

Working Paper:
Breaking the Conflict Trap: On the Factors Contributing to Civil War Recurrence

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Abstract

While the literature on civil conflict recurrence has expanded in recent years, there remains little agreement among scholars about the most significant contributing factors. Accordingly, this study analyzes several of the key factors which previous literature has identified as relevant. I have separated these factors into three schools – original conflict termination, original conflict context, and post-conflict development variables. My data cover civil conflicts which ended from 1960-2001, and I code for whether each conflict recurred within a ten-year span. I test the impact of my independent variables using multivariate logistic regression analysis. My results suggest that military victories significantly reduce the likelihood of conflict recurrence, while natural resource conflicts and conflicts in anocratic states are roughly three times more likely to recur. These findings stress the need to address grievances related to natural resources in the post-conflict setting and demonstrate the potential consequences of rapidly implementing Western neoliberal models after a civil conflict ends.

1. Introduction

Since the end of World War II, the incidence of interstate conflict has declined considerably. Some commentators have referred to the post-1945 period as The Long Peace.¹ Following the fall of the Berlin Wall and the collapse of the Soviet Union, Fukuyama even claimed that the world had reached “the end of history.”² Yet, while interstate conflicts have become less prevalent, intrastate conflicts have proliferated. From 1945-1999, 127 civil wars occurred globally, causing 16.2 million deaths. These conflicts involved 73 states, three times as many as took part in an interstate conflict.³ Additionally, the average duration of a civil conflict has increased to 16 years.⁴ Several civil conflicts, such as the ongoing wars in Afghanistan and the Democratic Republic of the Congo, have stretched on for decades

Yet, while these numbers would suggest the contagion of intrastate conflict is spreading, the real cause for these disturbing statistics is the recurrence of previous civil conflicts. Even as the number of civil wars has increased, the percentage of countries affected has remained stable at 1-2%.⁵ Recurring civil conflict has contributed to the emergence of several fragile and failed states on the periphery of the international system. Addressing this challenge requires generating better information on which factors are most likely to contribute to conflict recurrence and under what circumstances national and international actors can help build peace in war-torn states.

2. Literature Review

Research on civil conflict recurrence tends to cluster around three themes – the root causes of the initial conflict, the manner in which the original war was fought, and the settlement/peacebuilding process.⁶ Many scholars have asserted that identity conflicts are particularly prone to relapse. These conflicts may present an existential threat to the survival of a particular group, heightening their sense of insecurity.⁷ Additionally, the existence of identity groups reduces the barriers to collective action required to launch a rebellion. Others have challenged these findings, however, asserting that identity conflicts are no more intractable than those based on other grievances.⁸

Much of the research on the economic causes of civil conflict has concentrated on the role that natural resources play in financing conflict. Collier, Hoeffler, and Soderbom assert that rebel leaders continue fighting because they are able to gain socioeconomic benefits during conflict that they could not enjoy from peace.⁹ Rebel leaders may become dependent on illicit natural resource rents; these revenue streams would disappear if the state reasserted sovereignty over its resource endowment. Others have found evidence that states dependent on natural resource rents are at a higher risk for conflict recurrence for several reasons.¹⁰ The legitimacy of

many post-conflict regimes is tenuous, at best. Heavy reliance on resource rents may widen the gulf between the government and its constituents if the regime does not need to rely on citizens for tax revenue. Additionally, resource rents may incentivize rebel leaders to try and capture control of the state. Rustad & Binningsbø found that natural resource conflicts have shorter peace periods and face a higher risk of recurrence.¹¹

Scholars focused on the manner in which the original war was fought typically examine the conflict duration and intensity. Most researchers agree that longer conflicts appear less likely to recur. Some have argued this effect stems from the fact that long wars reveal more information on the military capacities of armed groups.¹² Having fuller information on the capacity and willingness of groups to continue the conflict allows actors to weigh accurately their odds of success. Without this information, rebels may overestimate their odds of success, increasing the likelihood that they will resist a negotiated settlement. Others have concluded war weariness lowers support for rebels to continue fighting.¹³ Doyle and Sambanis, however, challenge the war weariness theory, arguing it is not robust to model changes.¹⁴

