Bosnia's Civil War
Origins and Violence Dynamics

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The civil war in Bosnia has received heavy coverage in the popular press and in scholarly writings. The fact that the war took place in Europe, the extent of ethnic cleansing and killing, the investigations of the ICTY (the International Criminal Tribunal for the Former Yugoslavia), the deployment of several large United Nations (UN) peace operations, and the use of an assortment of humanitarian assistance projects by nongovernmental organizations (NGOs) have all attracted attention to this civil war and have resulted in the accumulation of a large descriptive corpus on the war. Despite this wealth of information, we still do not know which theories of civil war best explain this war and what lessons might be drawn from Bosnia that could inform existing theories of civil war.

There are many rival explanations of the onset of civil war in Bosnia. Most explanations cannot fit neatly in a theoretical framework that tries to explain more than just Bosnia. Reading case studies or reports on the war, it is hard to know what we might learn from Bosnia that we can generalize to other wars. We make an effort to integrate an analysis of the Bosnian war with broadly applicable theories by considering the fit of the Collier-Hoeffler (CH) model to this case (Collier and Hoeffler 2001). In doing so, we consider alternative explanations and weigh them against the predictions of the CH model.

We also analyze the patterns of violence in the Bosnian war and try to sort out the various competing explanations for the violence. The majority of works about the patterns of violence were written from authors whose main experience was limited to Sarajevo. This city, a journalist points out (Loyd 2001, 179), "had an inordinate media prestige as the Bosnian capital, which distracted journalists from much of what was happening elsewhere." However, the war was mainly conducted in the countryside. Much information collected by NGOs has two possible problems. First, because it seeks human rights violations, it focuses on sites of mass violence rather than sites of nonviolence, thus generating truncated data. There is an abundance of studies on Sarajevo, Prijedor, Kozarac, and Srebrenica during the war, but very little on the rest of the country. Second, it tends to privilege acts of violence rather than nonviolent acts that precede and follow violent ones and may be essential in

understanding the occurrence of violence. This is a more general problem of reporting and can eventually be addressed only through extensive fieldwork. We do not have exhaustive data on patterns of violence during the Bosnian war, but we have systematized existing data collected by the UN, the U.S. State Department, and Human Rights Watch. We use these data along with first-hand accounts of the violence as a first step toward a more comprehensive mapping.

This chapter is organized in five sections. In the first section, we provide a brief historical background to the Bosnian war. Next, we discuss the application of the CH model to explain war onset and we link it to the other Yugoslav wars, given the patterns of contagion and diffusion between them. In the third section, we analyze the patterns of violence. In the last section, we conclude with an overview of the CH model's fit to this case and suggestions for modifications of the CH model on the basis of our analysis of Bosnia.

Background to the Conflict

It is hard to know when to start in summarizing events that may be relevant to the Bosnian civil war. We start in 1980, when President Tito died, and power began to be held by an unstable collective presidency that rotated among leaders selected by the assemblies of Yugoslavia's six republics and two autonomous regions. Tito had suppressed the voicing of ethnic sentiments in politics and the new regime was marked by a rise in nationalist sentiment. In 1985, the Serbian Academy of Sciences drafted a memo that condemned Tito and the Party state for three decades of anti-Serb policies. The Academy blamed these policies for regional disparities in income and accused the Albanian majority in Kosovo of "genocidal" anti-Serb policies. Nationalist sentiment intensified when Slobodan Milosevic, heading the Serbian Communist party, made a powerful speech in Kosovo that rallied enough popular support to allow him to crack down on his opposition and purge the party of reformist rivals.

Milosevic, as president of Serbia, spearheaded the decision to curtail Kosovo's autonomy. In 1990, Serbia dissolved the Kosovo assembly and the province was ruled directly from Belgrade. In response, ethnic Albanian legislators in the province declared Kosovo a Republic. In January, the League of Communists split along ethnic lines. This was a mark of growing nationalist intolerance in the country, foreshadowing the oncoming conflict.

Federal elections that Ante Markovic, then the federal prime minister, wanted were never held, because Slovenia and Serbia boycotted the idea. The message to political elites was that they did not need to make broad appeals; it was enough for them to win locally (in their own republic). In April 1990, elections in Slovenia led to a dramatic victory by a Center-Right coalition, which immediately began drafting a new constitution that would allow Slovenia to secede. In Croatia, nationalist leader Franjo Tudjman and the Croatian Democratic Union won a majority. In response to these developments, the Krajina Serbs, a long-established Serbian minority on Croatian territory, started campaigning for autonomy in August, arguing that

if Croatia could secede from Yugoslavia, they should also be allowed to secede from Croatia. Local Serb militias mobilized and set up roadblocks to stop official Croatian interference in a referendum. Milosevic announced that if Yugoslavia disintegrated, some border changes would be required to keep all Serbs under a single nation. Amidst intensifying conflict, in March 1991, Serbs in the Croatian Krajina region declared themselves autonomous and were recognized by Serbia. The power-sharing arrangement at the Center collapsed when Serbs refused to accept a Croat as president, violating the terms of Yugoslavia's rotating presidency.

In June 1991, both Croatia and Slovenia proclaimed their independence from Yugoslavia. The Jugoslav National Army (JNA) did not put up much resistance and withdrew from Slovenia's territory, but its reaction vis-à-vis Croatia's secession was very different. In August 1991, war broke out in Croatia between Croatian militias and local Serbs and the JNA, which attempted to take control of the strategically important cities of Vukovar and Dubrovnik.

By September 1991, the UN had authorized a 14,000-man peacekeeping force for the region and imposed an economic embargo on Serbia and Montenegro (under Security Council Resolution 713). The Secretary General launched a mediation effort, headed by former U.S. Secretary of State Cyrus Vance, leading to a cease-fire agreement in Croatia in early 1992 and the deployment of the first UN peacekeepers during the winter of 1992. The main task for the peacekeepers was to help extract JNA units from Croatian territory and temporarily establish UN Protected Areas (UNPAs).

In January 1992, preempted by Germany's support for Croatian independence, the European Community decided to recognize Croatia and Slovenia, but deferred action on Bosnia, where nationalist conflict was also brewing, pending the results of a referendum on independence. In March, a Muslim majority, with a significant Serb majority dissenting, voted for independence. As soon as the votes were counted, Serbs set up roadblocks around major cities, cutting them off from the mostly Serbian countryside. The Serb-controlled JNA assisted Bosnian Serbs, who begun leaving the cities. A Bosnian Serb parliament was set up. In April, the Europeans recognized Bosnia, as did the United States. In response to continued Serb aggression, the UN Security Council imposed economic sanctions against Yugoslavia (Serbia and Montenegro) at the end of May. During the summer of 1992, a growing humanitarian crisis in Bosnia led to the deployment of UN peacekeepers to facilitate the delivery of humanitarian relief. The UN imposed a "no-fly zone" over Bosnia in October 1992 and UN peacekeepers were preventively deployed to the Former Yugoslav Republic of Macedonia (FYROM) in 1993. In May 1993, the UN declared Sarajevo and five other Muslim enclaves "safe areas" under UN protection. NATO agreed in June to use air power to protect UN forces if attacked. In August, NATO declared its readiness to respond with air strikes, in coordination with the UN, in the event that UN safe areas, including Sarajevo, came under siege. This decision temporarily ended the strangulation of Sarajevo. The UN peacekeeping mission was transformed into an enforcement mission, under chapter VII of the UN Charter. But that was not the end of the violence.

