic reversals, which usually (but not always) take the form of coups (e.g., Houle 2009). But, to my knowledge, this is the first paper to test the effect of inequality on coups in a world sample that contains both democracies and autocracies. While testing my causal mechanisms, I also provide evidence that inequality fuels many forms of political instability, such as riots and revolutions. These findings corroborate those of previous studies using different measures of inequality, such as capital shares (e.g., Alesina and Perotti 1996).

Second, I contribute to the literature on the causes and consequences of coup-proofing. Importantly, this is the first study to empirically demonstrate that inequality reduces coup-proofing. I also show that coup-proofing increases the likelihood of civil war. Although Powell (2014b, 2014c) has reported a similar finding, my analysis differs from his in a number of important ways. First, Powell's (2014c) analysis is limited to sub-Saharan Africa. Second, Powell (2014b) finds that coup-proofing only increases the risk of civil war in autocracies that are facing a large coup threat. My analysis generalizes this finding

to all regions and finds that the relationship is not conditional on the risk of a coup.

Previous Literature

The idea that inequality leads to political violence dates back to at least Karl Marx, who argued that inequality between the owners of the means of production and the laborers fuels class warfare.⁶ A similar argument was latter restated and refined by the deprivation theory (e.g., Davies 1962; Gurr 1970) and other authors (e.g., Midlarsky 1988; Muller 1985; Paige 1975; Russett 1964). More recently, Boix (2008), whose argument explicitly focuses on inequality between social classes, has argued that inequality increases the likelihood that the lower class initiates a civil war in order to install a regime in which it dominates.⁷

There are two main groups of empirical studies testing the effect of inequality on civil wars. The first focuses on the overall level of inequality in the society, usually measured with Gini coefficients. The findings of these studies have been inconclusive. While some authors find no relationship (e.g., Collier and Hoeffler 2004; Collier, Hoeffler and Rohne 2009; Fearon and Laitin 2003), others find a positive relationship (e.g., Bartusevičius 2014; Baten and Mumme 2013; Boix 2008; Russett 1964), and yet others a negative relationship (e.g., Parvin 1973). Moreover, Besançon (2005) finds that inequality has a negative effect on ethnic civil wars but a positive one on revolutions. As illustrated by the findings of Besançon (2005), authors that find a positive relationship often focus on a specific type of conflict. Bartusevičius (2014), for example, looks at cross-ethnic popular rebellions that led to at least 25 deaths.

Despite the differences in their findings, these empirical studies share several limitations. First, as noted above, most studies (especially the most recent ones) use Gini indexes to measure inequality. Authors that do not find a positive relationship typically use income Gini coefficients. Those that do find that inequality causes conflicts often use non-income Gini coefficients. For example, some are based on education attainment (Bartusevičius 2014) and others on physical height (Baten and Mumme 2013). Bartusevičius (2014) also provides evidence based on income Gini coefficients, but the estimated relationship is usually only significant at the ten percent level.

One potential problem with using Gini coefficients (whether based on income or not) is that they do not capture inequality between social classes – or between any particular

⁶Marx did not focus on civil wars but on political violence more generally.

⁷Boix (2008) further argues that inequality is more destabilizing when capital is immobile.

groups – but the overall level of inequality in a society. In fact, the arguments of Marx, on which most of that literature (at least implicitly) builds, and many of the more recent studies (e.g., Boix 2008) unequivocally center on the role of inequality between the masses and the rich. Gini indexes, however, are opaque and do not map neatly into any specific cleavage. Different income distributions can lead to the same Gini coefficient values. A high Gini coefficient value could be driven by a high level of inequality between, for example, the 30th and 10th percentiles of the income distribution or between the 99th percentile and the rest. These two types of income distributions may have very different consequences on political stability, especially if we believe that instability is primarily driven by inequality between the rich and the masses.

Moreover, most (albeit not all) authors using income Gini indexes rely on datasets that employ national surveys.⁸ The problem is that different countries use different methods and definitions in their surveys, which renders cross-national comparisons unreliable. For example, some surveys are based on net and others on gross income, some on expenditures and others on income, and in some cases the unit of analysis is the household and in others the individual. Finally, most previous authors use datasets with many missing values, often around 60 percent of the full population, which creates a serious sample-selection bias.

In response to the studies looking at the overall inequality level, a second group of authors have examined the effect of horizontal inequality – inequality between culturally defined groups (usually ethnic groups) – on the onset of civil wars (e.g., Cederman et al. 2011; Gubler and Selway 2012; Houle *forthcoming*¹; Østby 2008; Stewart 2000). These studies tend to show that horizontal inequality does breed conflict. Of course, an ethnic group is not the same as a social class and so these studies do not answer the question of the effect of interclass inequality on wars. It is quite possible that interclass inequality has different implications than inequality between ethnic groups. As discussed below, my argument about why inequality between the economic elites and the masses has little effect on conflicts is not directly applicable to the question of horizontal inequality. Among other contributions, the empirical analysis presented below tests the effect of inequality on civil war using measures that more closely proxy for inequality between the top of the income distribution and the rest.

⁸This problem is less important in studies that use the Gini indexes of Solt (2009, 2014), since Solt (2009, 2014) standardizes Gini coefficients taken from different sources (see below).

Inequality and Civil Wars

In this paper, I posit that inequality has two effects on political violence: a direct and an indirect effect. Neither effect, on its own, is entirely new to the literature. Both draw heavily from existing studies. Taken together and applied to the question of the effect of inequality on civil war, however, they offer an explanation for the absence of a consistent relationship between inequality and civil war. They also explain why inequality has a much stronger effect on other forms of political violence. Below, I explain these two effects in detail and then discuss the net effect (the combination of the direct and indirect effects) of inequality on different forms of political violence.

Direct Effect: Inequality Fuels Distributive Conflicts

As implied by the arguments of Marx and others (e.g., Davies 1962; Gurr 1970), inequality fuels distributive conflicts. I argue that inequality fosters *all* forms of political violence through this mechanism. Below, however, I focus first on coups and then on civil wars.

Imagine a situation in which a regime is dominated by either the lower or the upper class. For the sake of the argument, let us assume that the regime represents the interests of the upper class (although the logic of the argument is unaltered if it instead represents those of the lower class). Moreover, the regime can either be democratic or authoritarian. For simplicity, I assume that it is authoritarian. A political entrepreneur can mount a coup. In order to successfully establish him/herself as the new ruler after a (successful) coup, he/she is assumed to have to form a political coalition that supports the new regime. That is, a new regime is more easily established and maintained when a political entrepreneur can rely on a solid source of support. No political regime, even if authoritarian, can be instated and maintained without a coalition (Bueno de Mesquita et al. 2003; Geddes 1999).