Many researchers focused on the settlement and peace process suggest that military victory increases the likelihood of a durable peace.¹⁵ Mukherjee argues that military victories address key information asymmetries between warring parties, increasing incentives to keep the peace. She notes that weak (or defeated) governments have greater incentives to offer maximum concessions to rebels. Strong governments, in contrast, will offer limited concessions in order to buy off potential spoilers and separate rebel leaders from their supporters. Rebels also have incentives to accept concessions from strong governments in order to maintain the support of their followers and decrease the risk of additional losses.¹⁶ Quinn, Mason, and Gurses, in contrast, argue that this dampening effect only occurs after rebel victories. They claim that any

government victory which does not totally annihilate rebels cannot strip these groups of their ability to resume the fight. Accordingly, only rebel victories eliminate “dual sovereignty,” which is the ability of a group to make claims against the government’s authority.¹⁷ Others have argued that comprehensive peace agreements lower the risk of conflict recurrence by addressing key information asymmetries.¹⁸ Conversely, ceasefires, which do not typically include measures for information exchange and confidence building, contribute to a greater relapse risk.¹⁹

Multiple studies have analyzed the impact of international peacekeeping operations (PKOs). Doyle and Sambanis presented evidence that PKOs contribute to peacebuilding, and additional studies have supported their findings.²⁰ These researchers suggest that PKOs provide the critical resources and institutional capacity that is needed to build peace. Mukherjee, however, did not find a significant effect. She concludes that third-party actors may play an important role in bringing hostile actors to the negotiating table, rather than in building peace.²¹

Lastly, evidence suggests that economic growth and development in the post-conflict period should lower the recurrence risk.²² Higher levels of economic development present employment alternatives for potential rebels, raising the opportunity costs of rebellion. This process reduces the efficacy of rebel recruitment efforts and increases barriers to collective action. Fearon (2008) has challenged this theory, arguing that economic growth increases the incentive for rebels to try to capture key resources and means of production.²³

3. Data

This analysis explores the connection between factors that emerge during the initial conflict or in the post-conflict period and the likelihood of civil conflict recurrence. Unlike most other studies in the literature, I focus on individual conflicts as the unit of analysis, rather than country years. This process enables me to consider the particular trends influencing each

individual conflict, rather than the trends within individual conflict-affected states. The conflicts which I analyze come from the UCDP/PRIO Conflict Termination Dataset.²⁴ The analysis examines conflicts that terminated between 1960 and 2001 and defines conflict recurrence as relapse within the ten years following the end of the original conflict. As a check for robustness, I have also included conflicts terminated by 2006 in order to consider the likelihood of conflict relapse within a five-year period.

3.1 Measuring the Dependent Variables

In the UCDP/PRIO Conflict Termination dataset, a civil conflict has terminated when it no longer appears in the UCDP/PRIO Armed Conflict Dataset.²⁵ The latter dataset includes conflicts that produce at least 25 battle-related deaths per year. Accordingly, if an ongoing civil conflict falls below this 25-death per year threshold, the conflict is treated as having terminated. In order to avoid biasing my sample towards conflict recurrence, I have only included the initial instance of a given conflict between/among the same set of actors. For instance, the Government of Ethiopia has fought an ongoing insurgency against the Ogaden National Liberation Front since 1984. Due to changes in the level of the conflict's intensity, the UCDP/PRIO dataset lists four separate instances of conflict termination. For the purposes of my analysis, I have only included the first instance of termination and have classified the conflict as having recurred within both the five and ten-year thresholds. The final dataset includes 200 conflicts in 96 states (through 2006). My dependent variables are binary measures of whether civil conflict recurred within five and ten years after termination.

3.2 Measuring the Independent Variables

I have included several independent variables which the literature suggests influence the likelihood of conflict recurrence. To test the impact of how the original conflict terminated, I

have created three binary variables, *Military Victory*, *All Ceasefires*, and *Peace Agreement*. The UDCP/PRIO Conflict Termination dataset includes a nominal variable that codes conflict termination (1-7). My binary variables measure the conflicts which they list as having ended by a peace agreement, military victory, or ceasefire.²⁶ I expected that conflicts ending in military victory and peace agreements were less likely to recur, while those ending in ceasefires would be more likely to recur.

