

DEMOCRACY UNDER THE GUN: UNDERSTANDING POSTCONFLICT ECONOMIC RECOVERY

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Abstract

Why do some countries' economies recover from domestic armed conflicts more quickly than others? We argue that the key to successful postconflict reconstruction is the presence of a credible commitment to the peace. In turn, the ability of political actors, including ex-combatants, to create such a commitment depends crucially on the nature of political institutional transition a country must make. We test these arguments by employing duration analysis techniques on a newly created dataset of economic recovery from civil conflict. Among key results regarding resolution of conflicts and international aid, this paper finds that rapid postconflict democratization retards economic recovery. This result reinforces a growing sense among political scientists that democracies built rapidly at the conclusion of civil conflicts face stark challenges that threaten peace and prosperity (Ball 1996; Walter 1997, 1999; Paris 2004). In policy terms, we strongly suggest that scholars and practitioners develop new strategies, devote greater resources, and extend their time horizons in their efforts to help countries that attempt this transition.

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Since the end of World War II, domestic armed conflict has eclipsed interstate war as the most frequent and deadly form of political violence. According to the International Peace Research Institute (PRIO), 42 armed interstate conflicts occurred between 1946 and 2003, compared to 165 domestic armed conflicts, 22 of which became “internationalized” (*i.e.*, at least one other country intervened). During this period, civil conflicts killed nearly 4.8 million soldiers in battle and a nearly countless number of civilians, as well as causing irreparable harm to the lives of those left behind.¹

A broad consortium of political scientists, economists, and policy practitioners have responded to these trends by studying the causes, conduct, and human consequences of civil conflict. As with interstate war, the scientific study of civil conflict first concentrated on identifying the root causes of the onset of civil war (Collier and Hoeffler 1998; Collier and Hoeffler 2002b; Collier et al 2003; Fearon and Laitin 2003; Fearon 2005; Walter 2004), closely followed by analysis of the duration and termination of conflicts (Cunningham 2006; DeRouen and Sobek 2004; Fearon and Laitin 2003; Fearon, 2005; Licklider 1993; Regan 2002; Walter 2002), the causes and consequences of major power interventions (Findley and Teo 2006; Regan 1996, 1998; Regan and Aydin 2006), and, most recently, the human and economic consequences of civil conflict (Artadi and Sala-i-Martin 2003; Blomberg and Hess 2002; Collier 1999; Collier et al 2003; Ghobarah et al, 2003; Gupta et al 2004; Imai and Weinstein 2000; Iqbal 2006; Kang and Meernik 2005; Koubi 2005; Lacina 2006; Murdoch and Sandler 2002a, 2002b).

As this research program has matured, scholars have increasingly studied the aftermath of civil conflict, seeking mechanisms by which governments and international actors can aid the victims of violence in re-building their lives during the postconflict period (Ball 1996; Hartzell et al 2001; Hoddie and Hartzell 2005; Kang and Meernik 2004; Licklider 1993,

¹Battle deaths figure based on authors’ calculations based on PRIO’s and Uppsala University’s Armed Conflict Dataset (Version 3.0) and their data on battle deaths (Strand et al 2004; Lacina and Gleditsch 2005).

1995; Regan 1996, 1998, 2002; Walter 2002). A growing consensus exists that the state of the economy plays a special role in rebuilding societies; governments that can generate a rapid return to economic growth during the postconflict period lower the risk of recidivism substantially. For those governments that cannot, the alternatives seem grim. Collier and his co-authors (2003) propose that countries experiencing civil conflict easily can fall into a “poverty-conflict trap,” in which economic losses from a first civil conflict increase the likelihood of future conflict unless a strong postconflict economic performance breaks the vicious cycle.

Though valuable, the existing literature leaves unanswered the question of how best to maximize the economic growth prospects of postconflict countries. Kang and Meernik (2005: 89) identify two challenges facing economic policymakers at the conclusion of a civil conflict. First, policymakers must engineer a rapid economic recovery in the immediate postconflict period. Second, they must transform this short-term recovery into stable long-term economic growth. This paper investigates the former policy challenge by asking the following question: *why do some countries’ economies recover from domestic armed conflicts sooner than others?* We argue that the key to successful postconflict reconstruction is the presence of a credible commitment to the peace. In turn, the ability of political actors, including ex-combatants, to create such a commitment depends crucially on the nature of political institutional transition a country must make. We test these arguments by employing duration analysis techniques on a newly created dataset of economic recovery from civil conflict. We report three main findings. First, countries that undergo extensive democratization in the immediate postconflict period recover more slowly than countries that do not. Second, international aid speeds time to recovery, especially when aid is funneled to postconflict countries soon after the conclusion of hostilities. Third, outright military victory in civil conflict leads to a longer peace.

This paper proceeds as follows. We begin by reviewing the state of our knowledge regarding the economic consequences of civil conflict, the consequent danger of a “poverty-conflict

trap,” and short-term steps to escape that trap. We present our theoretical framework linking political transitions to prospects for economic recovery, which leads to two testable propositions regarding the effect of political institutional transitions on the speed of economic recovery. We then describe our research design for testing these hypotheses and present results from an event history analysis of a new dataset on postconflict economic recovery. Our conclusion discusses the implications of these results for future research on postconflict reconstruction.

Political Transitions and Postconflict Reconstruction

According to economic theory, violent domestic political conflict damages a country’s economic performance through a number of channels.² Recent research at the World Bank summarizes this body of research by referring to armed conflict as “development in reverse” (Collier et al 2003). We follow other authors in concentrating on the damage civil conflict inflicts on physical and human capital formation.³

Simply put, civil conflict destroys physical and human capital, as well as depressing investment that might regenerate both. Civil conflict immediately reduces the physical capital stock through the destruction of public infrastructure (e.g., roads) and productive capital (e.g., factories, equipment). Similarly, civil conflicts kill and maim people, and with them the skills they might have brought to the economy. Furthermore, civil conflicts may displace workers from their schools or jobs where they absorb knowledge and create new productivity-enhancing techniques. Moreover, civil conflict inhibits economic actors, both foreign and domestic, from investing in a country’s human and physical capital for fear of physical damage to new investments or their expropriation by armed actors. Thus, conflict

²Empirically speaking, countries experiencing civil conflict exhibit a far broader range of performance than one might expect; some countries continuously grow during civil conflicts. For a skeptic’s view of the effect of civil conflict on economic performance, see Haber, Razo, and Maurer (2003), Chapters 1 and 2.

³See Koubi 2005 for a recent summary of this literature.

can immediately reduce the level of human and physical capital, as well as reducing its rate of growth (Artadi and Sala-i-Martin 2003; Blomberg and Hess 2002; Collier 1999; Gupta et al 2004; Imai and Weinstein 2000; Kang and Meernik 2005; Koubi 2005; Mohammed 1999; Murdoch and Sandler 2002a).

Often, civil conflicts often do not only inflict grave damage to the economic lives of men and women during the war, but these effects linger and even worsen after the conclusion of hostilities. Ghobarah et al (2003) find that human capital continues to suffer after the conclusion of hostilities. Infectious diseases thrive in postconflict environments, which, coupled with diminished state capacity to provide adequate sanitation and public health services, also put noncombatants and especially women and children at risk (Ghobarah et al 2003; see also Lacina and Gleditsch 2005; Lacina 2006). Similarly, a number of authors have described the difficulty of re-building physical capital at the conclusion of civil conflict (Collier 1999; Gupta et al 2004; Imai and Weinstein 2000; Mohammed 1999).