Inequality between social classes widens the gap between the preferences over economic policies of members of the lower and the upper classes (Acemoglu and Robinson 2006; Boix 2003, 2008). For example, the lower class may want to increase redistribution or to adopt poor-friendly policies, such as public education and public health, while the upper class may oppose such policies. In the present example (in which the upper class is politically dominant and the regime is authoritarian), interclass inequality creates incentives for members of the lower class to support potential coup plotters in exchange for policies more in line with their own preferences. Inequality can thus produce political coalitions on which coup leaders can rely. This, in turn, facilitates the establishment and maintenance of the new regime; hence increasing the likelihood that a coup will be staged

in the first place.⁹ Notice that the relationship is driven by the level of inequality between the class in power (here, the upper class) and the one that is not (lower class), not by the country's overall inequality level, which also reflects the level of inequality within each class.

Although the example above pertains to left-wing coups (i.e. staged to represent the interests of the lower class) waged against autocracies, the argument extends to right-wing coups and coups staged against democracies. In fact, Boix (2003) and Acemoğlu and Robinson (2006) theorize that inequality between social classes instigates right-wing coups against democracies. In a democracy the median voter will be a member of the lower class, and so the upper class can stage a right-wing coup to reduce redistribution. A similar argument could be made that democracies that fail to redistribute sufficiently could fall victims to left-wing coups. Finally, an autocracy dominated by the lower class – in which substantial redistribution takes place – could itself be overthrown by a right-wing coup. Examples of left-wing coups carried out against autocracies include Burkina Faso (1983), left-wing coups staged against democracies Peru (1968), right-wing coups waged against autocracies Peru (1948), and right-wing coups staged against democracies Chile (1973) and Brazil (1964).

This is not to say that coups are always driven by class interests and that all coups are alike. Many coups are the results of purely intra-elites conflicts. In fact, the indirect effect discussed below pertains to how inequality affects the strictly intra-elites dimension of coups. Instead, inequality can produce conditions conducive to coups, notably by providing a source of support to potential coup plotters. Moreover, coup plotters need not be from the same social class as their supporters.

I identify three reasons why inequality may have a direct positive effect on civil wars. The first is based on the argument of Boix (2008) and is closely related to the discussion above on the effect of inequality on coups. Inequality increases the gap between the preferences over economic policies between the lower and upper classes, which increases the incentives of the class that is not in power to topple the regime through an insurgency and install a regime which would adopt policies more in line with its preferences. In other words, in the scenario above the class that does not hold office may simply resort to a rebellion rather than a coup. This reasoning is consistent with the quotes of Fearon (2004) and Roessler (2011) above, according to which coups and insurgencies are alternative strategies that political entrepreneurs can employ to usurp power.

⁹Of course, coup leaders can rely on alternative cleavages (e.g., ethnicity). My argument is simply that interclass inequality provides a potential source of support.

My second argument is based on the mechanisms proposed by the deprivation theory (e.g., Gurr 1970) and other authors discussed above (e.g., Russett 1964) that theorize that inequality breeds grievances. In short, according to this argument, inequality creates resentment among the masses, rendering them more willing to join insurgencies.

Finally, not only does inequality produce grievances and increase the gap between the preferences of different social classes, but it may also create opportunities for insurgency. At any income level, increasing inequality decreases the opportunity cost of potential recruits (which are typically overwhelmingly members of the lower class). This creates a large pool of young people willing to join a conflict in exchange for food, a roof, a meager salary and access to spoils. Keeping everything else constant, inequality thus reduces the cost of hiring recruits, which decreases the cost of mounting a rebellion for political entrepreneurs, who are themselves often members of the economic elites (Esteban and Ray 2011). According to this argument, inequality can fuel conflict even if the aim of the rebellion is not to install a more equitable regime, and if the regime in place already adopts poor-friendly policies.

Indirect Effect: Inequality Reduces Coup-Proofing

Inequality has also an indirect effect on political violence that operates through the structure of the military. Here, I build on Svolik (2012, 2013). It is important to note, however, that Svolik (2012, 2013) does not discuss the effect of inequality on civil war (which is the focus of this paper) and irregular leader removals (beyond military coups). Also, he does *not* consider the direct effect of inequality on coups, discussed above.

Svolik (2012, 2013) argues that, in autocracies, inequality increases the level of mass threat faced by dictators. When inequality between the population and the ruling elites is high, the masses have more incentives to revolt and are more costly to coop, for example, through a political party (since their preferences differ more widely from those of the elites). Moreover, as implied by the seminal work of Meltzer and Richard (1981), inequality increases the benefits (in terms of redistribution) associated with democracy for the lower class. Consequently, in autocracies, inequality between the masses and the ruling elites increases pressure in favor of democratization by the former (see Acemoglu and Robinson 2006; Houle 2009). Such threats to the rulers are not limited to (and, in fact, rarely involve) civil wars. Pressure for democratization, for example, almost never takes the form of a full-blown civil war.

According to Svolik (2012, 2013), these threats from below, in turn, push rulers to grant enough power to the military to quell mass opposition. The same logic also implies that

inequality precludes rulers from adopting coup-proofing measures – such as dividing the military into multiple units – because such tactics reduce the capacity of the military to repress. Coup-proofing has been demonstrated to substantially diminish the effectiveness of the military (Powell 2014a, 2014b, 2014c; Pilster and Böhmelt 2011, 2012). For example, a partitioned army is not as effective at repressing mass opposition as a united one. Moreover, while paramilitaries can repress small-scale opposition, only the military has the manpower to suppress widespread mass opposition. In the words of Svolik (2012), “when the opposition to a regime is mass based, organized, and potentially violent, the military is the only force capable of defeating it” (p.127). When inequality between the ruling elites and the masses is high, the former are unable to rely heavily on coup-proofing because it diminishes their ability to suppress mass opposition. This argument pertains to inequality between the elites and the masses, because smaller groups can, for example, be suppressed by paramilitaries. The masses, however, because of its size is most easily repressed by the military (Svolik 2012, 2013).