In February 1994, in response to a Bosnian Serb attack that killed 68 civilians in a Sarajevo marketplace, NATO issued an ultimatum that if Bosnian Serb heavy weapons were not withdrawn from UN-monitored exclusion zones around the capital, Bosnian Serb forces would be subject to air strikes. In early 1994, with UN-EU diplomatic efforts stalled over territorial issues, the United States began more active efforts to encourage a settlement. In March 1994, U.S. mediation produced an agreement between the Bosnian government, Bosnian Croats, and the government of Croatia to establish a federation between Muslims and Croats in Bosnia. Fighting between the two sides ceased. In April, NATO employed its first air strikes against Bosnian Serb forces to halt a Serb attack on the eastern enclave and UN safe area of Gorazde. In the spring of 1994, the United States, Russia, Britain, France, and Germany established a five-nation Contact Group, with the goal of brokering a settlement between the federation and Bosnian Serbs. On May 6, the UN, under Security Council Resolution 824, declared Serajevo, Tuzla, Zepa, Gorezde, Bihac, Srebrenica, and their surroundings as safe areas to deter armed attacks by the Bosnian Serb forces. Later in the year, new fighting erupted between the Bosnian government, antigovernment Muslims in Bihac (supported by Krajina Serbs), and Bosnian Serbs. NATO responded by expanding the range for air strikes into Serb-controlled Croatia. In December, with the help of former U.S. President Jimmy Carter, the sides agreed to a four-month cessation of hostilities. When the period expired, fighting resumed, and in May, the Bosnian Serb forces renewed attacks on Sarajevo and began threatening Srebrenica.

In the spring of 1995, Bosnian Serb attacks on the safe areas led to a massacre of Bosnian Muslims in Srebrenica and prompted U.S. President Clinton to insist that NATO and the UN make good on their commitment to protect the remaining safe areas. The Allies threatened broad-based air strikes if the safe areas were attacked again. When the Bosnian Serbs tested this ultimatum, NATO undertook an intensive month-long bombing campaign. United States-led mediation produced an agreement by the parties to basic principles of a settlement as well as a cease-fire, which went into effect in October. Proximity peace talks toward settlement began in Dayton, Ohio on November 1. The parties agreed to the Dayton settlement on November 21 and the terms of the treaty were signed in Paris on December 14, 1995. That was the end of the Bosnian war and the start of a long period of UN peacekeeping and peacebuilding.

The CH Model and the Outbreak of Civil War

The CH model of civil war onset stands in sharp contrast to political theories of civil war, such as theories that emphasize the role of relative deprivation (Gurr 1970), political grievance (Gurr 2000; Hegre et al. 2001), or nationalist ideology as the key causes of secessionist violence.

Economic models (such as CH) focus on how violence is organized and consider first and foremost the economic opportunity cost of violence and the availability of external financing. Ethnic diasporas and lootable natural resources make

rebellion feasible in these models, which also explore the links between geography and population concentration on the one hand and the likelihood of violence on the other hand.

Do these models apply to Bosnia? Did poverty and lack of economic opportunity motivate the violence? Some authors (e.g., Sudetic 1998) have observed a connection between patterns of mobilization and job losses in bankrupt public enterprises. What was the role of natural resources and diaspora assistance financing the war? For instance, it was often reported that fighting was concentrated in areas in which mining activities were important (e.g., the village of Hambarine in Northwestern Bosnia, where fighting broke out early on, lay in a geographical position connecting the town of Prijedor with the Ljubija mine). We try to establish patterns of diaspora support for the rebels (Bax 2000) and we conduct a brief survey of the Yugoslav economy to identify key characteristics of that economy—rates of growth, dependence on primary exports, unemployment rates, regional disparities in growth and income distribution—to determine any links between such characteristics and the outbreak of violence.

We consider how these economic explanations compare to models focusing on political determinants of the outbreak of violence. An alternative explanation to the CH model is that political grievances during the transition from Communism provided the spark for the violence and motivated the masses to participate in the war. We focus on the stability and legitimacy of state institutions and the role of political elites in mobilizing mass support for violence.

Both economic and political models consider the impact of ethnic divisions and nationalist scripts of violence, though the impact of such divisions is usually significant only in political models. To what extent did religious or ethnic divisions cause or fuel the war (once war started)? How could we distinguish, in the case of Bosnia, between the political and economic explanations for violence and the consequences of ethnic divisions? We explore these questions as well as the extent to which the gradual partition of Yugoslavia fueled secessionist conflict in the remaining Republics and provinces informational spillovers or contagion effects.

Bosnian Data and CH Predictions

The Bosnian war is unfortunately excluded from the CH analysis. The CH data set is missing data for most key variables in the model for both five-year periods during which Bosnia was an independent country (1990–94, 1995–99).[1] We collected these missing data using a number of resources, including the Yugoslav census and reports from the Yugoslav statistical service as well as secondary sources. When information on Bosnia was not available, we used data for Yugoslavia for 1990 to fill in missing values in the CH data set.[2] We describe the data for Bosnia in the following text, focusing on key variables in the CH model. We then use these data to obtain the CH model's predictions for Bosnia.

At first glance, the CH model's emphasis on income seems to fit the case well, because Bosnia was poorer than most Yugoslav republics (see table 7.1). We used

Table 7.1 **Income per Capita and Inequality by Region, 1988 and 1990**

Country	*1988 income per capita (pa)*	*1990 income per capita (current US$)*	*Population in 1990*	*Relative income*		*Gini (1988 income)*
				1988	*1990*	
Bosnia	2,124,319	2,365	4,516	76.2	67.8	24.4
Montenegro	2,062,042	2,484	644	73.9	71.1	25.6
Croatia	3,234,631	4,468	4,685	116.0	127.8	22.1
Macedonia	1,790,902	2,282	2,131	64.2	65.3	30.9
Slovenia	5,529,722	7,610	1,953	198.3	217.7	19.3
Derbia	2,523,329	3,379	5,849	90.5	96.7	25.0
Kosovo	1,062,039	854	1,983	38.1	24.4	27.7
Vojvodina	3,166,398	4,320	2,048	113.6	123.6	26.5
Yugoslavia	2,788,443	3,496	23,809	100.0	100.0	24.5

Source: Sambanis and Milanovic (2004).

income and inequality figures from Sambanis and Milanovic (2004), who collected their data from household surveys to compute the relative income and Gini coefficients for all Yugoslav republics. They do not have real income data (adjusted for purchasing power parity, PPP) for Yugoslavia, but rather use 1990 constant dollars. Thus, we converted our data to PPP-adjusted income to match the CH data and did so by dividing the CH real income data for Yugoslavia in 1990 (4,548) with our own current dollar figures for the same year (3,496), yielding a factor of 1.30, which we then multiplied with the Bosnian mean 1990 income of 2,365 current dollars, yielding a real income figure of 3,098. Income (interpersonal) inequality (*ygini*) for Yugoslavia for 1990–94 is equal to 31.88 in the CH model. The Sambanis and Milanovic (2004) data give a slightly different figure at 29.3. The Gini for 1988 for Bosnia is 24.4, equal to the mean for Yugoslavia (24.5 in 1988), as shown in table 7.1.

The value for regime type is also missing in the CH data set (also in the Polity database, which serves as the source for CH). We coded an anocracy, given that instability emerged immediately after the Muslim referendum for independence. This case makes clear the endogeneity of regime type to many of the same conditions that could lead to the outbreak of violence.[3]

Collier and Hoeffler use a variable measuring *peacetime* (i.e., time since the last civil war). The longer lasting the peace, the less likely is a new war, according to the CH model. *Peacetime* should be 0, because Bosnia was created out of the violent dissolution of Yugoslavia, so a variable measuring previous war should be coded 1 to account for the Croatian war of secession in 1991.

Population size is significant in the CH model. The population of Bosnia in the CH model (4,450,000) is different from the values given in Fearon and Laitin

(3,837,707) for 1992. Our data are closer to those of Collier and Hoeffler, counting 4,510,000 people in Bosnia in 1990.

We computed ethnic and religious fractionalization for Bosnia from scratch. Yugoslavia was relatively less religiously fractionalized (*rf* = 58) than Bosnia (*rf* = 71). We code the CH variable *ethnic dominance* equal to 0, since the largest group in Bosnia, the Muslims, were 43.7 percent of the population in 1991 and the second largest group, the Serbs, made up 31.4 percent. The third largest group, the Croats, made up 17.3 percent of the population, and 5.5 percent were self-classified as "Yugoslavs" in the census, so we cannot assign them to any of the other categories. The ethnolinguistic fractionalization score for Yugoslavia (75) is closer to that in Bosnia (67). We computed the ethnolinguistic fractionalization (ELF) index using data from the Yugoslav census of 1991, which identifies four main ethnic groups: Muslims, Serbs, Croats, and others.[4] The fractionalization (*frac*) score for Yugoslavia (4,350)[5] is lower than in Bosnia (4,899), which suggests that the probability of war in Bosnia should have been lower, according to the CH model.