Civil conflicts often arise from a lack of economic development, and the resultant destruction subsequently impedes postconflict economic performance, giving rise to further pessimism. Collier and his World Bank team (2003) term this grim cycle the “poverty-conflict trap.” In the trap, a country’s first entry into civil conflict not only reverses development during the conflict, but also retards economic growth afterwards. This failure of economic recovery increases the risk that the country will slip back into civil conflict, and the cycle begins again. Engaging in civil conflict not only engenders a temporary economic setback, therefore, but also risks the establishment of a permanent cycle of violence and poverty. However, there is a way out. As Collier and his co-authors emphasize, the most sensible approach to reducing the risk of recidivism remains reviving postconflict economies (Collier et al 2003: 152-153).

This process of postconflict reconstruction can be conceived as having two distinct stages: recovery and consolidation. First, in the early years after the conclusion of hostilities, leaders must (re-)build political institutions and implement policies for a rapid economic reconstruc-

tion. We refer to this phase as “recovery.” Second, the country must transform this initial recovery into the basis for stable long-term economic performance (“consolidation”).⁴ Here, we focus our efforts on understanding the first phase of escaping the poverty-conflict trap — economic recovery. This choice does not diminish the importance of long-term economic performance. Nevertheless, the recovery period deserves special attention. During that time frame, policymakers must execute a specific set of tasks that lie outside the realm of what might be termed long-term economic performance. If we hope to understand how countries can escape the poverty-conflict trap permanently, then we must first understand what occurs (or should occur) during the economic recovery period and the underlying causes of that period’s success.

In this paper, we offer a new explanation of why some countries’ economies recover quickly from civil conflicts, whereas others under-perform with potentially tragic repercussions. Specifically, we contend that the type of political transition that a country attempts in the immediate postconflict period crucially affects the ability of policymakers to make the kinds of credible commitments necessary for successful reconstruction.

We argue that the fundamental problem of economic recovery is the credible commitment to the peace required of former protagonists, which is crucial to creating a favorable environment for investment. The mere potential for violations of the peace may slow the process of reconstruction and intensify the odds of slipping back into conflict, which frightens potential investors and stifles recovery. Yet, existing research argues persuasively that stimulating investment is exactly what postconflict governments must do to rebuild their wartorn economies. A first-order priority is reconstruction of physical capital destroyed during the fighting. Such reconstruction requires an infusion of new investment from domestic and foreign investors and aid-granting agencies. Furthermore, international aid should be targeted carefully to where and when it is most likely to be effective (Collier and Hoeffler 2000; Kang

⁴These labels mirror consciously those used in the democratization literature to distinguish between stages of “transition” to democracy and “consolidation” of democracy.

and Meernik 2004). Particular attention must be paid to providing aid to governments that are honest and transparent in their use of the aid. Not only does corruption and opacity result in the waste of aid, but it can also re-open old wounds amongst rebel groups whose original grievances are often that they feel excluded from their share of the national wealth.

Second, in terms of human capital, policymakers must seek to divert citizens' efforts away from unproductive activities and toward productive ones that will reinvigorate human capital growth. Along these lines, Collier's World Bank team argues that "social policy is relatively more important and macroeconomic policy is relatively less important in postconflict situations than in normal situations" (2003: 154). Specifically, education and health care should be given relatively more weight in postconflict economies because emphasizing such policies might credibly signal the government's priority for social inclusion (154).

Finally, postconflict governments must clarify and, where necessary, re-assert citizens' property rights (Collier, et al, 2003: 156; see also Korf 2005). Civil conflicts often displace landowners while allowing those without legitimate title, often rebel soldiers, to seize their lands. Where such situations exist, government intervention is necessary to clarify the interpretation and enforcement of property rights. Such measures will allow citizens to return to economically productive activities more rapidly. Furthermore, an assertive approach to property rights in the immediate postconflict period will encourage private investors to invest in reconstruction.

Paradoxically, this regeneration of investor confidence must also occur precisely when these individuals and organizations most fear a return to conflict — in its immediate aftermath. While the postconflict economy likely provides ample investment opportunities, investors will remain wary of entering a politically volatile environment and will choose to restrict the scope and depth of their involvement. Collier and his colleagues suggest that a credible signal of the government's and any former combatants' commitment to peace should assuage investor concerns that the country is likely to relapse into conflict, encourage higher private investment, and promote the repatriation of funds moved abroad as part

of the capital flight that accompanies violent conflict (Collier et al 2003: 157). Therefore, understanding the determinants of credible commitment can help provide the keys to understanding postconflict economic recovery.

Regardless of how a conflict concludes, former combatants face a commitment problem in the immediate postconflict period. A warring party may publicly commit to the peace; however, once its former enemy has itself disarmed, it may renege and attack its enemies to gain political advantage. It therefore remains in its enemies' best interests to ignore their own commitment to the peace in case of a violation. Thus, the conclusion of hostilities witnesses a broad commitment problem — all former combatants are tempted to return to violence, making public commitments to the peace non-credible.

Forging a successful commitment to the peace is fundamentally a political problem. We argue that political institutions crucially shape governments' abilities to make commitments that economic actors can trust. A credible commitment to the peace requires that political actors possess the political motivation and capability to form durable commitments without fear of renegotiation by third-parties (that is, the ability to make agreements that are renegotiation-proof). Extant theory and a wealth of evidence on other issues of credible commitment — e.g., the cessation of violence, international deterrence, attracting investment — suggests that regime type fundamentally shapes the kinds of commitments political leaders can make.

We define democracy by its two main components: the placement of political authority in the hands of a broad swath of society and the potential for political competition at the elite level.⁵ Consider each in turn. First, vesting political authority in the public should make leaders accountable to a larger proportion of the overall population in comparison with non-democratic leaders. We do not mean to confer magical properties on the existence of elections as a panacea for postconflict countries. Nevertheless, a reliance on popular sovereignty might

⁵These components map onto the participation and contestation dimensions of polyarchy proposed by Dahl (1972).

assist leaders in making popular commitments to the peace. Fearon (1994) proposes that, in international crises, democratic leaders will more cautiously commit to particular goals than non-democratic leaders; if they do so and then are forced to renege, they will suffer steep audience costs (i.e., sanctions from the public for breaking their word) that increase rapidly as long as the crisis continues. In the postconflict political environment, Fearon's (1994) logic suggests that democratic political leaders will hesitate to break their commitments to the peace for fear of electoral censure.

Second, in democracies, elite competition takes the form of challenges to the incumbent government from within the political system. Though certain authoritarian governments may conduct regular popular elections, fewer actually allow real competition that could threaten their rule (Gandhi and Przeworski 2006). Some have suggested that the existence of elite competition in democracies may exacerbate the difficulty of building credible commitments because the increased number of veto points may make policy reversal more likely. However, these considerations may be overstated, and for two reasons. First, the presence of an opposition will likely force democratic leaders into only those agreements that veto actors will approve. Put differently, the presence of veto actors will transform any negotiations over the terms and implementation of the peace into two-level games where any potential agreement unsatisfactory to the opposition is vetoed (Putnam 1988). Second, democratic systems more likely allow previous antagonists the opportunity to enter the political system. Their inclusion likely will signal support for government actions by those least likely to give it, adding credibility to the peace for domestic and international observers.