Although the forms of threats discussed above are often short-lived, they have lasting implications for the role of the military in a country’s domestic politics. Once a ruler chooses to rely on the military to repress a short-term threat, he and his successors become ‘trapped’: they cannot undermine its power without putting themselves at risk of a military coup. While it is possible for a ruler to reduce coup-proofing, in the short-term it is much riskier (albeit possible) to increase it. Such policies necessarily threaten the interests of top military officials. Consequently, the capacity of the military to intervene domestically and the extent to which a country relies on coup-proofing is largely (though not completely) exogenous to any particular ruler. Countries that are unequal are likely to have a tradition of militaries that are involved domestically and that are not weakened by coup-proofing. Even though strong militaries originate while countries are authoritarian, even after democratization the army is likely to retain its capacity to intervene (Cheibub 2007; Svolik 2012, 2013).

The indirect effect of inequality has *different* implications on different forms of political violence. On the one hand, when the military is the main actor fighting against those that initiate violence, as in the case of civil wars, having a strong military reduces the likelihood of violence. Militaries that are not undermined by coup-proofing are also better at fighting civil wars, which decreases the likelihood that they will be instigated in the first place. As argued above, coup-proofing has been shown to reduce the capacity of the armed forces to fight against either international or domestic opponents (Pilster and Böhmelt 2011, 2012; Powell 2014a, 2014b, 2014c). For example, Pilster and Böhmelt (2011) demonstrate that coup-proofing increases casualties in the domestic army. In fact, Powell

(2014b, 2014c) has shown that coup-proofing increases the likelihood of civil war, albeit, as pointed out above, only under some conditions.

On the other hand, however, when the military is the one that instigates violence, as in the case of military coups, inequality increases the likelihood of violence through its indirect effect. The military is more likely to stage a coup if it is not weakened by coup-proofing. For example, Powell (2012) demonstrates that coup-proofing reduces the probability of coups. Notice that, although the indirect effect builds on Svolik (2012, 2013), my prediction about how inequality's impact on the structure of the military affects coups differs from his: he expects the relationship to be inverted U-shaped, whereas I expect it to be monotonic and increasing. It seems unlikely that countries with middling coup-proofing levels are more at risk of coups than those with no or few coup-proofing measures. If that were the case, the former would presumably rely on less coup-proofing. Therefore, I expect inequality to increase the likelihood of coups through its indirect effect on coup-proofing. Moreover, my predictions about inequality's net effect on coups (see below) is the product of the combination of the direct and indirect effects, whereas Svolik (2012, 2013) only considers what I have called the indirect effect.

But, why would rulers ever reduce coup-proofing and increase the capacity of the military to intervene domestically if that means that they are more likely to be overthrown by the military in the future? As explained above, for most rulers the power of the military and the extent to which the country relies on coup-proofing are largely inherited, but some rulers do decide to raise the former and reduce the latter. The idea is that the form of threats discussed above (e.g., riots and mass demonstrations) imperils the survival of the regime in the very short-run. Moreover, establishing an autocracy in spite of mass opposition may simply be impossible without the support of the military. Therefore, rulers will be willing to trade off the long-term risk of being ousted by the military in exchange for being able to establish their rule in the first place and/or remain in power when faced by short-term threats.

Net Effect of Inequality on Irregular Removals, Civil Wars and Coups

According to the argument developed above, inequality should heighten the overall risk that a country experiences political violence. Through its direct effect, inequality increases the incentives to usurp power. The indirect effect, for its part, is mostly relevant to the form that violence will take (e.g., civil war vs. coup) rather than whether it takes place or not. Therefore, I expect inequality to increase the overall likelihood of an irregular leader removal.

Combining the direct and indirect effects also provides predictions about how inequality affects the type of violence that a country is likely to experience. First, it helps explain why results on the effect of inequality on civil war have been largely inconclusive. While inequality increases the overall propensity for violence by breeding distributive conflicts (direct effect), it simultaneously deters potential insurgents by increasing the capacity of the military to fight (indirect effect); meaning that its net effect is ambiguous.

The two effects, however, reinforce each other in the case of coups: inequality, by accentuating grievances, creates coalitions on which coup plotters can rely to establish a new regime (direct effect), and produces opportunities for coups by reducing coup-proofing (indirect effect). The net effect of inequality on coups should thus be positive. Notice that my predictions on the effect of inequality on coups is *not* entirely driven by the effect of inequality on the structure of the military (indirect effect), which builds on Svolik (2012, 2013). Even without the indirect effect, I would still have expected the relationship to be positive because of the direct effect (which is unrelated to Svolik 2012, 2013). My prediction about the effect of inequality on civil wars, however, does depend on the combination of the direct and indirect effects. Again, Svolik (2012, 2013) does not apply the logic of the indirect effect to civil wars.

It must also be noted that my argument and findings do not necessarily contradict those of authors working on the effect of horizontal inequality on conflicts. While the argument made about the direct effect of interclass inequality could also be made regarding horizontal inequality, that about its indirect effect is less directly applicable. It is not because a specific ethnic group is much poorer or much richer than the rest of the country that rulers will necessarily be forced to allocate extensive power to the military. This is particularly clear in the cases of small ethnic groups that can, for example, be repressed by paramilitary forces. The masses, however, because of its sheer size does impact the need to use the military (hence my reliance on interclass inequality) (Svolik 2012, 2013). Of course, in some cases horizontal inequality may force the regime to rely more heavily on the military and prevent it from coup-proofing, generating a similar effect as interclass inequality. This may occur in an ethnocracy in which a large group that is excluded from power is much poorer or much richer than the one in power. But this is a special case. More generally, we should expect horizontal inequality to affect civil wars primarily through the direct effect; explaining why it has usually been found to foster civil wars.

Data

The unit of analysis is the country-year. The main sample covers 148 countries between 1960 and 2008.

Dependent Variables: I measure irregular leader removals using the *Archigos* dataset (Goemans, Gleditsch and Chiozza 2009). The *Archigos* considers a leader removal to be “irregular when the leader was removed in contravention of explicit rules and established conventions” (Goemans, Gleditsch and Chiozza 2009, p. 7). An irregular removal can either be instigated by regime insiders through a coup or by regime outsiders, for example, in the form of a civil war or popular revolt.¹⁰

Civil wars are large domestic conflicts involving casualties and fighting between organized non-state actors and the state. I use two indicators of civil war. The first is that of the Political Instability Task Force (PITF). To qualify as a civil war a conflict must oppose the government and a politically organized group, and involve at least 1,000 combatants on each side. The conflict also needs to cause at least 1,000 battle-related deaths over its course and 100 battle-related deaths per year. I also use the indicator of the Peace Research Institute Oslo (PRIO), which uses a battle-related death threshold of 25. Powell and Thyne (2011) report that 38 of the armed conflicts included in the PRIO dataset are actually coups. Since coups are different than civil wars – coups (see below) are staged by regime insiders¹¹, while civil wars require the participation of the masses – I purged the PRIO dataset from the coups identified by Powell and Thyne (2011).