Mountain cover—which is thought to increase the risk of war by making the conduct of insurgency easier for rebels—is equal to 60.5, which is two standard deviations higher than the average. Forest coverage is equal to 39.22, which is somewhat higher than the average.[6] Thus, both of these "technologies" of insurgency were conducive to civil war in Bosnia, consistent with the CH model.

We can now compute the probability of civil war in Bosnia in two ways: first as an out-of-sample prediction based on the CH data without Bosnia and then as a within-sample prediction. A comparison of the two estimates can help identify the impact of Bosnia on the model.

By plugging in the values for the variables in the CH model and using the coefficient estimates obtained from the model without the Bosnia observations, we can obtain out-of-sample probability estimates for war onset in Bosnia.[7] The probability of civil war onset in 1990–94 in Bosnia is 0.05. This is lower than the average for all country-years (0.07). By filling in missing values for Bosnia and reestimating, we computed the within-sample probability estimate for Bosnia, which is equal to 0.08—higher than the out-of-sample estimate and the average for all country-years.

It is striking how influential Bosnia is in the model. Adding this observation results in the coefficient for real income (*rgdpa*) dropping by 13 percent. Additionally, the square of primary commodity exports (*sxp2*) and the fractionalization variable (*frac*) are now completely nonsignificant (see table 7.2). Thus, while Bosnia seems inconsistent with the CH prediction that higher social fractionalization should decrease civil war risk, social fractionalization ceases to be significant when we add Bosnia to the analysis.

We find that Bosnia is an influential observation in the model.[8] Bosnia is not an outlier except if we do not correct the CH coding of *peacetime,* in which case Bosnia would be an influential outlier. Bosnia and the first Croatian war are among the most influential observations, along with Congo-Brazzaville in 1997, Iran in 1970 and 1975, Turkey in 1990, and Cyprus in 1970. These are all civil war countries with higher than average income per capita (except Congo, which has lower than average income).[9]

Table 7.2 **CH Model of Civil War Onset (1960–99), With and Without Bosnia** (Coefficients and Standard Errors [in parentheses] Reported)

Variable	*Bosnia dropped*	*Bosnia added*
Per capita real income	−0.0003	−0.00026
	(0.0001)***	(0.0001)**
Growth rate of income	−0.119	−0.122
	(0.04)***	(0.04)***
Primary commodity exports/GDP	10.83	9.22
	(4.53)**	(4.38)**
Primary commodity exports squared	−15.38	−13.04
	(8.65)*	(8.33)
Social fractionalization	−0.00014	−0.000117
	(0.00007)*	(0.000077)
Democracy level	−0.034	−0.041
	(0.05)	(0.051)
Months at peace since 1960	−0.0033	−0.0036
	(0.0009)***	(0.00097)***
Log of population size	0.374	0.336
	(0.116)***	(0.113)***
Constant	−7.47	−6.72
	(2.11)***	(2.05)***
Observations	753	754
Pseudo-R^2	0.198	0.195
Log-likelihood	−153.7	−156.41

Note: *** significant at .01; ** significant at .05; * significant at .10.

In the CH model, much of the work is done by the "*peacetime*" variable, because other variables do not change much over time (nothing changes in Bosnia, because we only have one observation). If Bosnia had been an independent state with no prior civil war since 1960, then its estimated risk of war would have been 5.4 times lower than the within-sample estimate, which is computed by setting Bosnia's *peacetime* equal to 0.[10] *Peacetime* is intended to measure, indirectly, the availability of war-specific capital. Such a measure should not be limited to measuring spillovers from a previous civil war in the same country, but rather should capture all sources of war-specific capital. In the context of Bosnia (as well as other wars in former Yugoslavia), the presence of the JNA in each region was crucial. The JNA should have deterred conflict escalation, but the fact that it was Serb-dominated meant that it became available to Bosnian Serbs and Croatian Serbs in their conflict against regional governments. More to the point, war capital is not confined to tangible goods. Memories of past conflict, which can fuel nationalist sentiment, are also forms of conflict capi-

tal. Most case histories (e.g., Glenny 1999) emphasize the impact of memory from the intra-Yugoslav violence during World War II. Despite the more than 50 years that intervened between the Croat violence against the Serbs under German rule, the historical legacy of the Ustashe looms large in the fears of Serb minorities in Croatia and can help explain the Krajina Serbs' movement for secession immediately after Croatia's independence. Let us now see how each component of the CH model applies to the Bosnian case.

Ethnic Fragmentation

Much of the popular discourse about Yugoslavia has centered on so-called "ancient hatreds" between Serbs, Croats, Bosnian Muslims, and Albanians. We should therefore start by considering whether ethnic dominance or ethnic fragmentation could explain Bosnia's war.

A cursory look at the data on Yugoslavia's ethnic makeup suggests a poor fit of this case to the CH ethnic dominance thesis. The largest ethnic group in the Yugoslav federation was the Serbs whose relative share of the population dropped from 42 percent in 1961 to 36.2 percent in 1991. The Serbs do not make the 40–45 percent cut used by the CH model to establish ethnic dominance.

However, accounts of Yugoslavia's politics suggest a polarized environment. An informal way to consider how the country's ethnic makeup might capture this polarization would be to measure the ELF index in the way that ethnic difference might be *perceived* by each group if relations between each group and all the others are hostile. From the perspective of the Serbs, a politically meaningful ELF index in Bosnia would combine all non-Serbs in a single group and would be computed as: ELF: $100*\{1 - [(0.315*0.315) + (0.685*0.685)]\} = 43.155$ From the perspective of the Muslims, the ELF index that captures the Muslim/non-Muslim divide would be: ELF: $100*\{1 - [(0.437*0.437) + (0.563*0.563)]\} = 49.206$. This exercise shows how viable coalitions among groups change the degree of effective, politically relevant ethnic differentiation in a country. The picture that emerges from these new ELF indices is one of a much less fragmented society and one much closer to what we would consider a polarized society. Ethnic and religious polarization has been shown to increase the risk of civil war, so this would make Bosnia more consistent with theory and large-*N* empirical results.

An interesting argument, raised by those who consider Yugoslavia's ethnic diversity as inconsequential with respect to the war, is that there was substantial exogamy (intermarriage) in Yugoslavia. Exogamy was, according to several accounts, widespread and this suggests to many analysts that a Yugoslav national identity was prevalent and there was not a substantial basis for ethnic hatred.[11] But in a careful quantitative study of exogamy in Yugoslavia, Botev (1994) argues that there is no clear upward trend in the rate of exogamy in Yugoslavia and there were also important regional variations in exogamy rates. Moreover, no clear pattern emerges between the rate of intermarriage and demand for secession in different regions. Croatia and Slovenia both seceded and both had a rising intermarriage rate from 1962 to 1989.[12]

By contrast, Kosovo and Macedonia both wanted to secede and had rapidly declining intermarriage rates.[13] Montenegro had a declining exogamy rate and Serbia and Bosnia had stable rates (at 12.9 and 11.9, respectively, for 1989). It is interesting that endogamy rates (i.e., no intermarriage) for both Serbs and Croats were lower in Bosnia than in other Republics. All three major groups had remained relatively closed in Bosnia (Botev 1994, 474–5). By contrast, the proportion of mixed marriages is highest in the region with the lowest level of ethnic conflict, Vojvodina. But Botev (1994) shows that this is more due to the fact that Vojvodina includes several small groups and less to a marked attitudinal difference among major groups in that region (though he notes that Serbs are slightly less endogamous there).