Our discussion of democracy's relative advantages in committing to the peace and economic reconstruction, however, has essentially assumed that at the conclusion of hostilities, a functioning democracy exists, one replete with the textbook attributes of a mature democracy — a functioning party system, legitimate elections, civic culture, etc. This begs the question of democracy's "starting point" following civil conflicts. What if a country transitions to democracy from some non-democratic regime immediately following the conclusions

of hostilities? Are the twin challenges of building democratic political institutions and rebuilding an economy an overwhelming obstacle or boon for reform?

A growing number of scholars address the former question (Ball 1996; Walter 1997, 1999; Paris 2004). These authors' critique grants that established democracies indeed make more credible commitments to peace. Furthermore, all advocate for the eventual implementation of democratic reforms in postconflict countries, for both normative and instrumental reasons. However, the authors differentiate the benefits of *mature democracy* from the dangers of *immature democracy* in the immediate postconflict period. Paris (2004) reasons that rapid democratization as a response to civil conflict involves two closely related risks. First, the new democracy will inevitably lack the institutional strength to limit competition to peaceful means. Elections likely exacerbate societal conflict, setting the stage for potential autocrats to hijack the electoral process (161-166). Second, these countries will largely lack the kind of civil society that restrains citizens from resorting to arms to pursue political goals (160-161). Therefore, political liberalization at the conclusion of conflict unleashes potentially violent political conflict precisely at the time when democratic institutions are least prepared to control it (for the seminal statement of this argument, see Huntington (1968)).

In research on the success of negotiated settlements of civil conflicts, Walter (1999) stresses that democratic political institutions cannot be expected to provide a sound basis for peace. Democratization that reconciles former combatants through an inclusive political process, she argues, can form the basis for long-term settlement of political conflicts (Walter 1997: 353). However, in the short-run, democratic political institutions will fail to guarantee former combatants that their enemies will respect the peace. Similarly, Ball (1996) also concurs that the long-term implementation of democracy should constitute a major goal for postconflict countries and international agencies. However, countries emerging from civil conflict too often lack any experience with democratic political processes, so that elections often exacerbate rather than soften political antagonisms (Ball 1996: 31-32).

In conclusion, the foregoing suggests the following:

H1 (Democracy): *Ceteris paribus, the speed with which a country's economy recovers economically from conflict should increase when that country is democratic.*

H2 (Democratization): *Ceteris paribus, the advantage of democratic governments in fostering postconflict economic recovery is attenuated when the democracy is new.*

A Duration Model of Postconflict Economic Recovery

Formal empirical testing of the hypotheses discussed in the previous section necessitates a carefully designed research strategy with demanding conceptual and empirical requirements. These include identifying a comprehensive list of civil conflicts, developing an empirical definition of recovery, and choosing an appropriate statistical technique to analyze these data.

To generate a list of conflicts, we turn to the Uppsala Conflict Data Project (UCDP), which contains data on domestic armed conflicts from 1946 to 2003, inclusive. Our final data set covers 1960 to 2002 since that is the temporal coverage of the World Bank's World Development Indicators (2004), which is our source for economic data.⁶ When multiple civil conflicts existed simultaneously within the same country, we combine them into a single *conflict episode*, which begins with the onset of the first conflict and ends with the conclusion of the last remaining conflict.⁷

Dependent Variable: What Is Recovery?

How would we know that a country has recovered economically from a conflict episode? Studying post-conflict recovery requires an explicit theoretical and empirical demarcation of

⁶The decision of which set of conflicts to study has important consequences (Sambanis 2004). An earlier version of this paper used the Correlates of War listing of civil wars, but this list is very restrictive. To broaden the universe of cases under consideration, we turned to the Uppsala dataset.

⁷The UCDP Conflict Termination data set assembled by Joakim Kreutz also uses the 'conflict episode' as the unit of analysis.

the end of the immediate postconflict period and the beginning of a the transition to long-term economic recovery, what we think of as the arrival of “normal” political and economic activity. Conceptually, we propose that a country has achieved these goals when it reaches and maintains a level of per capita economic activity that equals or exceeds preconflict levels. The achievement of this goal indicates minimally that economic actors have reestablished patterns of consumption and investment to an extent that, in terms of total economic activity on a per capita basis, the economy has at least returned to its preconflict state.

This conceptualization of recovery involves choosing the appropriate threshold to be regained for a country to be considered ‘recovered.’ One possibility is to use the level of GDP per capita in the year before the onset of conflict. But, if conflict resulted in part due to an economic downturn or if an economic downturn accompanied the road to conflict, this would imply that such a threshold would capture a local minimum and therefore be too low. An alternative is to use the highest level of GDP per capita obtained by the country in the five-year period preceding the conflict. This approach has two advantages. First, it averts the concern of setting the bar for recovery too low. Second, it captures better the “true potential” of the economy, which accounts at least in part for the idea of the counterfactual level of development possible for the country. In the results presented below, we use this alternative higher threshold for coding recovery, but all our results are robust to using the year prior to conflict as the threshold.⁸ The *per capita GDP* data required to code economic recovery were obtained from the World Bank’s *World Development Indicators CD-Rom* (2004). Since a primary requirement of this analysis is to compare levels of per capita GDP over time, we use constant figures of GDP per capita, where 1995 is the base year.⁹

⁸We have also utilized a more stringent measure of recovery, which required countries to have post-conflict levels of GDP per capita equal to or higher than their pre-conflict levels for three consecutive years. Results utilizing this measure are consistent with those reported in the text.

⁹A potential critique of this approach is that it ignores the ‘opportunity costs’ of conflict. That is, in the absence of conflict, if the country had maintained its normal growth rate, its GDP per capita would have

To illustrate the empirical coding of the dependent variable, imagine a country emerging from a civil conflict episode. The *recovery episode* begins in the first year after the conflict episode concludes. When the country's GDP per capita matches its pre-conflict level, we code the country as having *recovered* and the recovery episode terminates. A country may fail to recover for one of two reasons. The first is *conflict recidivism*. As Collier et al (2003) have argued, some states are unable to escape from the conflict trap. If another conflict episode commences before recovery from the previous conflict episode has been achieved, the country is coded as failing to recover. The second is more mechanical: some states are still in the process of recovering when our data end, leading their on-going recovery episodes to be *right-censored*.

/INSERT TABLE 1 ABOUT HERE/

Table 1 summarizes the empirical record of economic recovery from civil conflicts, using our definition.¹⁰ In total, there are 164 cases of conflict episodes in our dataset. Of those, 20 (12%) cases have missing data and 20 (12%) are ongoing conflicts. Of the remaining cases, 24 are right-censored, 65 recover and 35 relapse into civil conflict. The data support a pernicious version of the poverty-conflict trap and dramatically emphasize the importance of short-term economic recovery. Postconflict governments face a disturbingly short time frame in which to foster economic recovery. During the first year after conflicts end, 45 cases recover (27% of all cases), while only 17 cases relapse into conflict (10% of all cases). From the second to the eighth year after conflicts conclude, the empirical portrait shifts. During that period, the odds of recovery and relapse are exactly equal; eighteen cases (11%) recover,

increased too, which suggests that some counterfactual level should be the threshold for recovery. While we recognize this critique's validity, we believe our definition's advantages outweigh its potential disadvantages. Most importantly, our approach does not require us to speculate about the country's counterfactual growth rate, which is particularly important because high levels of growth-rate volatility in the developing world make speculations about future growth paths tenuous at best (Pritchett 2000).

¹⁰A complete listing of all conflict episodes, recovery episodes, and our coding of their outcomes, is provided in the appendix.

but eighteen (11%) cases also relapse.