To measure coups, I use the dataset of Powell and Thyne (2011), which includes both failed and successful coups.¹² Coups are defined as “illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive” (Powell and Thyne 2011, p. 252). To summarize, coups are driven by regime insiders, whereas civil wars necessitate the participation of outsiders (although they can also involve insiders). Irregular leader removals, for their part, combine removals instigated by both insiders and outsiders.

In addition to testing the effect of inequality on irregular removals, civil wars and coups, I also test three of the key assumptions on which my argument rests. First, I show

¹⁰Irregular removals can also take other forms (e.g., assassinations).

¹¹Morrison and Stevenson (1972) write that by definition coups take place “without overt mass participation” (p. 13).

¹²Executive coups (or self-coups) are not included.

that inequality is associated with diverse forms of political instability. I rely on the dataset of Banks (2014) on general strikes, riots, revolutions and demonstrations. These tests also provide some evidence for the direct effect, according to which inequality fuels distributional conflicts.

Second, I test whether greater inequality prevents rulers from coup-proofing.¹³ Third, I test whether coup-proofing increases the likelihood of a war but decreases that of a coup. These two analyses test the indirect effect of inequality.

I measure coup-proofing with the dataset of Pilster and Böhmelt (2012), which is an indicator of the extent to which the ruler relies on counterbalancing. The indicator gives the number of branches into which the military and paramilitary are divided. This variable covers only ground units. During a coup, any branch of the military or paramilitary could oppose the group carrying out the coup. Creating multiple military/paramilitary units thus magnifies the coordination problem that is inherent to mounting a coup (Belkin 2005; Geddes 1999). There are other coup-proofing tactics that rulers can rely upon. However, counterbalancing is the type of coup-proofing strategy for which data is the most widely available and that has been studied most closely (Belkin 2005; Pilster and Böhmelt 2011, 2012; Powell 2014a, 2014b, 2014c). Tests on coup-proofing only include non-democracies (anocracies and autocracies) because counterbalancing is rarely employed in democracies (Pilster and Böhmelt 2012).¹⁴ As suggested by the Polity IV Project, countries with a Polity score below 6 are classified as non-democracies.

Independent Variables: I use three measures of inequality. The first is the capital share of the value added in the manufacturing sector provided by Ortega and Rodriguez (2006) and extended by Houle (*forthcoming*2). The dataset has been constructed from data collected by the United Nations Industrial Development Organization (UNIDO). Capital shares give the proportion of the value created within specific firms that accrues to the

¹³I focus on how inequality affects coup-proofing rather than its effect on the capacity of the military to intervene domestically because the latter is difficult to measure. Measures such as manpower and military expenditure, for instance, do not adequately capture this concept because they do not distinguish between equipment/personal meant to intervene domestically and internationally.

¹⁴According to Pilster and Böhmelt (2012), because they are more transparent, democracies rely on *ex post* strategies to coup-proof (i.e. they identify and punish perpetrators, usually before they act) whereas autocracies use *ex ante* tactics such as those considered in this paper.

owners of these specific firms, as opposed to the laborers. Low capital shares indicate low levels of inequality. The capital share is a measure of inequality between the owners of the means of production (capital) and the laborers. Whenever social classes are defined over the ownership of capital, it thus proxies for interclass inequality. In the words of Acemoğlu and Robinson (2006), "when the major conflict is between the rich and the poor, one variable that captures *inter-group* inequality is the share of labor income [which is one minus the capital share]" (p. 59, emphasis added).

Although this measure of inequality has yet to be used in the literature on wars and coups, it has been used in the literatures on regime transition and redistribution (e.g., Acemoğlu and Robinson 2006; Dunning 2008; Haggard and Kaufman 2012; Houle 2009, *forthcoming*; Przeworski et al. 2000; Rodrik 1999).¹⁵ According to Dunning (2008), "capital shares represent the best available cross-national indicator of private inequality" (p.143). Unlike Gini coefficients, capital shares are not calculated based on national surveys but on surveys distributed directly by the UNIDO to firms using similar definitions and methods for all countries. Therefore, capital shares are comparable across countries and within countries over time. Finally, the capital shares dataset has a lower proportion of missing values than other inequality datasets.¹⁶

My second measure of inequality is the top one percent's share of total income of Solt (2009, 2013). This indicator captures inequality between the rich and the poor rather than, for example, between the middle class and the poor. One potential problem with this dataset is that, like Gini coefficients, it is calculated from national surveys. However, Solt (2009, 2013, 2014) uses an algorithm to standardize the observations and increase comparability. Although this method remains imperfect, it is an important improvement over unadjusted data.

I also use the net income Gini indexes of Solt (2009, 2014), which is (arguably) the most reliable dataset on Gini coefficients available on a wide range of developing countries. Solt (2009) uses the same algorithm as for the top one percent's share to standardize the observations. Again, Gini indexes may not proxy for the concept of interest as well as the other measures I employ.

None of these indicators, on its own, perfectly measures interclass inequality. How-

¹⁵Acemoğlu and Robinson (2006) and Przeworski et al. (2000) use Rodrik's (1999) version.

¹⁶Section 1 of the online appendix provides more detail on capital shares. It also responds to some of the potential objections to the use of capital shares as a measure of inequality.

ever, the fact that my findings are consistent across all three indicators increases our confidence in the results.

Control Variables: I include controls that are usually employed in models on irregular leader removals, civil wars and coups and that could be related to inequality: GDP per capita logged (from Treisman *forthcoming*), growth in GDP per capita, income emanating from oil and gas production logged (Ross 2012), trade openness (sum of export and imports divided by total income; World Bank), and ethnic fractionization (Przeworski et al. 2000). Political instability in the form of regime change may also be associated with coups and civil wars. Therefore, I include a dummy variable (*Instability*) indicating whether a country has experienced a regime transition over the last three years. Since partial regimes have been found to be more unstable, I add the Polity score and its square.