Yugoslavia censuses offer us a rare (for quantitative studies) view into the fluidity of ethnic identification. The Yugoslav census provides data on individuals' self-declared ethnic identification and there is evidence of identity switch that corresponds to the timing of intensifying nationalist sentiment in the country (see table 7.3, with data on ethnic composition by republic). The category of "Yugoslav" in the census was meant to capture those who did not want to emphasize their ethnic affiliation and, according to some scholars, this category captured Yugoslav communalism. The rise from 1.4 percent to 5.5 percent in the share of the population who identified themselves as Yugoslavs in the 1970s was a sign of a growing "sense of community" and political integration.[14] By contrast, in the late 1980s and early 1990s, this trend was reversed in the states with most intense conflict. In Bosnia, many self-identified Yugoslavs seemed to have shifted to the "Muslim" category both in the 1971 census and the 1991 census.[15] In Croatia, the Yugoslav category had been increasing through the 1961, 1971, and 1981 censuses, but the percentage of Yugoslavs dropped from 8.2 to 2.2 in the 1991 census.[16] Some of them seem to have moved to the "Croat" category, whereas others may have moved out of Croatia because of the war. In Serbia, the number of Yugoslavs seems to have dropped almost by half in the 1991 census (the number of Serbs increased proportionately), whereas in Kosovo, the Muslim and Albanian categories seem to have been merged in 1991 and there is a steady decline in the share of Serbs in the population from around 25 percent in 1961 to 10 percent in 1991. This decline is not explained only by population growth rates, but rather indicates the steady out-migration of Kosovo Serbs and growing domination of Albanians (90 percent in 1991).

By all accounts, these ethnic differences in Yugoslavia mattered because of a pattern of ethnic discrimination. Top positions in the bureaucracy were distributed "equally" among the six republics and two provinces (according to the parity principle, or *kljuc* in Serbo-Croatian). Thus, relative to their population size, Serbs and, particularly, Montenegrins were overrepresented and Croatians and Slovenes were underrepresented (most members of the League were Serbs and Montenegrins). The Serbs dominated the Army's officer corps. Yugoslavia was stable as a de facto confederal state with each republic having its own autonomous Communist party, but its stability rested on the principle of "weak Serbia, strong Yugoslavia."

We might propose a modification of the CH ethnic dominance variable that might help capture the impact of ethnic difference in federal or decentralized states.

Table 7.3 **National Composition of Yugoslavia, 1961–91, by Republics and Provinces** (Percent of Total Population)

Republic	*1961*	*1971*	*1981*	*1991*
Bosnia-Herzegovina	100	100	100	100
Serbs	42.8	37.3	32.2	31.4
Muslims	25.6	39.6	39.5	43.7
Croats	21.7	20.6	18.4	17.3
Yugoslavs	8.4	1.2	7.9	5.5
Montenegrins	0.4	0.3	0.3	
Albanians	0.1	0.1	0.1	
Slovenes	0.1	0.1	0.1	
Macedonians	0	0	0	0
Other	0.9	0.8	1.5	2.1
Croatia	100	100	100	100
Serbs	15	14.2	11.6	12.2
Muslims	0.1	0.4	0.5	0.9
Croats	80.2	79.4	75.1	78.1
Yugoslavs	0.4	1.9	8.2	2.2
Montenegrins	0.2	0.2	0.2	0.2
Albanians	0	0.1	0.1	0.3
Slovenes	0.9	0.7	0.5	0.5
Macedonians	0.1	0.1	0.1	0.1
Other	3.1	3	3.7	5.5
Macedonia	100	100	100	100
Serbs	3	2.8	2.4	2.2
Muslims	0.2	0.1	2.1	
Croats	0.3	0.2	0.2	
Yugoslavs	0.1	0.2	0.8	
Montenegrins	0.2	0.2	0.2	
Albanians	13	17	19.7	21
Slovenes	0.1	0.1	0.1	
Macedonians	71.1	69.3	67	64.6
Other	12	10.1	7.5	12.2
Montenegro	100	100	100	100
Serbs	3	7.5	3.3	9.3
Muslims	6.5	13.3	13.4	14.6
Croats	2.2	1.7	1.2	
Yugoslavs	0.3	2.1	5.4	4
Montenegrins	81.3	67.2	68.5	61.8
Albanians	5.5	6.7	6.5	6.6
Slovenes	0.2	0.1	0.2	

(*Continued*)

Table 7.3 **National Composition of Yugoslavia (*Continued*)**

Republic	*1961*	*1971*	*1981*	*1991*
Macedonians	0.1	0.1	0.2	
Other	0.9	1.3	1.3	3.7
Serbia	100	100	100	100
Serbs	74.6	71.2	66.4	65.8
Muslims	1.2	1.8	2.3	2.4
Croats	2.6	2.2	1.6	1.1
Yugoslavs	0.3	1.5	4.8	3.2
Montenegrins	1.4	1.5	1.6	1.4
Albanians	9.2	11.7	14	17.2
Slovenes	0.3	0.2	0.1	0.1
Macedonians	0.5	0.5	0.5	0.4
Other	9.9	9.4	8.7	8.4
Serbia "proper"	100	100	100	100
Serbs	92.4	89.5	85.4	87.3
Muslims	1.7	2.4	2.7	
Croats	0.9	0.7	0.6	
Yugoslavs	0.2	1.4	4.3	2.5
Montenegrins	0.7	1.1	1.4	
Albanians	1.1	1.2	1.3	
Slovenes	0.3	0.2	0.1	
Macedonians	0.4	1.1	0.5	
Other	2.3	2.4	3.7	10.2
Vojvodina	100	100	100	100
Serbs	54.9	55.8	54.4	57.2
Muslims	0.1	0.2	0.2	0
Croats	7.8	7.1	5.4	4.8
Yugoslavs	0.2	2.4	8.3	8.4
Montenegrins	1.8	1.9	2.1	2.2
Albanians	0.3	0.2	0.1	0
Slovenes	0.8	0.8	0.9	0.8
Macedonians				
Other	10.2	9.7	9.1	9.7
Kosovo	100	100	100	100
Serbs	23.5	18.4	13.3	10
Muslims	0.8	2.1	3.7	
Croats	0.7	0.7	0.6	
Yugoslavs	0.5	0.1	0.2	0.2
Montenegrins	3.9	2.5	1.7	

(*Continued*)

Table 7.3 **National Composition of Yugoslavia (*Continued*)**

Republic	*1961*	*1971*	*1981*	*1991*
Albanians	67	73.7	77.5	90
Slovenes	0	0	0	
Macedonians	0.1	0.1	0.1	
Other	3.5	2.4	2.9	
Slovenia	100	100	100	100
Serbs	0.8	1.2	2.2	2.4
Muslims	0	0.2	0.7	1.4
Croats	2	2.5	3	2.7
Yugoslavs	0.2	0.4	1.5	0.6
Montenegrins	0.1	0.1	0.2	0.2
Albanians	0	0.1	0.1	0.2
Slovenes	95.6	94	90.5	87.6
Macedonians	0.1	0.1	0.2	0.2
Other	1.2	1.4	1.6	4.7

Source: Woodward (1995) and Yugoslav census (Savezni Zavod za Statistiku 1992).

Rather than coding if the country as a whole is dominated by a single ethnic group, we can look at each region (the republics in former Yugoslavia) and measure the ethnic or cultural difference between that region and the center. That difference would be maximized if the region was dominated by a national minority (as in the case of Slovenia, Croatia, and Kosovo) *and* if most of the members of the regional majority lived in that region and were not dispersed throughout the country.[17] Such a measure, applied to Yugoslavia, would help explain the demand for self-determination in Slovenia, Croatia, and Kosovo and the lack of such demand in Vojvodina, Montenegro, and Serbia. Serbia was, of course, the core state (Serbs made up 87 percent of Serbia "proper"), and it was poorer than some of the regions, so it did not have the incentive to secede. There was ethnic dominance in Vojvodina, but it was the Serbs—not a national minority—that dominated the region (57 percent of the population), which helps explain the lack of a significant movement for independence and the absence of war.