Explanatory Variables: Political Institutional Transitions

Together, **H1** and **H2** state that, while well-established democratic governance effectively shortens the recovery process, newly instituted democracies will tend to experience longer recoveries. Since much of the logic underlying these hypotheses emphasizes the importance of competition and participation in the democratic process for reducing grievances, we choose the Polity measure of regime type, rather than measures of civil and political rights (Gurr and Jagers 1995; Marshall et al 2004). This measure is widely used in both comparative and international politics scholarship, and consists of a series of indicators designed to capture the competitiveness and openness of the political system. We use the combined Polity indicator which we scale from 1 (perfect non-democracy) to 21 (perfect democracy).¹¹

H1 and **H2** imply an interaction effect between the pre- and postconflict regime types. Normally, we might code these hypotheses by including a variable for preconflict democracy, postconflict democracy, and their multiplicative interaction. However, we argue that the state of theory on postconflict economic recovery demands an alternative empirical strategy. Previously, we focused on the advantages and disadvantages of democracy relative to other regime types, as well as the relative advantages of more established democracies versus unestablished democracies. As such, we do not distinguish among non-democratic regimes (e.g., single-party rule, military dictatorship, etc.) or amongst political transitions to non-democracies (e.g., democratic preconflict regimes becoming authoritarian during the course of a conflict). Instead, we offer hypotheses regarding the comparative statics of democratic governance and democratic transitions. Consequently, using the multiplicative interaction term described above imposes restrictions on the data unsupported by theory. Most importantly, such a specification would imply that countries in the middle of the Polity scale — alternatively referred to as “mixed regimes,” “anocracies,” and “incoherent regimes” in that

¹¹For an important critical evaluation of the Polity Index’s utility, see Treier and Jackman (2005).

they lack either pure democratic or autocratic tendencies — are superior to more purely autocratic regimes. The interaction term would suffer similar weaknesses. Given the relatively blunt status of theory on this subject, a more flexible empirical strategy is needed.

We thus follow Gurr and Jagers (1995) in using the Polity measure to code three *regime types*: democracy (scores of 17 to 21 on the Polity scale), autocracy (scores of 1 to 7 on the Polity scale), and mixed regimes (scores of 7 to 17 on the Polity scale) In this empirical specification, there are nine potential political institutional transition types: three infer regime-type stability (autocracy to autocracy, mixed to mixed, democracy to democracy), three infer moves towards democratization (autocracy to mixed, autocracy to democracy, mixed to democracy), and three infer moves towards autocracy (democracy to mixed, democracy to autocracy, mixed to autocracy). This coding allows a flexible comparison of the impact of various political institutional transition types on the speed of recovery.

Control Variables

As we suggested previously, the relative importance of different reconstruction tasks depends on the nature of a recovering country's economy and attributes of its civil conflict. Put differently, the nature of the country's economy and its civil conflict define the nature of the recovery challenge and, in turn, influence the speed of that recovery. We thus include control variables for two aspects of the postconflict economic and political environment that may also affect time to recovery.

We begin with economic influences. Broadly speaking, the preconflict level of economic development helps us understand a country's postconflict ability to recover. We argue that a country's preconflict level of development defines the country's baseline economic potential. All else equal, investors considering investing in a postconflict economy will more likely do so when presented with preconflict evidence of a country's innate growth potential. We control for the preconflict level of per capita GDP using the World Bank's *World Development Indicators CD-Rom* (2004) measure of GDP per capita in constant 1995 US dollars.

Another economic factor affecting the ability of postconflict societies to recover is the amount of capital they receive that can be used to revive a depleted economy (Ball 1996; see Kang and Meernik 2004 for a more complete review of this research). A rapid infusion of international aid is particularly useful in galvanizing investments in physical and human capital and providing opportunities to potential private investors. Furthermore, Collier and Hoeffler (2000, 2002a) have argued that the effect of aid is *conditional on its timing* and, specifically, that aid is most effective when given in the latter half of the decade following the cessation of violence. Our measure of official development assistance (ODA) to the developing world comes from the OECD, and is measured in constant US dollars. We expect a diminishing marginal return to aid, and therefore include a logarithmic transformation of the raw aid figures in our model. To probe the alleged aid-timing effects, we create three time category variables. The first captures the first three years of the recovery episode; the second captures the next three; and the last captures years 7 and over. Next, we interact the level of aid with these time categories, creating a set of variables that capture the time trend of aid during the recovery process.

Along with economic influences, the nature of the conflict itself defines the shape of the postconflict recovery process. Conflicts vary substantially in their cause, duration, destructiveness, and resolution. We follow previous scholars in conceiving of civil conflicts as being of two basic types. Whereas control-of-center conflicts are fought for control of the the central government, territorial conflicts typically involve demands for secession or autonomy. We expect that the underlying grievances surrounding territorially-based conflicts less easily lend themselves to credible postconflict commitments to peace. Territorial conflicts are characterized by a more continuous issue space; as a result, the issues more likely lack clear reference points to which political actors can agree and commit. In contrast, former combatants will likely find it more difficult to modify the resolution of control-of-center conflicts without a fundamental re-ordering of political institutions. The Uppsala Armed Conflict Data base distinguishes between these two types of conflict. We create a dichotomous indi-

cator variable where conflicts over territory are coded 1 and conflicts over government control are coded 0.

Civil conflicts also vary in their economic destructiveness. Some conflicts certainly kill massive amounts of combatants and civilians, destroy cities and factories, disrupt agriculture, and disturb the enforcement of property rights. However, other civil conflicts only moderately damage the economy. Logically speaking, the economic destructiveness of wars might have two countervailing effects. We might suggest that countries suffering lighter economic damage will recover more quickly; simply put, they have a less challenging hill to climb. Alternatively, more economic damage may depress investment levels far below the optimal levels, causing investors to rush to make large gains associated with being first movers (Collier 1999). Also, if the damage forces the replacement of older infrastructure with more modern technologies, postconflict economic growth might even be hastened. Koubi (2005) finds support for the latter hypothesis, which was first articulated by Organski and Kugler (1977) in their seminal work on the ‘Phoenix Factor’ in interstate wars. Unfortunately, calculating the true economic destructiveness of a conflict episode is a difficult task. As a proxy, we use data on GDP per capita to calculate economic “damage,” or the percentage of the prewar GDP per capita lost by the end of the conflict. Mathematically, $\text{Damage} = [(\text{PrewarGDPpc} - \text{PostwarGDPpc}) / \text{PrewarGDPpc}] * 100$.¹²

In addition to the raw economic destructiveness of civil conflicts, we also attend to their duration. The longer a conflict episode lasts, the longer the economy and populace suffer, which should make subsequent recovery harder to achieve. However, the relationship between conflict duration and recovery might be non-linear. For instance, Collier (1999) suggests that we should expect longer civil conflicts to yield more rapid economic recoveries because

¹²In analyses not reported here, we used Uppsala’s total battle deaths measure as an alternative indicator for the severity of conflict (Lacina and Gleditsch 2005; Lacina 2006). When we do include a control for battle deaths (we used the `tbdeadb主` measure — total battle deaths, best estimate), our results do not change (though the sample size does reduce from 332 to 315). And the battle deaths variable is not significant in any of the estimated models.

investors will return once the conflict is ‘normalized’ in order to gain an early advantage once the conflict is over. Likewise, civil conflicts vary radically in terms of their duration, from disturbances of only a few days (e.g., Augusto Pinochet’s 1973 military coup against Salvador Allende) to longer civil wars (e.g., Ethiopia’s long-running civil conflicts). While a conflict that lasts a year is expected to do more long-term damage than one that lasts a week, ten years of persistent conflict might well allow economic actors to resume activity even while the conflict continues. We use data from the PRIO dataset to measure the length of the conflict episode and include a quadratic term as well to account for this possible inversion of effect.