The models on civil wars include two additional controls: the proportion of the country that is mountainous (Gubler and Selway 2012) and population (World Bank). I also include the time since the last irregular removal/coup/war along with cubic splines. All models include decade dummy variables. Summary statistics for all variables are provided in Table A2 of the online appendix.

Empirical Results

In this section, I first demonstrate that inequality increases the likelihood of irregular removals. I then examine the effect of inequality on different unconstitutional means that can be used to remove leaders. In particular, I show that while inequality increases the likelihood that a country experiences a coup, it has no discernible effect on civil war onset. I then turn to the causal mechanisms driving the aggregate relationships. Finally, I discuss the robustness tests presented in the online appendix.

Effect of Inequality on Irregular Leader Removals

Table 1 reports logistic regressions of the effect of inequality on irregular leader removals along with robust standard errors. All explanatory variables are lagged. The direct effect implies that when inequality is elevated, members of the class that is not in office become more willing to support political entrepreneurs who want to usurp power through unconstitutional means (e.g., coup or rebellion) in exchange for policies that are more closely aligned with their preferences. Inequality should thus breed irregular removals.

[Table 1 about here]

[Figure 1 about here]

Results show that inequality indeed increases the likelihood that a leader loses office through violence. Figure 1 shows the predicted probabilities of an irregular removal at different inequality levels. This is the first paper to demonstrate that inequality increases the overall risk of violent turnover. Previous authors have instead focused on particular strategies to usurp power, such as civil wars or coups. However, as suggested by the quotes of Fearon (2004) and Roessler (2011) above, these are largely *alternative* strategies that should be studied in relation to one another.

Effect of Inequality on Different Forms of Political Violence

I now test the effect of inequality on two different antiregime strategies: civil wars and coups. Table 2 estimates the effect of inequality on civil war onset. Inequality never attains statistical significance. In six of the eight estimations, inequality actually *reduces* the likelihood of war (although the relationship is not significant). Although these results are in line with those obtained by many previous authors, they still contributes to the literature by showing that, even when we use better measures, inequality has little effect on civil war. Moreover, as discussed above, some recent authors do find a positive relationship between inequality and conflict (e.g., Bartusevičius 2014; Baten and Mumme 2013).

[Table 2 about here]

Next, I test the effect of inequality on coups in Table 3. Columns 10-15 use only successful coups. Results show that inequality breeds coups. Models 13-15 test the hypothesis of Svolik (2012, 2013) that the relationship is inverted U-shaped by including inequality squared. The relationship would be inverted U-shaped if the coefficient on inequality were positive and that on inequality square negative. In all regressions, the two coefficients are of the expected signs. However, the relationship is usually weak. In only one case (model 14 using the income share of the top one percent) is the coefficient on inequality squared (barely) significant at the ten percent level. Moreover, this variable becomes insignificant in all robustness tests presented in the online appendix (Tables A7, A16, A19 and A25). Therefore, although there is some evidence consistent with an inverted U-shaped, on balance the results seem to point toward a monotonic positive relationship. One possible reason why my results differ from those of Svolik (2012, 2013), even though we both use Gini indexes, is that I employ those of Solt (2009, 2014) while he uses those

of Babones and Alvarez-Rivadulla (2007).¹⁷ Columns 16-18 reproduce models 10-12 but with both failed and successful coups.

[Table 3 about here]

[Figure 2 about here]

Figure 2 gives the predicted probabilities of coups and wars at different levels of inequality along with 95 percent confidence intervals.¹⁸ The probability of a coup increases sharply with inequality, whereas that of a war is largely unaffected. Based on Figure 2, increasing capital share from 25 (e.g., Macedonia) to 90 (e.g., Bolivia) raises the likelihood of a coup almost tenfold, from 1.5 to 11.36 percent, *every year*. The same change in inequality only increases the likelihood of a civil war from 0.68 to 1.34 percent. Figure 2 uses capital shares. When using the two other measures, inequality reduces the likelihood of war.

Most control variables have the expected effect. As found by previous authors, GDP per capita decreases the likelihood of irregular leader turnovers, coups and civil wars (Fearon and Laitin 2003; Poole and Londregan 1990). Countries with large populations are more likely to endure conflicts. Anocracies are more likely to experience civil wars and coups. Countries that produce a lot of oil and gas as well as countries with large mountainous areas are more likely to experience civil wars (Collier and Hoeffler 2004; Fearon and Laitin 2003). Finally, ethnic diversity fuels civil war, but only when one is using the indicator of the PRIO.

Causal Mechanisms

I now test three of the key assumptions on which my argument relies. First, I estimate the effect of inequality on diverse forms of political instability: general strikes, riots, revolutions and demonstrations. Because of space constraints, results are reported in Table

¹⁷Babones and Alvarez-Rivadulla (2007) standardize Gini coefficients by adding fixed adjustments depending on how they have been calculated (e.g., net vs. gross income). These adjustments are the same for all countries. However, the effect of using different methods and definitions depends among other things on the family structure, the details of the tax laws, and the propensity to save; all of which vary widely across countries (Solt 2009). Solt (2009, 2014), on the other hand, uses information specific to the country (and sometimes culturally similar countries) to standardize the observations.

¹⁸These are based on Table A4 of the online appendix, which includes the same set of control variables and sample for both estimations (which renders them more directly comparable). Figure A1 of the online appendix redoes Figure 2 based on Tables 2 and 3.

A9 of the online appendix. Only the model that tests the effect of capital shares on riots fails to find a statistically significant positive relationship (although the effect is positive). These results suggest that inequality creates threats to rulers. They are also consistent with the assertion that inequality fuels distributive conflicts, as implied by inequality's direct effect. In Table A10 of the online appendix, I also show that inequality is positively associated with an aggregated conflict index, also taken from Banks (2014). This index combines information on the four indicators used in Table A9 along with assassinations, guerilla warfare, major government crises and purges.

Tables 4 and 5 provide support for the indirect effect of inequality, which operates through its effect on coup-proofing. Table 4 tests whether, as implied by the logic of my argument, inequality is associated with less coup-proofing. In all specifications, inequality decreases the extent to which non-democracies rely on coup-proofing and the relationship is significant at the one percent level.¹⁹ This constitutes evidence that inequality impedes on the ability of rulers to coup-proof. This paper is the first to show empirically that unequal countries rely on less coup-proofing.