H1: Military Victories and Peace Agreements should reduce the likelihood of conflict relapse, while Ceasefire Agreements should increase this likelihood.

To examine the effect of the length of the original conflict on conflict recurrence, I recorded the number of months which the conflict lasted, based on the start and end dates listed in the UCDP/PRIO dataset. Due to the variation within these data (see Table 1), I then took the natural log of this total to create the variable *Logged Conflict Duration*. I expect that longer conflicts will be less likely to recur, because they address the information asymmetries that remain following shorter conflicts.

H2: Longer initial conflicts are less likely to recur than shorter initial conflicts.

To examine the effects of the motivations that contributed to the initial conflict, I created the binary variables *Identity Conflict* and *Natural Resource Conflict*. In order for a conflict to be coded an identity conflict, one or more parties must have raised grievances along racial, ethnic, and/or religious grounds. This variable includes separatist movements and uprisings by religious groups. I used data from previous studies in order to classify these conflicts.²⁷ For the *Natural Resource Conflict* variable, I used data from Rustad & Binningsbø.²⁸ They defined natural resource conflicts as those involving disagreements over the distribution of resource revenues, in which revenues fund rebel movements, and/or in which natural resources aggravate ongoing

conflicts. Their data cover 194 of the 200 conflicts included in this analysis. I expect that natural resource conflicts will be more likely to recur.

H3: Identity conflicts will be more likely to recur than non-identity conflicts.

H4: Natural resource conflicts will be more likely to recur than those conflicts that do not have a natural resource component to them.

Given the expanded role the United Nations has played in post-conflict settings since the end of the Cold War, I created the variable *Presence of UN PKO*, which is a binary measure of whether the UN dispatched a peacekeeping operation to help end original conflict and/or engage in post-conflict peacebuilding. I drew these data from Rustad & Binningsbø.²⁹ If the UN's efforts to build and maintain peace in post-conflict countries have borne fruit, this variable should decrease the likelihood of conflict relapse.

H5: The presence of a UN peacekeeping/peacebuilding operation within a country should reduce the likelihood of civil conflict relapse.

I also examined how post-conflict development can affect conflict recurrence. As suggested by Walter, I include the mean *Infant Mortality Rate (IMR)*, during the five and ten years after the original conflict terminated.³⁰ IMR is a measure of the number of infant deaths per 1,000 live births. Development increases the opportunity costs for rebellion by providing alternatives to taking up arms. Because IMR acts as an aggregate measure of socioeconomic development, I expect that lower IMR rates would decrease the risk of conflict recurrence. Additionally, many post-conflict governments prioritize developing their natural resources as a path to development in the aftermath of a conflict.³¹ Accordingly, I created the variable *Natural Resource Rents as Percent of GDP*, which averages the percentage of national GDP derived from natural resource rents in the five and ten years following conflict termination; data are from

the World Development Indicators database.³² I assume that higher levels dependence on natural resources for economic development increases the risk of conflict recurrence, as it can contribute to the onset of the resource curse. If post-conflict governments do not derive tax revenues from their people for public goods, their fragile legitimacy may be undermined.

H6: Higher levels of socioeconomic development in the post-conflict period, as measured by infant mortality rates, reduces the likelihood of conflict recurrence.

H7: Higher levels of natural resource dependence, as measured by the percentage of GDP made up by natural resource rents, increase the likelihood of conflict recurrence.

Lastly, I introduced four control variables – *Anocracy*, *Logged Population*, *Africa*, and *Cold War*. The first variable provides a binary measure of whether the post-conflict government is an anocracy. I define anocracy as a government with an average score between -5 and 5 in the Polity IV dataset during the period following conflict termination.³³ The literature suggests that anocracies may be more susceptible to conflict risk. While authoritarian regimes can crack down on potential rebel movements and democracies provide political space for opposition groups, anocracies fall somewhere in the middle, inhibiting their ability to control domestic upheaval. Civil conflicts also occur more frequently in larger countries, as larger countries are more likely to cross the minimum battle death threshold required for classification as a civil conflict.³⁴ Accordingly, I control for population size by introducing the logged average of population, drawn from the Penn World Tables, version 7.1.³⁵