Lastly, having discussed conflict’s origins, destructiveness, and duration, we turn to its resolution. Domestic armed conflicts typically conclude in one of three ways: outright military victories for one side, negotiated peace agreements, or ceasefires. Licklider (1995) and Atlas and Licklider (1999) argue that the outright military victory of one side or the other in civil conflict greatly reduces the risk of recidivism for at least two reasons. First, it destroys the organization of one side of the civil war, thus making a return to arms more difficult (Licklider 1995: 685). Second, negotiated settlements create a new axis of conflict *within* former armed groups, as more extremist elements seek to continue to violence while the leadership of the armed group adheres to the agreement (Atlas and Licklider 1999). Peace agreements, by contrast, require a credible commitment by all parties involved to maintain the peace. Peace agreements must therefore be policed and rogue elements of either side may still force a return to arms. Walter (2002) echoes these arguments. She stresses the difficulties in sustaining peace agreements and proposes that they necessitate third-party guarantees in order to last. In turn, peace agreements reveal that actors were able to come to the negotiating table and agree to terms. We thus might prefer peace agreements to the slow fading away of conflict. A new data base from PRIO codes the nature of termination for all conflicts in the Uppsala data base (Kreutz and Mack 2005). This data set distinguishes between five termination types on the basis of whether the warring sides had resolved the

underlying conflict and the explicitness of the agreement with respect to disarmament and demobilization. We create two mutually exclusive dummy variables for whether the conflict ended in *unilateral victory* or in a *peace agreement*. Thus, the reference category is comprised of those conflicts that ended in ceasefires or where the level of violence tapered out without explicit resolution of the underlying grievances (DeRouen and Sobek 2004; Hoddie and Hartzell 2005; Licklider 1993; Walter 2002, 2004).¹³

Models and Results

To analyze the timing of recovery after violent domestic conflict, we utilize event history analysis. Specifically, as described above, recovery episodes can end in one of three ways: successful recovery, conflict recidivism, or right-censoring. Therefore, a competing risks model is appropriate. To account for multiple recovery episodes within a single country, we follow Beck, Katz, and Tucker's suggestion (1998: 1272) and include in the specification a variable that counts the number of previous recovery episodes.

In the language of event history analysis, countries in a postconflict environment face a multistate competing risks problem. Any given recovery episode ends with either successful recovery or recurrence of conflict. States experiencing neither outcome are right-censored. As such, a competing risks analysis is suitable. Summary statistics for all variables included in the analysis are reported in the appendix, as is a detailed list of all the recovery episodes included in the data set. A careful examination of the baseline hazard suggests the use of the log-normal distribution for the duration portion of our model.¹⁴ We report our results

¹³That is, the other three ways in which conflicts end, as coded by Kreutz and Mack, are ceasefire agreements signed and/or accepted by the main actors in the conflict, ceasefire agreements not signed and/or accepted by the main actors, and low levels of conflict activity. Roy Licklider has suggested that recent conflicts might experience a new termination type, which he terms 'forced settlement' (personal communication).

¹⁴The hazard rate peaks slightly after 4 years from the end of the conflict, and then falls away steadily, which suggests that most successful economic recoveries occur within 4 years. Statistically, the nonmonotonic

in Table 2.¹⁵

Political Institutional Transitions

Concentrating first on the testing of the political institutional transition hypotheses, we can draw several conclusions from Table 2.¹⁶ First, political institutional transitions do matter for economic recovery. Six of nine transition types have statistically significant estimated effects, and a Wald test on the nine transition type variables together is statistically significant at the $p = 0.001$ level.

/INSERT TABLE 2 ABOUT HERE/

Second, **H1** states that postconflict democracy should be good for recovery. Is this supported by our data? There are three transition types in Table 2 that result in postconflict democratic governance: democratic stability and transitions from either autocracy or anocracy to democracy. A Wald test on these three variables rejects the hypothesis that postconflict democracy is good for recovery ($p = 0.258$). However, this result is likely driven by our finding that transitions from authoritarianism to democracy yield the slowest subsequent economic recoveries. By contrast, as we discussed in more detail below, cases of democratic

shape of the hazard function suggests the use of the lognormal distribution for the duration portion of our model, since the alternative exponential and Weibull models assume constant and monotonic hazards respectively (Box-Steffensmeier and Jones 2004). Following Box-Steffensmeier and Jones (2004), we also estimated Cox non-parametric equations for each of the models presented in this text. The lognormal distribution generates the lowest Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) scores. And our results hold when we use the Cox model instead. These are available upon request.

¹⁵Because the model reported in Table 2 uses a log-normal parameterization, positive coefficients indicate that increases in the independent variable *increase* the time to the event. Therefore, in the recovery model, since the goal is to facilitate the quickest possible recovery, the smaller the coefficient value the better. In models of conflict recurrence, we normatively prefer a long and stable peace and thus larger coefficients.

¹⁶In results not reported here, we specified the model using continuous measures of democracy, and included the interaction of the country's pre- and post-conflict democracy score. While the results from this interaction term model support our claims, we prefer the indicator variable model since it does not require us to specify *a priori* that anocracies are necessarily better than autocracies and so on.

stability and smaller shifts from mixed regimes to full democracy are among the fastest to recover.

Does the lack of emphatic confirmation of democracy's hypothesized benefits mean that our argument is incorrect? Not necessarily. Recall that **H2** proposed that new democracies will experience longer recoveries than mature democracies. Indeed, the results make clear that democracies' postconflict performance varies widely on the basis of the preconflict regime. The estimated coefficients presented in Column 1 essentially allow us to rank the political institutional transition types according to their effect on the speed of recovery and provide statistical evidence as to the strengths of those rankings. Accordingly, Table 3 reproduces the relevant effects from Table 2 by rank-ordering the various transition types according to the size of their effect on recovery time. Of the nine transition types, countries that retain a democratic regime at the conclusion of a conflict recover the most quickly, with the predicted effect of democratic stability being 2.83 years. Countries that transition from anocracy to democracy perform nearly as well; the predicted effect of such transitions is 2.97 years. In contrast, countries constructing new democratic institutions out of authoritarian beginnings are ranked next-to-last in terms of recovery time, with a predicted effect of 7.39 years. Therefore, Column 1 partially supports **H2**: transitions from non-democracy to democracy severely retard recovery efforts, though more minor alterations to the polity are less worrying. In fact, postconflict increases in democracy only do better than average when the preconflict regime was already highly democratic, but this effect is not statistically significant. As such, scholars and practitioners such as Ball (1996), Licklider (1993), Paris (2004), and Walter (2002) advocating a patient approach to postconflict political liberalization should be bolstered by our results.

/INSERT TABLE 3 ABOUT HERE/

Table 3 reveals one other interesting pattern in the effects of political transition on recovery. Countries that end civil conflicts as mixed regimes tend towards longer recovery periods, ranking fourth (mixed regime stability), seventh (democratic to mixed), and last

(authoritarian to mixed) in terms of speed of recovery. Taken in conjunction with the other transition-type results, these results make clear that regime incoherence is the least desired outcome for postconflict societies since it lacks both the popular legitimacy of democracy and the iron fist of autocracy, leaving it little with which to engender economic revival.