[Table 4 about here]

Finally, Table 5 estimates the effect of coup-proofing on civil wars (models 22-23) and coups (models 24-25). Non-democracies relying on coup-proofing are much more likely to experience a civil war, which supports my assertion that coup-proofing reduces the capacity of the military to fight civil wars. The predicted probability of a civil war is 2.13 percent per year in a country with a unified military but 7.16 percent in one in which the military is divided into four branches.

[Table 5 about here]

As shown in models 36 and 37, although coup-proofing does reduce the risk of coups, its effect is not significant. The weakness of the relationship is most likely due to endogeneity: autocracies that face a serious coup threat are more likely to coup-proof; hence biasing the relationship downward. In fact, Powell (2012) finds that coup-proofing reduces the incidence of coups.

It is important to note that while the results reported in Tables A9-A10 and 4-5 are consistent with my causal mechanisms, they are not definitive. In particular, because we only observe the aggregate relationship between inequality, irregular removals, civil wars and coups, we cannot directly test what I have called the direct effect of inequality. The

¹⁹When I include democracies I find that, consistent with previous authors (e.g., Pilster and Böhmelt 2012), richer countries adopt less coup-proofing (available upon request).

findings shown in Tables A9-A10 do suggest that inequality creates distributive conflicts. However, we cannot be sure based on this evidence, that distributive conflicts are also central to irregular turnovers, coups and conflicts. Despite these limitations, combined together, the results shown in Tables A9-A10 and 4-5 do provide evidence suggesting that my causal mechanisms at least partially explain the weakness of the relationship between inequality and civil war.

Robustness Tests

The online appendix presents several additional robustness tests. Tables A23-A28 redo Tables 1-5 and A9 while only controlling for income per capita (logged). As suggested by the findings of Besançon (2005) and Bartusevičius (2014), inequality may only be relevant to class-based conflicts. Therefore, Table A13 redoes Table 2 with only class-based conflicts.²⁰ One could argue that my argument applies more directly to non-democracies. For instance, the indirect mechanism may be more relevant to non-democracies. Tables A17-A19 show that the results reported in Tables 1-3 are robust to the exclusion of democracies (Polity score of at least 6).

Moreover, to make sure that my results are not entirely driven by Western countries (Western Europe, Canada, the United States, Australia and New Zealand) which tend to be equal and stable, I redo Tables 1-3 without Western countries (Tables A14-A16). Results are robust, although the coefficient on inequality squared in model 15, Table 3, is now significant at the ten percent level. I also redo Tables 1-3 and 5 using the random-intercept logistic regression model employed by Svolik (2012, 2013) (Tables A5-A8). This method enables us to control for country-specific factors that may explain why some countries are inherently more vulnerable to instability irrespective of their level of inequality. On balance, the results are robust, although the effect of Gini coefficients on irregular removals falls out of significance (but remains positive).

Tables 2 and 3 use different sets of control variables and slightly different samples. In order to fully compare the effects of inequality on coups and civil wars, Table A4 reruns the two baseline coup models (models 10 and 16) using the same set of control variables and sample as in the main civil war model (model 4). In the main text, I use the capital shares dataset that has been extended through multiple imputation by Houle (*forthcoming*²). Table A12 redoes all the estimations reported in Tables 1-3 with the original capital shares data of Ortega and Rodriguez (2006). The results shown in Tables 4 and A9 are

²⁰Class-based civil wars are those that are classified as 'revolutionary wars' (as opposed to 'ethnic wars') by the PITE.

also unchanged when I use only non-imputed capital shares (available upon request).

Finally, Section 3 of the online appendix employs a descriptive analysis to show that inequality increases the probability of irregular removals and coups, but has little effect on civil wars (Table A3). This analysis increases our confidence that the results reported in this section are not driven, for example, by the estimation techniques or the particular model specifications employed.

Conclusion

This paper proposes an important twist to the literature on the effect of inequality on civil war onset. I posit that inequality has two offsetting effects on civil war: while, as expected by previous authors (e.g., Davies 1962; Gurr 1970), it increases the propensity for conflicts by generating distributive conflicts, it also increases the capacity of the military to fight insurgents.

Using three indicators of inequality, I find that inequality does render leaders more likely to be violently overthrown, which contradicts the argument that inequality is irrelevant to political violence. However, I also find that inequality has different effects on different forms of political violence. In particular, while inequality fosters coups, it has little effect on civil conflict outbreaks. I have also provided evidence consistent with my causal mechanisms. In particular, I have shown that inequality is associated with less coup-proofing and that, in turn, coup-proofing increases the likelihood of a civil war.

These findings imply that, as suggested by Fearon (2004) and Roessler (2011), the literatures on diverse forms of political violence ought to be more closely related. Political actors dispose of diverse means to attain similar aims. The factors that explain why, for example, they tend to resort to coups in some countries may also explain why insurgencies are unlikely in these countries, and vice versa.

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Tables and Figures

Table 1: Effect of Inequality on Irregular Leader Removals

	(1)	(2)	(3)
Cap. share	.026 (.007)***		
Share 1 perc.		.046 (.019)**	
Gini			.021 (.010)**
GDP pc (logged)	-.330 (.135)**	-.440 (.187)**	-.309 (.182)*
Growth	-.020 (.010)*	-.042 (.015)***	-.040 (.015)***
Oil/gas inc. pc (logged)	.052 (.038)	.061 (.051)	.050 (.052)
Instability	-.250 (.269)	-.238 (.320)	-.378 (.325)
Trade open.	-.003 (.002)	-.004 (.003)	-.006 (.004)*
Ethnic frac.	-.004 (.003)	-.003 (.004)	-.006 (.004)
Polity	-.017 (.015)	-.024 (.020)	-.009 (.020)
Polity sq.	-.015 (.003)***	-.013 (.004)***	-.015 (.004)***
Time last irreg. rem.	-.143 (.060)**	-.212 (.080)***	-.185 (.081)**
Spline1	-.001 (.001)	-.002 (.001)	-.001 (.001)
Spline2	.0003 (.0004)	.0006 (.0006)	.0004 (.0006)
Spline3	9.87e-06 (.00007)	-4.93e-06 (.00009)	5.62e-06 (.0001)
N	5432	3701	3613
Log-Lik.	-838.137	-467.357	-452.604

Note: Logit estimations. Robust standard errors in parentheses. Includes decade dummy variables. All explanatory variables are lagged. *** $p < .01$, ** $p < .05$ and * $p < .1$.