In order to account for potential differences between African and non-African states and the effects of the Cold War, I introduce the binary *Africa* and *Cold War* control variables. Africa is a unique region for several reasons. First, it experiences the highest number of civil conflicts, and these conflicts tend to more violent than those in other regions.³⁶ Secondly, it has the most

ethnically diverse countries of any continent, which may contribute to identity conflicts.³⁷

Thirdly, Africa is the only continent which has seen an increase in the number of civil conflict in recent years.³⁸ I control for the Cold War to account for the fact that the number of civil conflicts increased steadily through the mid-1990s.³⁹ The end of the Cold War has limited the control that international actors can exert on former client regimes, which may increase conflict recurrence.

Table 1. Descriptive Statistics for Key Variables

	Number of Cases (N)	Mean	Standard Deviation	Minimum	Maximum
Conflict Recurrence (10 Year)	189	0.33	0.47	0.00	1.00
Conflict Recurrence (5 Year)	200	0.26	0.44	0.00	1.00
Military Victory	200	0.37	0.48	0.00	1.00
Peace Agreement	200	0.14	0.35	0.00	1.00
All Ceasefires	200	0.13	0.33	0.00	1.00
Conflict Duration (months)	200	52.53	91.17	0.00	576
Logged Conflict Duration	200	1.19	0.73	0.10	2.76
UN Peacekeeping Operation	195	0.17	0.38	0.00	1.00
Identity War	200	0.71	0.45	0.00	1.00
Natural Resource Conflict	194	0.41	0.49	0.00	1.00
Percent GDP from Natural Resource Rents	178	10.33	13.63	0.08	78.79
Infant Mortality Rate	197	75.12	40.46	4.61	179.84
Polity IV Score	194	-0.71	6.29	-10	10
Anocracy	194	0.37	0.48	0.00	1.00
Population (thousands)	200	87,174.69	220, 335.74	70	1,048, 538.55
Logged Population	200	9.77	1.73	4.25	13.86

4. Methodology

In order to analyze my data, I first examined the descriptive statistics. As Table 1 shows, 52 conflicts recurred within five years of conflict termination (26.1%), while 63 recurred within ten years (33.3%). As one would expect, considerable variation exists within the data. The conflict termination variables (*Military Victory*, *Ceasefire Agreement*, and *Peace Agreement*) account for roughly two-thirds of all conflict terminations in the UCDP/PRIODATASET dataset. Conflict duration and population size (thousands) both display high levels of variance. Accordingly, I

have logged these variables. Identity played a role in 71% of conflicts, while 41% of conflicts involved natural resources. Just 17% of post-conflict settings had an UN PKO.

Next, to get a better sense of relationships that may exist between the variables, I ran bivariate correlations (see Table 2). Four independent variables – *Military Victory*, *Conflict Duration*, *Natural Resource Conflict*, and *Anocracy* – were significantly correlated to conflict recurrence within ten years. While *Military Victory* is correlated with a lower recurrence risk, the other three variables are associated with heightened risk. The *UN PKO* variable shows a significant, inverse relationship with *Military Victory*. This relationship may indicate, as Fortna notes, that UN PKOs frequently take place in the most challenging conflict environments.⁴⁰ Additionally, *Identity Conflicts* appear negatively correlated to military victories and positively linked to longer conflicts, which may support the thesis that they are particularly intractable.

Table 2. Correlation Matrix for Key Variables

	Conflict Recurrence (10 Year)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Military Victory	-.326**	1										
(2) Peace Agreement	.109	-.303**	1									
(3) Ceasefire Agreement	.101	-.289**	-.152*	1								
(4) Logged Conflict Duration	.180*	-.484**	.141	.125	1							
(5) UN PKO	.109	-.218**	.349**	-.074	.156*	1						
(6) Identity War	.139	-.374**	.091	.108	.307**	.074	1					
(7) Natural Resource Conflict	.202**	.036	-.040	-.060	.117	.025	.119	1				
(8) Natural Resource Rents as % of GDP	.147	.097	-.031	.025	-.067	-.103	.071	.298**	1			
(9) Infant Mortality Rate	.036	.099	.041	-.188*	.050	-.076	-.022	.196**	.061	1		
(10) Anocracy	.264**	-.050	.156*	-.036	-.035	.194**	.064	-.042	.074	.073	1	
(11) Logged Population	.044	-.232**	-.143*	-.011	.266**	-.233**	.208**	.188*	-.115	-.047	-.218**	1