Montenegro seems on the surface to pose a problem for this theory, as it is dominated by Montenegrins (62 percent) but it did not have a significant demand for self-determination and there was no civil war. But, Montenegrins were net beneficiaries in Yugoslavia and were culturally similar to the Serbs (both were Christian Orthodox and more than 30 percent of them think they *are* Serbs). The fact that Montenegro's second largest minority is Muslim (14.6 percent) and that the region borders Bosnia to the north and Albania to the south might suggest an explanation for the majority's reluctance to secede: The Christian Orthodox Serb majority had to be weary of a possible Muslim independence movement, supported by its Muslim

neighbors if Montenegro decided to secede from Serbia. Montenegro is also poor (see table 7.1; in 1990, its average household income was a third lower than the Yugoslav average), so increased sovereignty for it would come at a significant economic cost, because it would have to provide for defense and other public goods and services now covered mostly by Serbia.[18]

Thus, the theory does seem to fit, and despite this economic constraint there was a substantial constituency for independence in Montenegro. This was evident in the 2001 Republican Parliamentary elections, where nationalists in favor of independence won more than 40 percent of the vote (see table 7.4). The Liberal Alliance of Montenegro (LSCG) was founded on January 26, 1990 with Slavko Perovic as its first president. The party's key objective is Montenegrin independence and membership in the United Nations and the party has wide electoral support.

Moreover, during the time of Croatia's secession, the Serb-controlled JNA, together with the Territorial Defence Force and Montenegrin police special units, launched a joint attack on Dubrovnik using heavy artillery, navy, and air force on October 1, 1991. The Montenegrin leadership justified this as a "war for peace" to counter the "Croat fascist authorities" which could stage an attack on Montenegro from Dubrovnik. That attack might have been interpreted as a signal of the Center's likely reaction to a Montenegrin attempt at secession; it certainly demonstrated that

Table 7.4 Montenegro Republic Parliamentary Elections, April 22, 2001

	Votes		*Deputies*	
List	*Number*	*Percent*	*Number*	*Percent*
The Victory is Montenegro's (DPS + SDP)	153,946	42.36	36	46.8
Liberal Alliance of Montenegro (LSCG)	28,746	7.91	6	7.8
Together for Yugoslavia (SNP + NS + SNS)	148,513	40.87	33	42.9
People's Socialist Party (NSS)	10,702	2.94	0	—
Srpska Radikalna Stranka (SRS)–Vojislav Seselj	4,275	1.18	0	—
Demokratska Unija Albanaca	4,232	1.16	1	1.3
Bosnjacko-muslimanska demokratska partija	4,046	1.11	0	—
Demokratski Savez Crne Gore	3,570	0.98	1	1.3

Source: Various Montenegrin news sources; see www.izbori.org.yu/e-rezultati.html [accessed 10/22/2001].

Note: Electorate: 447,673; turnout: 366,152 (81.79 percent); irregular ballots: 2,748 (0.75 percent); regular ballots: 363,404.

Montenegrin elites, which had long since been dominated by the Serb Communist party, would not facilitate a secession.

Elite loyalty to Serbia was apparent in the agreement to support the Zabljak Constitution. A high-level agreement between the Socialist party of Serbia and the Socialist Democratic party of Montenegro decided to form a new state, the Federal Republic of Yugoslavia. The so-called Zabljak Constitution was named after the location of the meeting where the constitution was signed by Ratko Markovic, representing Serbia, and Zoran Zizic, representing Montenegro. Only the ruling parties of the future federation took part in the meeting and neither the Serbian National Assembly nor the Serbian citizens opted for the Constitution and new federation. The Montenegrin government called a referendum on March 1, 1992 when about 63 percent of citizens of Montenegro supported a new federation. The Constitution was adopted on April 27, 1992 by the Parliament of the Federal Republic of Yugoslavia. The Constitution allowed for bicameral Federal Assembly, consisting of the Chamber of Citizens with 138 seats, 30 of which belonged to Montenegro, and the Chamber of Republics, for which the two federation members delegated 20 parliament representatives each. In practice, leaders opposed to Milosevic were quickly ousted from office.

To sum up, the CH ethnic dominance argument may be relevant as a partial explanation of Yugoslavia's civil wars, but dominance must be political, not simply numerical, so the CH measure for this variable is only tangentially relevant. With reference to secessionist wars in particular, ethnic difference between the regions and the center may be more important than ethnic dominance at the national level.

How does our narrative suggest that ethnic dominance might have increased the risk of civil war in Yugoslavia and Bosnia? We can identify three mechanisms: (a) ethnic dominance translated into a pattern of political hegemony of the majority over the minority; (b) ethnic dominance by the Serb majority led to a perception of economic inequity, as small yet rich republics dominated by ethnic minorities subsidized large, poor republics dominated by the majority[19]; and (c) as the country became less fractionalized and more polarized, the minorities' fear of domination increased (so this suggests that we should focus on changes to the level of ethnic fractionalization, not the level itself). As the regions (Croatia and Bosnia) became ethnically dominated by an ethnic minority (which was also a regional titular majority), the expectation would have been one of greater political dominance and hegemony over the residual minorities, which would increase those minorities' fears and push them toward the use of violence. Serb populations in Croatia and Bosnia rationally expected their rights to be reduced, as they witnessed a shift toward greater and more direct control by a perceived hostile group. This gave rise to Serbian unification nationalism in Croatia and Bosnia, supported by irridentist nationalism in mainland Serbia.[20]

Economic Growth

The rate of growth of the Yugoslav economy dramatically declined from 1989 to 1991 from a rate of approximately 1–2 percent to −15 percent, whereas the decade

previous to that was relatively stable with rates between 0 and 5 percent (Woodward 1995, 55). This trend seems consistent with the CH model's expectations.

Yet, growth *must* be negatively affected by civil war and by lower-level violence, so simply looking at Bosnia's negative growth rate in 1991–92 will lead us to miss the spillover effects from the Croatian war. Civil war reduced investment, output, and access to markets in all Yugoslav republics. In Croatia in early 1991, 90 percent of the state budget was allocated to the war, more than 200,000 men were drafted, and taxes were imposed to raise money to fund the war.[21] This creates an endogeneity problem that is not necessarily a problem for the CH analysis, but it might be a problem for other studies (e.g., Fearon and Laitin 2003), which do not drop observations of ongoing war in analyzing the risk of new war onset.

Moreover, in countries that are integrated in regional markets, war in one country will reduce growth in all neighboring countries.[22] The effect is undoubtedly stronger in countries emerging from collapsed federations, as in the former Yugoslav and Soviet republics. Thus, the war in Croatia helped cause negative growth in Bosnia; and the rate of growth in Macedonia dropped to −18 percent in January 1992, undoubtedly as a result of losing access to Yugoslav markets (as well as a trade embargo from Greece, which was indirectly related to the war and Greece's ensuing fears of Macedonian irridentist designs on the Greek part of Macedonia). This example suggests the difficulty in justifying the independence assumption between neighboring states in large-*N* studies and suggests the need for a much more complicated estimation strategy that would take into account such spillover effects.

Economic Inequality

Income inequality is nonsignificant in the CH model (as in several other econometric studies of civil war). This result might seem counterintuitive, because earlier theories (e.g., Gurr 1970) emphasized the impact of relative deprivation in motivating violence. One explanation for this counterintuitive result is that Collier and Hoeffler and other analysts are using the wrong measure of inequality. Econometric studies have typically looked for direct linear effects between the Gini index, which measures interpersonal (or vertical) inequality, and civil war onset. Different measures of inequality may be more relevant in explaining war outbreak in Bosnia and Yugoslavia. Yugoslav society was a deeply unequal society, if we measure inequality by the differences in mean incomes in the different constituent republics (see table 7.1). The ratio of the top to bottom regional income—an index of inequality—was high at 5.2 for 1988 and getting higher, reaching 8.9 in 1990. (Contrast this to the much lower ratio of 2.17 in the USSR in 1988.) These figures are consistent with Sambanis and Milanovic's (2004) theory that higher levels of interregional inequality will increase the risk of violent demands for self-determination and suggest that interregional inequality might be a variable worth considering in expanding the CH model, at least when the CH model is used to explain secessionist conflicts.