Table 2: Effect of Inequality on Civil War Onsets

	PITF			PRIO		
	(4)	(5)	(6)	(7)	(8)	(9)
Cap. share	.012 (.010)			.006 (.008)		
Share 1 perc.		-.028 (.027)			-.012 (.021)	
Gini			-.009 (.016)			-.005 (.011)
GDP pc (logged)	-.511 (.176)***	-.416 (.201)**	-.459 (.201)**	-.337 (.142)**	-.349 (.182)*	-.447 (.181)**
Growth	-.005 (.016)	-.021 (.021)	-.024 (.022)	-.010 (.013)	.003 (.018)	.007 (.019)
Oil/gas inc. pc (logged)	.121 (.054)**	.125 (.064)*	.122 (.067)*	.113 (.039)***	.119 (.047)**	.135 (.049)***
Instability	.157 (.355)	-.018 (.424)	-.136 (.450)	.022 (.272)	.030 (.281)	.001 (.287)
Mountains	.179 (.073)**	.065 (.092)	.106 (.094)	.154 (.059)***	.148 (.075)**	.158 (.074)**
Population	.165 (.044)***	.160 (.051)***	.167 (.052)***	.196 (.035)***	.170 (.037)***	.167 (.037)***
Trade open.	-.0006 (.003)	-.006 (.003)*	-.006 (.004)	-.0005 (.003)	-.004 (.003)	-.003 (.003)
Ethnic frac.	.004 (.005)	.003 (.006)	.002 (.006)	.009 (.004)**	.010 (.004)**	.011 (.005)**
Polity	-.003 (.019)	.011 (.026)	.005 (.026)	.023 (.015)	.037 (.019)**	.033 (.019)*
Polity sq.	-.012 (.004)***	-.019 (.005)***	-.016 (.006)***	-.006 (.003)*	-.007 (.004)*	-.004 (.005)
Time last war	-.118 (.076)	-.143 (.103)	-.187 (.107)*	.070 (.068)	.100 (.078)	.112 (.080)
Spline1	-.0007 (.0009)	-.001 (.001)	-.002 (.001)	.002 (.001)**	.003 (.001)**	.003 (.001)**
Spline2	.0003 (.0006)	.0006 (.0008)	.0009 (.0008)	-.002 (.0008)**	-.002 (.0009)**	-.002 (.0009)**
Spline3	.00002 (.0002)	-.00007 (.0002)	-.00009 (.0002)	.0006 (.0003)**	.0007 (.0003)**	.0007 (.0003)*
N	5668	4144	4065	5702	4136	4055
Log-Lik.	-476.811	-316.04	-301.428	-685.712	-499.916	-477.958

Note: Logit estimations. Robust standard errors in parentheses. Includes decade dummy variables. Explanatory variables are lagged.

*** $p < .01$, ** $p < .05$ and * $p < .1$.

Table 3: Effect of Inequality on Coups

	Successful Coups					All Coups			
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Cap. share	.033 (.009)***			.090 (.094)			.024 (.006)***		
Cap. share sq.				-.0004 (.0007)					
Share 1 perc.		.062 (.022)***			.259 (.120)**			.055 (.017)**	
Share 1 perc. sq.					-.008 (.005)*				
Gini			.028 (.013)**			.191 (.105)*			.030 (.009)***
Gini sq.						-.002 (.001)			
GDP pc (logged)	-.264 (.160)*	-.698 (.232)***	-.648 (.233)***	-.262 (.159)	-.697 (.232)***	-.610 (.241)**	-.326 (.114)**	-.583 (.158)**	-.555 (.159)***
Growth	-.016 (.013)	-.043 (.017)**	-.040 (.018)**	-.016 (.013)	-.044 (.017)**	-.041 (.018)**	-.030 (.010)**	-.045 (.013)**	-.043 (.013)***
Oil/gas inc. pc (logged)	.032 (.044)	.138 (.059)**	.155 (.062)**	.032 (.043)	.137 (.058)**	.147 (.063)**	.082 (.032)**	.096 (.044)**	.108 (.044)**
Instability	.097 (.299)	.090 (.367)	-.237 (.373)	.084 (.301)	.094 (.365)	-.258 (.374)	.381 (.207)*	.317 (.254)	.187 (.259)
Trade open.	-.004 (.003)	-.003 (.004)	-.005 (.004)	-.004 (.003)	-.004 (.004)	-.005 (.004)	-.004 (.002)*	-.003 (.002)	-.003 (.003)
Ethnic frac.	-.002 (.004)	-.004 (.005)	-.005 (.005)	-.002 (.004)	-.004 (.005)	-.005 (.005)	-.001 (.003)	-.003 (.004)	-.003 (.004)
Polity	-.012 (.019)	-.008 (.025)	.016 (.025)	-.012 (.019)	-.010 (.026)	.016 (.025)	-.010 (.013)	-.011 (.017)	.005 (.017)
Polity sq.	-.015 (.003)***	-.014 (.005)***	-.016 (.005)***	-.015 (.003)***	-.014 (.005)***	-.015 (.005)***	-.015 (.002)**	-.016 (.003)**	-.016 (.004)***
Time last coup	-.079 (.055)	-.159 (.075)**	-.127 (.077)	-.079 (.055)	-.150 (.074)**	-.125 (.078)	-.143 (.041)**	-.172 (.054)**	-.145 (.056)***
Spline1	-.00003 (.0007)	-.001 (.001)	-.0008 (.001)	-.00003 (.0007)	-.0009 (.001)	-.0007 (.001)	-.0009 (.0005)*	-.001 (.0006)**	-.001 (.0007)*
Spline2	-.0004 (.0006)	.0004 (.0009)	.0003 (.0009)	-.0004 (.0006)	.0003 (.0009)	.0002 (.0009)	.0005 (.0004)	.0008 (.0005)*	.0007 (.0005)
Spline3	.0004 (.0004)	.0002 (.0005)	.0002 (.0005)	.0004 (.0004)	.0002 (.0005)	.0002 (.0005)	-.00006 (.0002)	-.0002 (.0002)	-.0002 (.0002)
N	5964	4207	4126	5964	4207	4126	5964	4207	4126
Log-Lik.	-607.274	-324.429	-312.355	-607.097	-323.232	-311.414	-994.278	-554.506	-533.062

Note: Logit estimations. Robust standard errors in parentheses. Includes decade dummy variables. Explanatory variables are lagged. *** $p < .01$, ** $p < .05$ and * $p < .1$.