** p < 0.01, * p < 0.05

5. Results

I then ran a series of multivariate logistical regressions for conflict recurrence within both five- and ten-year period, accounting for *Anocracy* and *Logged Population* (see Table 3). As expected, *Military Victory* significantly reduces the risk of conflict recurrence for the five- and ten-year measures. The duration of the original conflict is significant for each time period; however, longer conflicts appear to increase the risk of recurrence. This result may support Fearon and Laitin's weak state hypothesis.⁴¹ Because longer conflicts drain government resources, rebels may perceive higher levels of state weakness and be inclined to take up arms.

Table 3. Logistic Regression of Key Independent Variables and Civil Conflict Recurrence, 5 and 10 Years After Conflict Termination (1960-2005)

Independent Variable	Probability of Conflict Recurrence After 10 Years	Probability of Conflict Recurrence After 5 Years
<i>Original Conflict Termination Variables:</i>		
Military Victory	0.176**	0.211**
Peace Agreement	1.862	1.776
Ceasefire Agreement	2.150	1.127
<i>Original Conflict Context Variables:</i>		
Logged Duration of Original Conflict	1.850**	1.824*
Presence of UN PKO	1.814	1.963
Identity Conflict	1.975 [†]	2.211 [†]
Natural Resource Conflict	2.487*	1.882 [†]
<i>Post-Conflict Development Variables:</i>		
Natural Resource Rents as % of GDP	1.024 [†]	1.003
Infant Mortality Rate	1.000	1.003
<i>Control Variables:</i>		
Anocracy	3.455**	1.914 [†]
Logged Population	1.111	1.115

** p < 0.01, * p < 0.05, [†]p < 0.10

As expected, both *Identity Conflict* and *Natural Resource Conflict* raise the conflict recurrence risk; however, *Identity Conflict* is only weakly significant. *Natural Resource Rents as Percent of GDP* is also weakly significant. Contrary to H5, UN peacekeeping operations actually appear to increase the likelihood of recurrence. UN missions nearly double the risk of relapse in five years, but the effect is not significant. This result may stem from the fact that the Security Council typically sends PKOs into the most intractable conflicts. Lastly, *Anocracy* more than triples the risk of conflict within ten years and nearly doubles the risk within five years.

Next, I ran a series of models to test combinations of my independent variables. Models 1-3 examine the three schools of thought on conflict recurrence factors. Model 4 examines the effects of the variables which emerged as significant in Table 3. Models 5 and 6 test the effects of each independent variable, accounting for the effects of the four control variables.

As Table 4 suggests, many of the results shown in Table 3 are sensitive to model changes. The only variables that remain significant across models are *Military Victory*, *Natural Resource Conflict*, and *Anocracy*. *Military Victory* lowers the risk of conflict recurrence by over 80%. In order to distinguish the effects of government and rebel victories, I introduced these variables from the UCDP/PRIO. Government victories were less likely to recur, while rebel victories were more likely to recur, but neither effect was significant. *Natural Resource Conflict* and *Anocracy* also emerge as highly significant; the former more than doubles the risk of conflict recurrence, while the latter more than triples the risk. Consistent with H1, *Peace Agreement* reduces the risk of recurrence, while *Ceasefire Agreement* increases this risk. However, neither variable is significant in any model.