The fact that rich yet small (in terms of population) regions provided the bulk of fiscal transfers to the poorer, larger regions generated an incentive for secession in the

richer regions. But this logic suggests a possible problem in using the CH model to explain secession, as here we would expect richer states to want to secede. In one sense, the model still applies, as richer states should be better able to overcome the financial constraint of mounting an effective military campaign for secession. But the model's emphasis on the economic opportunity costs of violence is harder to apply here, as richer states have more to lose by a destructive civil war. Whether or not we will observe a war in reaction to a secessionist movement ultimately depends on the reaction by the Center, which has less to lose from war, so the opportunity cost argument now applies to the "government" (i.e., the Center) and not the "rebels" and can explain secession. But we still need to explain why richer states did not acquiesce when the Center decided to use force. A plausible explanation is that rich states weigh the long-term benefits of secession against the short term costs of war and find that their economic opportunity costs from war are actually low.

Poverty and Unemployment

Bosnia was among the least-developed republics in Yugoslavia. The data on relative income in table 7.1 are instructive. Bosnia was poor and becoming poorer when the war started. Its relative income dropped from an index figure of 76.2 in 1988 to 67.76 in 1990, while Croatia's and Slovenia's income rose to 127.8 and 217.7, respectively. Kosovo was the only other region doing markedly worse in this two-year period and its per capita income amounted to only 24.4 of Yugoslavia's average income in 1990 (Montenegro and Macedonia were relatively unchanged, whereas Serbia's position was improving). Regional illiteracy rates confirm the regional disparities in development[23]: The Yugoslav average illiteracy rate was 13.7; it was 22.2 for Bosnia, 13.9 for Montenegro, 8.5 for Croatia, 14.8 for Macedonia, 1.4 for Slovenia, 15.2 for Serbia, 25.7 for Kosovo, and 8.4 for Vojvodina. Regional unemployment figures give a similar picture.

When we compare Bosnia's per capita income to the mean regional income in Yugoslavia, Bosnia is a poor state. The CH model fits very well in this regard. But when we compare Bosnia to the mean income for all countries in the CH data set, Bosnia is less poor: Its income is 21 percent lower than the average of $3,920, but it is well above the median income of $2,117.[24] This suggests that Bosnia does not fit neatly in the CH model. Yugoslavia, with a per capita income of $4,548 in 1990, is clearly a problem case for CH. But, once Yugoslavia fell apart, Bosnia's march to war fits the CH model's prediction, as does Kosovo, though Croatia in 1991 decidedly does not fit the model nor does Slovenia (there was no war there, but Slovenes seemed determined to go to war if Serbia tried to prevent them from seceding).

This all suggests a useful qualification to the CH model: In new states that emerge from dissolved federations, the risk of civil war is not independent of the war risk in other regions of the federation. The econometric analysis must account for this non-independence and the contagion effects of civil war must be properly modeled.[25]

This point about the dangers of political transition in dissolving federations implies that economic arguments have clear limits in explaining Bosnia. Economic

arguments have also not been very popular in nonacademic analyses of the Bosnian war, which have generally favored the so-called ancient enmities explanation. Yugoslavia's history is seen as strewn with ethnic rivalry and the focus of these explanations is on the underlying motives for violence. But economic arguments offer a counterweight to the ancient hatreds approach and also speak to motives, as well as to the opportunity for war.

A prominent economic account that differs from the CH model is Susan Woodward's (1995), which focuses on the impact of economic crisis exacerbated by the austerity programs pushed by the International Monetary Fund (IMF). According to this view, rapid economic liberalization caused social stress, due to rising unemployment, a debt crisis, decline in real income per capita, and a dramatic drop in economic growth in the few years before the war's onset. The cause of the war was economic decline, mainly high debt and the consequences of programs to move quickly from a command and control economy to a market economy. The different republics' call for self-determination was the result of their desire to keep economic assets at home. The state was unable to modernize the economy and economic grievances that were generated during the 1980s were an important part of the story. Structural adjustment programs exacerbated these grievances.

Woodward provides a useful "top-down" economic explanation of the civil war's onset (by focusing on the foreign debt crisis) and downplays the bottom-up (e.g., ethnic) factors. She argues that Milosevic marshaled nationalism simply as a mobilization device to keep himself in power. Although the explanation does seem to capture some parts of the narrative we have offered above, Woodward's argument, like all other elite-centered accounts, does not explain why the masses would actually support violence if they did not share some of their leaders' nationalist ideas. The public cannot be treated as nonstrategic, simply yielding to elite manipulation. Successful nationalist mobilization must be consistent with facts or perceptions on the ground, and must reflect the public's fears and proclivities. Milosevic's decision not to fight a war to prevent Slovenia's secession must have been influenced by the fact that there were very few Serbs in Slovenia (2.3 percent in 1991), so he could not develop a credible nationalist argument for war. Thus, the fact that he allowed the richest republic to secede, whereas he fought to retain control of Kosovo—the poorest region of Yugoslavia, yet one with a significant historic and symbolic value for Serb nationalist history—suggests that elites' actions are themselves circumscribed by the boundaries of the ethnic group that they represent and largely reflect the preferences of that group. Economic accounts of war that emphasize the role of poverty, debt, negative growth, and unemployment must explain why the war was organized along ethnic lines and why nationalism was so easily cultivated by predatory elites.

Natural Resources

What was the role of resource looting in Yugoslavia's wars? Yugoslavia had no natural resources of note. Some old lignite mines in Kosovo were of little economic value. Yet, despite the absence of natural resources, the CH model's focus on "loot-

ing" is applicable to this case. In the CH model, looting is a mechanism used to overcome the rebels' financial constraints. There was widespread looting during the Bosnian war; a large percentage of militia members or paramilitaries looted civilians as a way to sustain themselves. There is no evidence in case studies of the Bosnian war that looting was a motive for violence. But, as a means for irregular forces to sustain their insurgency, looting in Yugoslavia is consistent with the CH model's focus on predation.

That said, the resource-looting argument is not as relevant in this case because access to the weaponry of the JNA was pivotal in supporting the Serb rebellion in Bosnia and Croatia. Thus, this suggests another way in which the CH model might be modified when it is applied to war in former federal states. If the parties to the war are governments of former republics with access to trained soldiers and military equipment, access to natural resources may not be as significant a determinant of the parties' ability to fight an insurgency. Resources may still be a motive for secession (as in Aceh in Indonesia), but resource looting need not be a mechanism of overcoming the rebels' financial constraint if the parties have immediate access to the administrative and financial resources of the state. Slovenia, for example, had access to the arms-manufacturing industry; the Croats had access to tax revenues and could draft massive numbers of troops through conscription.

Could we perhaps reason by analogy to understand the role of looting in Yugoslavia? Could we argue that in Yugoslavia's deteriorating federal system, the most precious "natural resources" were Slovenia and Croatia—the richest republics that were sources of fiscal transfers to the poorest regions? This might be a plausible argument, though it is not directly analogous to the concept of looting in the CH model, because Slovenia and Croatia did not provide transfers to Serbia. The rich republics were important for the stability of Yugoslavia, in which Serbia had a dominant role, but if Serbia's wish was not to keep the federation intact, but rather to carve out as much land as possible from Yugoslavia to unite all Serbs and all historically Serb-controlled areas, then the looting analogy does not work. It may be the case that in nationalist conflicts, national symbols and memorials are just as valuable for mass mobilization as oil or diamonds or other "lootable" commodities in "greed"-driven conflicts.