Table 4: Effect of Inequality on Coup-Proofing

	(19)	(20)	(21)
Cap. share	-.003 (.001)***		
Share 1 perc.		-.013 (.003)***	
Gini			-.012 (.002)***
GDP pc (logged)	.018 (.020)	.026 (.029)	.002 (.028)
Growth	-.001 (.002)	-.002 (.002)	-.003 (.002)
Oil/gas inc. pc (logged)	.010 (.005)*	.034 (.007)***	.032 (.007)***
Instability	-.046 (.062)	-.079 (.066)	-.063 (.066)
Trade open.	-.001 (.0003)***	-.0005 (.0003)*	-.0004 (.0003)
Ethnic frac.	-.003 (.0005)***	-.004 (.0007)***	-.003 (.0007)***
Polity	.005 (.005)	.009 (.005)*	.011 (.005)**
Polity sq.	-.002 (.0007)***	-.002 (.0009)**	-.002 (.0009)*
Time last coup	.010 (.001)***	.006 (.001)***	.006 (.001)***
N	2697	1744	1694
Log-Lik.	-2408.668	-1544.103	-1474.743

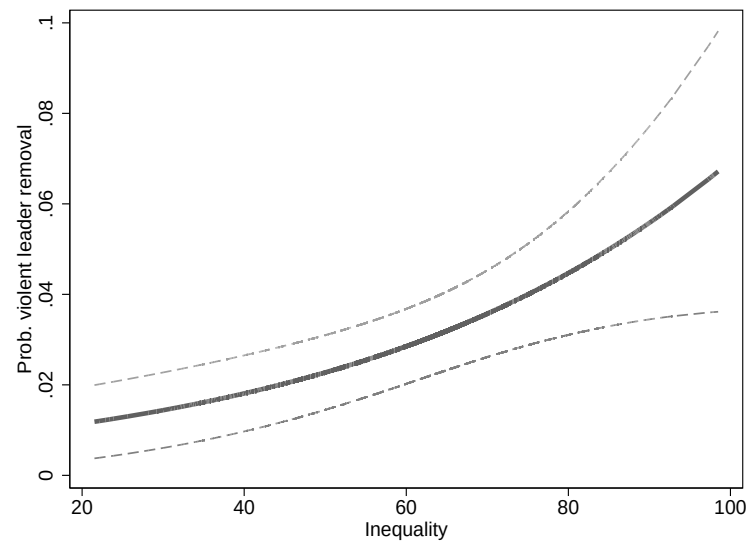
Note: OLS estimations. Includes only non-democracies. Robust standard errors in parentheses. Includes decade dummy variables. Explanatory variables are lagged. *** $p < .01$, ** $p < .05$ and * $p < .1$.

Table 5: Effect of Coup-Proofing on Civil War Onsets and Coups

	Civil Wars (PITF)	Civil Wars (PRIO)	Successful Coups	All Coups
	(22)	(23)	(24)	(25)
Coup-proofing	.420 (.196)**	.461 (.166)***	-.190 (.236)	-.027 (.160)
GDP pc (logged)	-.626 (.211)***	-.503 (.200)**	-.056 (.237)	-.236 (.171)
Growth	.005 (.020)	-.004 (.018)	-.019 (.016)	-.036 (.013)***
Oil/gas inc. pc (logged)	.135 (.062)**	.134 (.051)***	-.075 (.062)	-.028 (.045)
Instability	.422 (.526)	.379 (.482)	-.183 (.585)	.145 (.381)
Mountains	.162 (.092)*	.240 (.078)***		
Population	.091 (.064)	.018 (.046)		
Trade open.	-.001 (.004)	.003 (.003)	-.004 (.003)	-.002 (.002)
Ethnic frac.	.002 (.007)	.010 (.005)*	.007 (.006)	.008 (.004)*
Polity	.154 (.042)***	.089 (.041)**	.026 (.052)	.029 (.034)
Polity sq.	.013 (.007)*	.007 (.006)	-.002 (.009)	-.001 (.006)
Time last war	-.082 (.090)	.127 (.095)		
Time last coup			-.226 (.080)***	-.236 (.058)***
Spline1	-.0003 (.001)	.003 (.002)**	-.001 (.001)	-.001 (.0007)**
Spline2	.00006 (.0007)	-.002 (.001)**	.0003 (.0008)	.0006 (.0005)
Spline3	.00006 (.0002)	.0006 (.0003)*	.0003 (.0004)	.0001 (.0002)
N	2495	2502	2671	2671
Log-Lik.	-284.526	-365.971	-303.955	-513.591

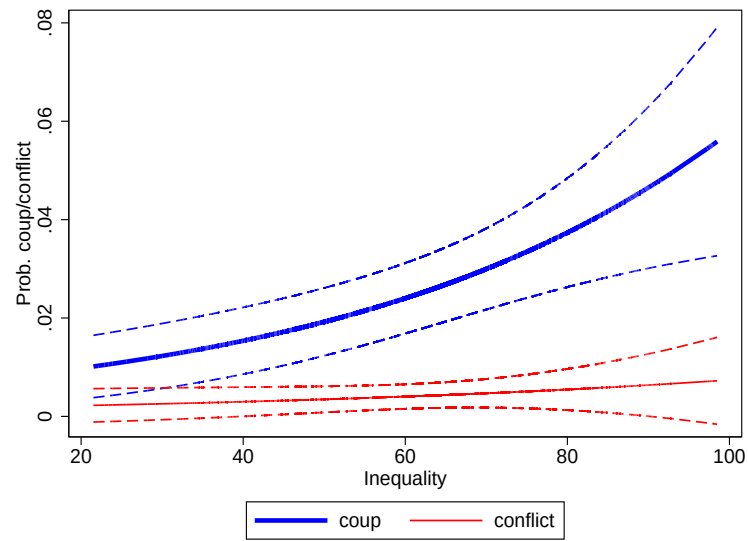
Note: Logit estimations. Includes only non-democracies. Robust standard errors in parentheses. Includes decade dummy variables. Explanatory variables are lagged. *** $p < .01$, ** $p < .05$ and * $p < .1$.

Figure 1: Predicted Probabilities of Irregular Leader Removal



Note: Dashed lines give 95 percent confidence intervals. Uses capital shares.

Figure 2: Predicted Probabilities of Coup and Conflict Onset



Note: Dashed lines give 95 percent confidence intervals. Uses capital shares.