Table 4. Logistic Regression of Key Variables and Civil Conflict Recurrence Probability 10 Years After Conflict Termination, Multiple Models

Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Original Conflict Termination Variables:</i>						
Military Victory	0.183**			0.156**	0.130**	0.119**
Peace Agreement	0.995				0.854	0.920
Ceasefire Agreement	1.221				1.208	1.596
<i>Original Conflict Context Variables:</i>						
Logged Duration of Original Conflict		1.623 [†]		1.152	1.076	1.004
Presence of UN PKO		1.320			1.163	1.383
Identity Conflict		1.568		1.002	0.984	0.733
Natural Resource Conflict		2.339*		3.260**	2.513*	2.752*
<i>Post-Conflict Development Variables:</i>						
Natural Resource Rents as % of GDP			1.024 [†]		1.023	1.029
Infant Mortality Rate			0.998		0.998	0.991
<i>Control Variables:</i>						
Anocracy	3.498**	3.515**	3.755**	3.855**	4.026**	3.751*
Logged Population	1.021	1.035	1.150	0.990	1.031	1.120
Africa						2.650
Cold War						1.242
Number of Cases (N)	183	174	161	189	152	152
Pseudo- R ² Value	.236	.200	.140	.301	.326	.342

** p < 0.01, * p < 0.05, [†]p < 0.10

The effect of UN PKOs remains inconsistent and insignificant in each model. *Natural Resource Rents as Percent of GDP* slightly elevates the risk of recurrence in each model, but its effect is weakly significant in just one model. Contrary to H3, *Identity Conflict* also appears to have a muted impact. It actually decreases the likelihood of conflict recurrence in Models 5-6, but these results are not significant. Neither *Africa* nor *Cold War* is significant, but including them increases the predictive capacity of Model 6. I ran each of these models to test the effects on conflict recurrence within five years (results not shown here). Only *Military Victory*

showed a significant effect across models, reducing the likelihood by roughly 80% in each model. *Anocracy*, *Logged Conflict Duration*, and *Natural Resource Conflict* was each significant in one model, but none was robust across models.

6. Discussion and Conclusions

As noted, *Military Victory*, *Natural Resource Conflict*, and *Anocracy* significantly influence the risk of civil conflict recurrence. None of the other independent variables is robust to sensitivity analysis. The significantly negative impact of *Military Victory* supports Luttwak's "give war a chance" thesis, which encourages international actors to allow civil conflicts to run their course without intervening.⁴² I tested the relative effects of government and rebel victories, but contrary to previous studies, this process did not produce significant results.⁴³

As expected, *Natural Resource Conflicts* are significantly more likely to recur during the ten-year period, which gives some support to Rustad and Binningsbø. Though the effect was largely insignificant for the five-year period, my results indicate that natural resource conflicts appear more prone to recurrence than other types of conflicts. The remarkably strong impact of *Anocracy* supports the theory that such regimes are more likely to experience civil conflict. This finding challenges the liberal peace thesis, as the process of democratization appears particularly tricky and conflict-prone. Instead, actors should follow Paris' "Institutionalization before Liberalization" model by developing effective government institutions before implementing a neoliberal agenda.⁴⁴

While identity conflicts appear somewhat more likely to recur, this variable is insignificant and not robust, further challenging Huntington's "Clash of Civilizations" thesis.⁴⁵ Additionally, the weak and insignificant effects of infant mortality rate counter research that suggests rapid development builds peace.⁴⁶ The ambiguous impact of the *UN PKOs* variable

does little to settle debates over the issue. These findings may stem from two causes. First, my model uses conflicts as the unit of analysis, not country years. Secondly, while most research in this field utilizes data from the Correlates of War, I rely on the UCDP/PRIO dataset. Ultimately, however, my results may simply indicate that UN PKOs tend to operate in particularly complex, challenging settings. Accordingly, the Security Council should be willing to provide the mandate and resources to necessary for the success of a PKO mission before they dispatch it.

Lastly, although higher levels of natural resource dependence appear to increase the likelihood of conflict recurrence somewhat in Table 4, the effect is only significant in one model. Additionally, this variable is positively correlated with natural resource conflict, which has a far greater effect on recurrence. This outcome would suggest that resource conflicts subsume the effects of resource dependence. These results may provide support for efforts to utilize natural resources as a basis for economic development and peacebuilding.⁴⁷ Enabling post-conflict states to tap into their resource endowments can provide a pool of money for rebuilding critical infrastructure, creating employment opportunities, and buying off potential peace spoilers. Ultimately, however, it is crucial to ensure that domestic actors distribute resource revenues equitably, lest this process generate additional grievances and feed into the vicious cycle of natural resource conflict.

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