Diaspora Support

The CH argument about diaspora support is certainly relevant in this case, but the relationship between diaspora support and violence is complex. There was extensive diaspora support for all parties—not just the rebels—in all of Yugoslavia's civil wars. Diaspora support was not limited to financial assistance, but volunteers from other countries actually joined the fight. Ethnic associations abroad raised substantial amounts of funds for all parties. Perhaps the best example was Gojan Susak, the Croatian defense minister, who was a pizza place owner in Canada and was instrumental in the campaign to finance the Croatian movement through donations from Canada. There was also assistance from the regional diaspora, as was also the case in the Kosovo war, where ethnic brethren in neighboring countries were as important

(if not more important) than the international diaspora. Support from the wider Islamic community was also available to the Bosnian Muslims (the Islamic lobby in the United States was crucial in efforts to lift the Bosnian arms embargo). The United Kingdom and France both had strong pro-Serb lobbies that were instrumental in putting in place the arms embargo, which ultimately helped the Serbs given the military status quo in Bosnia. The Croat lobby in Germany was extremely strong and was a major influence in Germany's decision to recognize Croatia in 1992 (see Woodward 1995). Given that all parties had substantial diaspora support, it is not clear in which direction we would expect diaspora support to influence the risk of civil war onset.[26] The CH model should consider diasporas in the neighborhood, not only in rich industrialized countries (which is the current focus of the model) and should factor in the potentially offsetting effects of diaspora support to both the rebels and the government.

Terrain and Related Factors

Terrain variables—mountains and forests—are consistent with the model, as Bosnia is particularly mountainous and offered a good theater for guerrilla insurgency (the value for the mountainous terrain variable is 4.11 and the average for all countries is 2.17, with a maximum of 4.55). Croats, Serbs, and Bosniacs (Bosnian Muslims) were largely dispersed, with several small areas of concentrated majorities strewn across each region. Thus, demographic patterns in Bosnia seem consistent with the predictions of the CH model.

One potentially relevant variable that is not included in the CH model is population growth. Explanations of Bosnia's war sometimes mention the fact that the Muslims were growing much more rapidly than the other groups, threatening Serbian dominance.[27] This trend seems to have been particularly significant in Kosovo, because it was accompanied by growing Albanian control of the province and Serb out-migration. Indeed, the Serbian exodus from Kosovo is a counterexample for the Fearon and Laitin (2003) "sons of the soil" argument, which explains war onset as the result of friction between autochthonous populations and newly arrived migrants.

Another important dimension of the conflict that is not captured by the CH model is the rural/urban divide in Bosnia. Several analysts have observed a pattern of violence between the less-developed and less-educated (also Serb-dominated) rural areas against the more affluent (Muslim-dominated) urban areas. Thus, there is an urban-rural cleavage that maps on relatively well to the ethnoreligious cleavages along which the Bosnian war was fought.

Democracy and Democratic Stability

The dissolution of Yugoslavia was an important shock that increased the risk of civil war onset. Collier and Hoeffler do not model the impact of a large regime transition, though other econometric studies have found this to be a significant correlate of war onset.[28]

The process of democratization in Yugoslavia was impeded by ethnic conflict in the constituent republics. With no civil society institutions to fall back on to sustain the process, the result of political liberalization was an incomplete democratization, which increases the risk of civil war (Snyder 2000). The effects of ethnic difference and ethnic dominance on democratization—like the effects of economic inequality, discussed earlier, on the probability of regime transition—are largely outside the CH model, which looks for independent linear effects on civil war (except with regard to natural resources, where the relationship is thought to be quadratic). The CH model could be extended to account for the indirect effects of ethnic difference and economic inequality on the process of democratization and, through that process, on civil war onset.[29]

Both ethnic cleavages and leadership loom large in most accounts of failed democratization in Yugoslavia. The eight-part (six republics and two provinces) presidency during Tito had created only an illusion of political decentralization. From 1987 to 1990, there was a marked change toward more centralization (or, rather, an effort to impose Serbian hegemony) and this might have incited fears of ethnic domination, consistent with theories of nationalism that highlight the negative effects of attempts to impose direct rule (cf. Hechter 2001). A series of constitutional amendments changed the status of the Republics. The Slovenia amendments were rejected and we witnessed an antibureaucratic revolution in Yugoslavia. The autonomy of regions (Kosovo, Voivodina) was taken away, suggesting that the Center was unwilling to use democratic governance and promote equal rights.

Growing centralization can fuel nationalisms (see above) and can cause security dilemmas as each ethnic group tries to defend itself during a period of emerging anarchy (Posen 1993). Consistent with this view, other analysts have focused on the role of opportunistic leaders in fanning these security dilemmas (De Figueiredo and Weingast 1999; Silber and Little 1997). According to these views, disastrous policy choices, nationalistic speeches, organization of paramilitary groups, and reluctance to compromise by exploitative politicians caused the war. Although this view could be correct, it cannot clearly distinguish the leaders' actions that resulted in their own preferences from those actions that were in response to rising nationalism in all the republics. Leadership arguments typically run into a sort of selection problem: Without explaining why the electorate would support a nationalist leader, it is hard to attribute all nationalist policies to elite preferences. Indeed, a reading of Yugoslav history does not give us a sense of social harmony that was suddenly disturbed by predatory elites. Rather, one can find clear evidence of ethnically organized social protest that, throughout Tito's era, was decisively and forcefully suppressed (Glenny 1999). Yugoslavia was a precariously balanced regime based on repression, and the ethnic contests in the 1990s had deep historical roots.

Cold War

Finally, we should consider systemic influences. Collier and Hoeffler code a binary variable denoting the end of the Cold War as an indirect measure of the

superpowers' interests in taming ethnic conflicts in their spheres of influence. Our narrative illustrates various other ways in which the international community can influence the risk of civil war onset. The obvious point is that multilateral peacekeeping intervention and mediation had an impact on patterns of violence and helped end the war with the Dayton peace accords in 1995.[30] A less apparent diffusion effect is discussed well by Woodward (1995), who places considerable emphasis on how the Yugoslav parties' behavior was shaped by international norms, especially norms regarding partition and self-determination. As she puts it, expectations of how the international community would react to events in Yugoslavia influenced the parties' decision to go to war. Woodward describes international norms as constraints that shifted suddenly as the European Community changed its position regarding recognition of Croatia and Slovenia. Related to this, Woodward offers a convincing account of how international irresponsibility and incoherence influenced events in Bosnia (looking the other way while the violence was intensifying; sending mixed signals by recognizing Croatia and Slovenia before deciding on how to handle demands for self-determination in Bosnia).

Dynamics of Violence

The armies that fought in the Bosnian war were a mix of irregular and regular forces. At the one end of the spectrum were criminal and quasi-criminal elements, often freed from prison in order to take part in the fighting (Mueller 2000). At the other end were former career officers of the JNA who had defected to the various ethnic armies. In the middle were reservists and home guards, armed and trained by the JNA. They were mobilized locally by ethnic parties and ethnic entrepreneurs. The mobilization of civilians into militias was facilitated by the abundance of weapons (Maas 1996, 231; Sudetic 1998, 89). Paramilitary forces from outside Bosnia also actively participated. The degree of organization and discipline also varied widely, with quasi-criminal groups in one end and regular units in the other. Moreover, many of these units underwent an organizational transformation during the war, becoming more organized and centralized.

A key feature of the war was the combined numerical inferiority and (initial) military superiority of the Serb forces. Toward the end of the war, the two sides reached relative military parity. By the summer of 1994, the Bosnian government was able to eventually field 110,000 troops, including Croats, while Bosnian Serb forces reached 80,000. The initial military advantage of the Bosnian Serbs was offset by their demographic inferiority, the unwillingness of ordinary Serbs from the rump Yugoslav Federation to fight in Bosnia, and the multiform international support received by the Bosnian Muslims and Croats.

The Bosnian war can be described as a "symmetric nonconventional" war (Kalyvas 2005), a type of war characterized by a mix of regular and irregular forces fighting in territory defined by clear frontlines and a political context shaped by state collapse. These wars tend to generate high levels of violence.

The defining characteristic of violence in Bosnia was mass deportation of civilians along ethnic lines, commonly known as "ethnic cleansing." Mass deportation in Bosnia was initiated by the Serbs in April 1992 and became common practice throughout the war, practiced by all sides to varying degrees. It was first used in late summer 1991 in eastern Croatia but became most severe in Bosnia. Serb units from Serbia, many part of special paramilitary forces such as Arkan's Tigers, inaugurated this tactic in Bosnia. Eventually, the perpetrators included conscript soldiers, local policemen, and local villagers.