Returning to Table 2, column 2 reports the results from a model of conflict recurrence. Why are some countries more prone to relapsing into violent conflict? In general, it appears that there are few political institutional guarantees against recidivism with most transition types having insignificant effects. However, the data do suggest that moves away from democracy to either anocratic or authoritarian governance increase the time until the recurrence of conflict. That is, relapse into conflict is best avoided by transitions away from democracy to more authoritarian situations. These results are statistically significant, and troubling for those who favor democratization as a cure-all for these societies. Rather, the recurrence of civil conflict analysis provides further support for the patience approach to regime change in postconflict societies. While normatively unpleasing, these results nevertheless demand serious attention due to their policy implications. Before we consider some of these implications in more detail, we discuss the findings from the rest of the model.

Control Variables

Our analysis rejects the proposition that the speed of recovery should be positively related to the preconflict level of economic development. Controlling for other factors, the preconflict level of per capita GDP has a small and statistically insignificant effect in both the recovery and conflict recurrence models in Table 2.

We find that the effect of international aid does depend on its timing. Aid in the first three years of the recovery episode reduces time to recovery. Aid in the next three years also speeds recovery, though our estimate of this effect is extremely imprecise. Finally, aid given in year 7 and beyond of a recovery episode *increases* time to recovery.¹⁷ One consequence of

¹⁷These results might seem at odds with Collier and Hoeffler (2000, 2002a), who find that aid benefits

this conditional impact of aid is that studies omitting aid timing from their models are likely to generate misleading results. When we estimate a model that assumes that aid has a time invariant effect on recovery, it suggests that aid has no effect on recovery or the recurrence of conflict.¹⁸ A more detailed investigation of aid's effects and of *where* and *when* aid is allocated is warranted. We leave this for future research.

As a whole, the results reported in Tables 2 provide mixed support for the role of conflict attributes in subsequent economic recovery or conflict recurrence. The political issues underlying conflicts — here posed as a comparison of control-of-center versus secessionist conflicts — exert little effect on recovery. Most likely this is because any effects of ‘issue basis’ are likely mediated by intervening factors such as the conflict’s destructiveness and duration, so we now attend to those results.

Clearly the extent of the damage incurred by the economy matters.¹⁹ More destructive conflicts prolong the time until recovery. This is probably just confirmation of the simple hypothesis that states that have incurrent greater losses take longer to do so. But, the fact

postconflict countries most when given after the fourth year of the recovery period. We caution against such an interpretation for at least two reasons. First, countries still in recovery after six years (*i.e.*, neither recovered nor relapsed) are likely to be countries recovering from extremely intense conflicts. Second, the focus of our study diverges from that of Collier and Hoeffler (2000, 2002a); whereas their work emphasizes longer-term postconflict economic growth patterns, we concentrate on explicitly on the more short-term challenge of economic recovery. Neither should these results imply that donors should restrict aid to countries still struggling to recover years after a conflict episode.

¹⁸Results available from authors.

¹⁹As discussed above (see *fn* 11), we also considered a measure of total battle deaths as a proxy for conflict severity. The battle deaths variable is not significant in any of our models, and the results discussed here do not change. These results are that surprising. Having controlled for economic destruction, it’s unclear why higher fatalities would affect *economic recovery*. Rather the logic behind the inclusion of casualties — that more brutal conflicts leave scars from which it is harder for a country to recover — is more likely to be relevant for prospects of *conflict recurrence*. And, in fact, when we include the casualty variable in that model, it is statistically significant, and the results suggest that more violent conflicts engender longer periods of peace. Results available from authors.

that economic destructiveness is also positively correlated with time till conflict recurrence suggests another interpretation - that these states experience an extended transition period during which both recovery and recidivism are likely outcomes. The fact that the coefficient for our economic damage variable in the recidivism model is one-half the size of the coefficient for the same variable in the recovery model also suggests that this extended transition period is more likely to end in conflict than in recovery.

The claim that the duration of a conflict episode affects prospects for subsequent recovery or recidivism receives no empirical support. Neither is there any evidence for a non-linear effect of duration whereby medium-length conflicts are most difficult from which to recover.

Lastly, Licklider's (1993, 1995) and Atlas and Licklider's (1999) arguments regarding the importance of civil conflicts' resolution receive tentative empirical support. Military victories significantly delay recurrence of conflict. However, military victories do not significantly alter time to economic recovery in either equation. Peace agreements seemingly have no effect on either recovery or recurrence, again compared to the residual categories of ceasefires or informal cessation of violence. But how do military victories compare to peace agreements? We conducted Wald tests of whether the coefficients on the two indicator variables are statistically different from each other. A Wald test on the coefficients for recovery reveals that the difference between outright military victories and peace agreements is not statistically significant ($p = 0.32$). However, the difference between the two conflict resolution types is significant for time to conflict recurrence ($p = 0.05$), supporting Licklider's (1993, 1995) and Atlas and Licklider's (1999) propositions that outright military victories are better for the postconflict peace.²⁰

²⁰While these results are suggestive of the advantages of outright military victories, we caution that a fuller evaluation of the effect of termination type on recovery would need to account for possible problems of non-random assignment. If some unobserved factors correlated with termination type are also correlated with timing of recovery and/or relapse, then the results discussed above might be spurious.

Conclusions and Implications for Future Research

Scholars and policy analysts have long noted the devastating impact of violent conflict on economic development. The question of how best to sustain peace and foster economic recovery is particularly pressing given recent findings of a “poverty-conflict trap” from which many states are unable to escape. In this paper, we build a new theoretical and empirical definition of short-term economic recovery. We contend that efficiently reconstructing postconflict economies is the first and perhaps the most difficult step on the road to domestic security and prosperity. We conclude by reviewing our results, and considering their academic and policy implications.

Our research yields three principal findings. First, postconflict political transitions shape the success of economic recovery. Major changes in regime from autocracy to democracy retard economic recovery; indeed. These findings are robust to different specifications of political institutional transitions. Furthermore, transitions to mixed regimes (that is, anocracies) have a largely negative effect on postconflict recovery, which confirms concerns about the ‘incoherent’ nature of these regimes. Second, international aid speeds time to recovery, especially when that aid is funneled to recovering countries early after the conclusion of hostilities (i.e., within three years). Third, outright military victory leads to a longer peace when compared to peace agreements.

We pay special attention to the academic and policy implications of our findings on political transitions and economic recovery. In the wake of a violent civil conflict, policymakers must often build both new political institutions or rehabilitate frayed ones while simultaneously implementing economic policies that will foster recovery. They do so in an environment where viable threats to the newfound peace continue to exist, which in turn jeopardize both their political and economic efforts. In this vein, we have demonstrated that building new democratic institutions while simultaneously promoting economic reconstruction represents a nearly impossible challenge in many instances. Future research must develop a subtler understanding of the factors at play in such instances. Our measure of democracy, while widely

used, is an aggregate index of different aspects of a country's regime type. The next step therefore is to develop arguments about exactly which aspects of democratization endanger stability in the postconflict period and how those dangers can be managed successfully. Are elections inherently destabilizing when held soon after the conclusion of hostilities or does freedom of speech exacerbate residual hatreds from the conflict? What steps can be taken to smooth the democratic transition? We hope that future scholars bring the full range of our research tools to bear on these questions.

In policy terms, we strongly suggest that scholars and practitioners develop new strategies, devote greater resources, and extend their time horizons in their efforts to help countries that attempt this transition. Given the normative desirability of democratic governance, the imposition of authoritarian regimes in postconflict countries for the sake of shorter economic recoveries represents an undesirable outcome. Instead, we must develop a more comprehensive and long-term approach to assisting new governments in postconflict reconstruction. In doing so, we must replace the understandable temptation to hurriedly schedule elections, with the inevitably gratifying photographs of overjoyed citizens voting, with a more sober and long-term, though necessary, process of institution-building. A new wave of scholars has begun to outline new approaches along these lines. Paris (2004) suggests a series of specific institutional reforms before democratization is phased in. Similarly, Ball (1996) proposes an extended period of caretaker governments. Finally, Walter (1997, 1999) recommends third-party security guarantees of the peace to give fragile democratic governments breathing room.

Investigating the origins of civil conflicts and their relationship to the subsequent recovery challenge remains a key task in this effort. As we have noted, the countries that ultimately enter our dataset almost certainly form a non-random sample, which raises the potential for bias in our results. Mature democracies rarely suffer from serious violent political conflict. Additionally, not all countries that experience civil conflict experience economic decline to the same extent. In such instances, we are equipped with methodological techniques to correct

for sample bias. In contrast, we suggest that scholars treat such problems not as statistical “bugs” to be “fixed,” but as theoretical challenges to be investigated. The implications for policy are clear: re-building a conflict-torn society requires that we understand the roots of its conflict, its conduct, and its final outcomes. Thus, research on domestic civil conflict should move toward developing a more integrated framework of analysis. Our analysis makes clear that political transitions are an important factor in recovery, but they are likely also important for understanding the origins of the conflict in the first place if combatants are fighting essentially to set the political ‘rules-of-the-game’. This suggests that focusing on political transitions during violent domestic conflict might hold the key to developing a unified explanation of conflict onset, conclusion, and recovery. Indeed, given the relatively recent attention paid to domestic armed conflicts, our advances in knowledge of their onset, participants, nature, duration, termination, and consequences are impressive. Each of these topics has typically been studied in isolation, an important first stage of a research program. Nevertheless, the time is propitious for the construction of a more unified theory of civil conflicts that offers both scholarly understanding and specific policy advice that can help in the pursuit of peace and prosperity.

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Table 1: Summary of Cases

Category/ Duration	Number	Percentage of total cases	Percentage of recoveries/ relapses
Cases with missing data	20	12%	
Ongoing conflicts	20	12%	
Censored cases	24	15%	
Cases of Recovery			
Year 1	45	27%	69%
Year 2	6	4%	9%
Year 3	4	2	6%
Year 4	3	2%	5%
Year 5	2	1%	3%
Year 6	1	1%	2%
Year 7	1	1%	2%
Year 8	1	1%	2%
Year 10	1	1%	2%
Year 19	1	1%	2%
Total recovered	65	40%	100%
Cases of Relapse			
Year 1	17	10%	49%
Year 2	8	5%	23%
Year 3	4	2%	11%
Year 4	3	2%	9%
Year 7	2	1%	6%
Year 8	1	1%	3%
Total relapsed	35	21%	100%
Total conflict episodes	164	100%	

Table 2: **Log-Normal Competing Risks Estimates**

	Recovery	Recurrence
Authoritarian stable	1.50*	0.67
	(0.77)	(1.02)
Authoritarian transition to anocratic	2.31***	0.27
	(0.83)	(1.01)
Authoritarian transition to democratic	2.00**	0.61
	(0.94)	(1.40)
Anocratic transition to authoritarian	1.28*	0.88
	(0.76)	(1.05)
Anocratic stable	1.32	0.71
	(0.81)	(1.15)
Anocratic transition to democratic	1.09	1.01
	(0.88)	(1.25)
Democratic transition to authoritarian	1.40*	4.26***
	(0.80)	(0.99)
Democratic transition to anocratic	1.84**	3.79***
	(0.77)	(1.05)
Democratic stable	1.04	0.84
	(0.74)	(1.07)
Pre-conflict GDP per capita (High)	-0.02	0.03
	(0.08)	(0.11)
Aid: 1 to 3 Years	-0.12*	-0.09
	(0.06)	(0.11)
Aid: 2 to 6 Years	0.08	0.01
	(0.08)	(0.12)
Aid: 7 Years +	0.32***	0.21
	(0.12)	(0.15)
Secessionist Conflict	0.25	-0.21
	(0.18)	(0.23)
Conflict Duration	-0.02	0.07
	(0.03)	(0.05)
Conflict Duration (Squared)	0.00	-0.00
	(0.00)	(0.00)
Economic Damage	0.02***	0.01**
	(0.01)	(0.00)
Termination: Victory	0.01	0.95***
	(0.18)	(0.23)
Termination: Peace Agreement	0.21	0.28
	(0.24)	(0.34)
Recovery Number	0.14	0.19*
	(0.12)	(0.10)
N	332	332
AIC	209.82	162.99
BIC	289.72	242.90

Notes: * p<0.10, ** p<0.05, *** p<0.01; Standard errors in parentheses.

Table 3: Comparison of Political Institutional Transition Types

Rank	Transition Type	Coefficient ($\hat{\beta}$)	Predicted Effect ($e^{\hat{\beta}}$)	No. of Cases (N)
1	Democratic stability	1.04	2.83	18
2	Anocratic to democratic	1.09	2.97	12
3	Anocratic to authoritarian	1.28	3.60	16
4	Anocratic stability	1.32	3.74	112
5	Democratic to authoritarian	1.40	4.06	18
6	Authoritarian stability	1.50	4.48	79
7	Democratic to anocratic	1.84	6.29	5
8	Authoritarian to democratic	2.00	7.39	18
9	Authoritarian to anocratic	2.31	10.07	54
				332

Source: Table 2 and authors' calculations.

Note: Predicted effect is in years and is calculated by exponentiating the estimated coefficient from the log-normal model.

Appendix

Table 4: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Prewar Polity score observation	8.964	5.869	1	21	332
Postwar Polity score observation	10.009	5.822	1	21	332
Pre-conflict GDP per capita (High)	6.583	0.909	4.739	9.569	332
Official Development Assistance (Log)	5.378	1.091	0.770	7.895	332
Secessionist Conflict	0.184	0.388	0	1	332
Damage (% of Pre-conflict GDP per capita)	7.786	21.567	-149.94	90.60	332
Conflict Duration	3.895	5.861	1	31	332
Termination: Victory	0.575	0.495	0	1	332
Termination: Peace Agreement	0.208	0.406	0	1	332
Recovery Number	1.578	0.860	1	5	332

Table 5: List of Cases

Country	Conflict Episode	Previous Year ^a		5-Year High ^b	
		Recovery Period	Outcome	Recovery Period	Outcome
Afghanistan	1978-01	2002-	Censored		
Angola	1960-2002	na	-	na	-
Argentina	1963	1964	Recovered	1965-65	Recovered
	1973-77	1978-79	Recovered		
Azerbaijan	1992-95	1996-	Censored		
Burundi	1965	1966	Recovered		
	1991-92	1993	Relapsed		
	1994-02	na	-	na	-
Burkina Faso	1987	1988	Recovered		
Bangladesh	1974-1992	1993	Recovered		
Bosnia-Herzegovina	1992-95	1996	Recovered		
Bolivia	1967	1968-75	Recovered		
Cent. African Rep.	2001-	na	-	na	-
Chile	1973	1974-79	Recovered	1974-80	Recovered
Cote d'Ivoire	2002-	na	-	na	-
Cameroon	1984	1985	Recovered		
Congo, Rep.	1993-94	1995-96	Relapsed		
	1997-99	2000-01	Relapsed		
	2002-	na	-	na	-
Colombia	1965-	na	-	na	-
Comoros	1989	1990-96	Relapsed		
	1997	1998	Recovered	1998-	Censored
Cuba	1961	-	-	-	-
Djibouti	1991-94	1995-98	Relapsed		
	1999	2000-	Censored		
Dominican Rep.	1965	1966-70	Recovered		
Algeria	1991-	-	-	-	-
Egypt	1993-98	1999	Recovered		
Eritrea	1997	1998	Recovered		
	1999	2000-02	Relapsed		
	2003-	-	-	-	-
Ethiopia	1960	1961	Relapsed		
	1962-1992	1993-95	Relapsed		
	1996-	-	-	-	-
Gabon	1964	1965	Recovered		
Georgia	1991-93	1994-	Censored		
Ghana	1966	1967-70	Recovered		
	1981	1982	Relapsed		
	1983	1984-87	Recovered	1984-02	Recovered
Guinea	1970	-	-	-	-
	2000-01	2002	Recovered		
Gambia	1981	1982-83	Recovered		
Guinea-Bissau	1998-99	2000-	Censored		
Equatorial Guinea	1979	-	-	-	-
Guatemala	1965-95	1996	Recovered		
Croatia	1992-93	1994-95	Relapsed		
	1996	1997	Recovered		

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Country	Conflict Episode	Previous Year ^a		5-Year High ^b	
		Recovery Period	Outcome	Recovery Period	Outcome
Haiti	1989	1990	Relapsed		
	1991	1992-	Censored		
Indonesia	1960-61	1962	Recovered	-	-
	1965	1966-68	Recovered		
	1975-92	1993	Recovered		
	1997-	na	0	na	-
India	1961-72	1973	Recovered		
	1978-	na	-	na	-
Iran	1966-68	-	-	-	-
	1979-88	1989	Relapsed		
	1990-93	1994	Recovered	1994-95	Relapsed
	1996-97	1998	Recovered	1998	Relapsed
	1999-01	2002	Recovered	2002	Censored
Iraq	1961-70	-	-	-	-
	1973-96	-	-	-	-
Israel	1960-	na	-	na	-
Kenya	1982	1983-87	Recovered		
Cambodia	1967-75	-	-	-	-
	1978-98	1999	Recovered		
Laos PDR	1960-61	-	-	-	-
	1963-73	-	-	-	-
	1989-90	1991	Recovered		
Lebanon	1975-90	1991-93	Recovered		
Liberia	1980	1981-88	Relapsed		
	1989-95	1996-99	Relapsed		
	2000-	na	-	na	-
Sri Lanka	1971	1972-73	Recovered		
	1983-01	2002	Recovered		
Lesotho	1998	1999-	Censored		
Morocco	1971	1972	Recovered		
	1975-89	1990	Recovered		
Moldova	1992	1993-	Censored		
Madagascar	1971	1972-	Censored		
Mexico	1994	1995	Relapsed		
	1996	1997	Recovered		
Macedonia	2001	2002-	Censored		
Mali	1990	1991-93	Relapsed		
	1994	1995	Recovered	1995-98	Recovered
Myanmar	1960-	na	-	na	-
Mozambique	1976-92		Recovered		
Malaysia	1960	1961	Recovered	-	-
	1963-66	1967	Recovered		
	1974-75	1976	Recovered		
	1981	1982	Recovered		
	1992	1993	Relapsed		
Niger	1994	1995	Relapsed	1995	
	1996-97	1998	Recovered	1998-	Censored
	1999-	na	-	na	-
Nigeria	1966-70	1971	Recovered		
Nicaragua	1978-79	1980	Relapsed		
	1981-1989	1990-	Censored		

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RECOVERING FROM DOMESTIC CONFLICT

Country	Conflict Episode	Previous Year ^a		5-Year High ^b	
		Recovery Period	Outcome	Recovery Period	Outcome
Nepal	1960-62	1963	Recovered	-	-
	1996-	na	-	na	-
Oman	1972-75	1976	Recovered		
Pakistan	1971	1972-73	Relapsed		
	1974-77	1978	Recovered		
	1990	1991	Recovered		
	1995-96	1997	Recovered		
Panama	1989	1990	Recovered	1990-93	Recovered
Peru	1965-66	1967	Recovered		
	1980-99	2000-	Censored		
Philippines	1970-	na	-	na	-
Papua New Guinea	1989-90	1991	Relapsed		
	1992-1996	1997	Recovered		
Paraguay	1989	1990	Recovered	1991-	Censored
Romania	1989	1990-	Censored		
Russia	1990-91	1992	Relapsed		
	1993-96	1997-98	Relapsed		
	1999-	na	-	na	-
Rwanda	1990-94	1995-96	Relapsed		
	1997-	na	-	na	-
Saudi Arabia	1979	1980	Recovered	1980-	Censored
Sudan	1963-72	1973-75	Relapsed		
	1976	1977	Recovered		
	1983-	na	-	na	-
Senegal	1990	1991	Relapsed		
	1992-93	1994	Relapsed		
	1995	1996	Recovered	1996	Relapsed
	1997-01	2002	Recovered		
Sierra Leone	1991-2000	2001-	Censored		
El Salvador	1972	1973	Recovered		
	1979-91	1992-	Censored		
Somalia	1978	-	-	-	-
	1981-96	-	-	-	-
	2001-02	-	-	-	-
Suriname	1986-88	1989-91	Recovered	1989-	Censored
Syria	1966	1967-69	Recovered		
	1979-82	1983	Recovered		
Chad	1965-94	1995-96	Relapsed		
	1997-	na	-	na	-
Togo	1986	1987-90	Relapsed		
	1991	1992-	Censored		
Thailand	1974-82	1983	Recovered		
Tajikistan	1992-96	1997	Relapsed		
	1998	1999	Recovered	1999-	Censored
Trinidad & Tobago	1990	1991	Recovered	1991-00	Recovered
Tunisia	1980	1981	Recovered		
Turkey	1984-	na	-	na	-
Uganda	1971-72	-	-	-	-
	1977-79	-	-	-	-
	1981-91	1992	Recovered		

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Country	Conflict Episode	Previous Year ^a		5-Year High ^b	
		Recovery Period	Outcome	Recovery Period	Outcome
	1994-	na	-	na	-
Uruguay	1972	1973-74	Recovered		
Uzbekistan	2000	2001	Recovered		
Venezuela	1962	1963	Recovered		
	1992	1993	Recovered		
Yemen	1962-70	-	-	-	-
	1980-82	-	-	-	-
	1994	1995	Recovered		
Serbia & Montenegro	1991	-	-	-	-
	1998-99	2000-02	Recovered		
South Africa	1966-88	1989	Recovered		
Zaire	1960-62	1963	Recovered	-	-
	1964-65	1966	Relapsed		
	1967	1968-69	Recovered	1968-73	Recovered
	1977-78	1979-95	Relapsed		
	1996-91	1992-	Censored		
Zimbabwe	1972-79	1980-81	Recovered		

na: Not applicable since conflict is on-going as of end of data set.

-: GDP data missing.

^a: Using GDP per capita in year prior to onset of conflict as threshold for recovery.

^b: Using highest level of GDP per capita in 5 years prior to onset of conflict as threshold for recovery.