Though individual instances differed, a general pattern emerges. Initially, Serb forces would establish military control of an area, either from inside, relying on the local Serb population, or by attack or siege. This task was often carried out by Serb roving militias, though artillery support could be provided by regular units. In many cases, these outsiders were accompanied and helped by locals. In his description of the attack against his village, Pervanic (1999, 23) recalls that

> most of the faces came from the surrounding Serb villages, Maricka, Jelicka, Petrov Gaj, Gradina, Omarska, and Gornja Lamovita. But others were strangers speaking with an accent that could only be from some part of Serbia or Montenegro. Many of the local Chetniks were people who had gone to school with us, and with whom we socialised regularly.

These units would attack, and usually defeat, hastily organized "self-defense" units formed by Muslim villagers. Where complete control could not be achieved, for instance in some of Bosnia's larger cities, Serb forces lay the area under siege.

Once control was achieved, local non-Serbs met various fates. Some were killed immediately, some were imprisoned, and others were harassed, tortured, or forcibly deported. Thousands of men were taken to prison camps set up within Bosnia's borders, numbering close to 100. Possibly the worst was Omarska, where as many as 4,000 Bosnian men, primarily Muslim, were killed. In some places expulsion was immediate and violent, and sometimes safe passage was offered for those who voluntarily left an area. Many refugees were also coerced into signing over their property to the Serb forces before being allowed to leave. Property was frequently looted and destroyed. Although some of the violence was targeted, much of it was indiscriminate.

Where Serb control came early, coercive measures, such as restrictive security measures that set non-Serbs apart from other residents, were used against those who had not yet left. In the Banja Luka region, non-Serbs were put under curfew and were prohibited from meeting in public or in groups of more than three people, and prohibited from traveling by car and from visiting relatives out of town. Non-Serbs were also deprived of their livelihoods, their utilities were cut off, their houses often burned down, and many were beaten, raped, or killed. By the end of 1993, only 40,000 of the region's 350,000 Muslims remained.

Destroying a community's cohesion helped to break resistance. Community leaders—such as wealthy professionals, academics, and local clergy—were often elimi-

nated. In the Kozarac area, prominent Muslims were identified, arrested, and earmarked for elimination based on existing blacklists. Sometimes, violence was accompanied with the victims' humiliation. In conquered areas, mosques and other religious and cultural relics were destroyed, often to the point where it was no longer possible to see that they had ever existed. Muslim clergymen were dispersed, imprisoned, or killed, and it is estimated that by September 1992 over half of Bosnia's mosques, historical monuments, and libraries were destroyed.

By the fall of 1992, ethnic cleansing had spread beyond Bosnia's villages to towns and cities. The publication by Western media, in August 1992, of extensive reports outlining the existence of concentration camps in Bosnia that housed thousands of Bosnian non-Serbs generated widespread outrage. In response, Serb leaders closed some of the worst camps and transferred their prisoners to other locations by the end of 1992. By November, there were approximately 1.5 million Bosnian refugees and at least 20,000 rapes had been committed.

Polarization and Violence

In the following text, we address two questions. First, what is the relationship of ethnic polarization and ethnic violence? Second, how does one explain the prevalence of ethnic cleansing?

The Bosnian war is described as a case of "ethnic conflict." Most people sided with the ethnic group to which they belonged. Of course, this is a simplification. There were some high-profile instances of crossing ethnic lines. Best known is that of the Bosnian Muslim leader Fikret Abdic, who controlled a sizeable area of northwestern Bosnia (Bihac) and allied with the Serbs, fighting against the Bosnian government. Examples on a more minor scale are also numerous and include Serb commanders in the Bosnian Army, in Sarajevo and elsewhere, and Muslim soldiers in Serb units and even Serb prison camps (Human Rights Watch 1992, 77, 130). Overall, however, ethnic identity appears to be a good predictor of the side that an individual was likely to join. Whether it is also a good predictor of ethnically intolerant attitudes is a different issue (Massey, Hodson, and Seculić 1999).

There is evidence also suggesting that intragroup violence was not uncommon and served to police ethnic boundaries (Cohen 1998, 199; Human Rights Watch 1992, 15, 231; Silber and Little 1997, 137–44) and that most people wanted no part in the fighting (Claverie 2002, 48; Mueller 2000). It is often overlooked that many fighters were conscripts rather than volunteers (Maas 1996, 109). According to Loyd (2001, 85),

> many people found themselves carrying a gun whether they liked it or not. If you were of combat age, meaning only that you possessed the strength to fight, kill and possibly survive, then you were conscripted into whichever army represented your denomination, Muslim, Serb or Croat.

No systematic data are available about the motivations of the individuals who participated in ethnic cleansing. Initially at least, the war brought to the surface sim-

mering tensions that had developed in the context of party politics during the period immediately preceding the advent of hostilities. However, the first to embrace the violence of the war were those who had embraced it in peace, including the most notorious one, the Serb warlord Arkan (Cohen 1998, 192; Sudetic 1998, 97). Some of the first leaders of the Bosnian army had criminal backgrounds. Ramiz Delic ("Celo") had served several years in prison for rape, while Jusuf Prazina ("Juka) was a "debt collector in peacetime" (Cohen 1998, 280; Maas 1996, 31). The men in charge of the Visegrad chapter of the Stranka Demokratski Akcije (SDA), the Sabanovic brothers, also had a criminal past (Sudetic 1998, 90). The influence of alcohol in the production of violence cannot be underestimated because it recurs in description upon description (e.g., Human Rights Watch 1992, 168; Sudetic 1998, 293). In other words, it appears that the war provided an opportunity for violent action to individuals with a propensity to violence, rather than turning most individuals into murderers (Mueller 2000).

Some of the violence took place between neighbors. Often the victims knew by name the perpetrators of violence (Human Rights Watch 1992, 67). However, the dominant form of violence appears to have been more of the "soldiers against civilians" rather than the "civilians against civilians" type that is more common in riots and pogroms (or the Rwandan genocide). Only small minorities of the various populations participated in the violence (Mueller 2000), and there is evidence that local deals were reached in several circumstances (Bougarel 1996). Often, the violence hid personal grudges rather than impersonal ethnic animosity. Pervanic (1999, 156–7) recalls that "many inmates" in the Omarska prison camp "were murdered for private reasons. Guards who had a grudge against somebody took their revenge. The visitors from outside often took advantage of the same opportunity."

It would be erroneous to assume that the ethnic divide was as deep as the violence suggests. Maas (1996, 149) writes of how

> the airwaves came alive as men on both sides of the front line talked to each other, swore at each other and sang songs. A Bosnian soldier would chat over the airways with a Serb friend, now a solider on the other side, exchanging gossip about their families and mutual acquaintances.

The soldiers who found themselves 200 yards apart in trenches "traded in cigarettes and gasoline, at night there was banter about soccer teams or arguments about history. If somebody was injured, the person who shot him might even inquire later about his health" (Cohen 1998, 292). Often soldiers gave cigarettes and drinks to one another, had conversations, and warned each other against the most hostile units in their own forces; soldiers on both sides refrained from firing on one another and even arranged informal truces.

There are numerous examples of people's lives being spared precisely because they had the chance to see a friend on the opposite side. A Muslim tells how "one of my neighbors was taken into the house [to be killed] but a Serb friend spoke up so he was released." Another witness notes that "one of the soldiers wanted to kill us, but

the soldier I knew didn't let them." Often having friends on the other side got one out of prison. Often people tried to cooperate with their friends in anticipation of the violence to come (Human Rights Watch 1992, 70, 72, 158, 260; Sudetic 1998, 109). In short, although people fought primarily along with their ethnic kin, their actual behavior was not always violent.

Disaggregating the cycle of polarization and violence is not easy given present data limitations. The available evidence suggests that the period prior to the war witnessed substantial polarization along ethnic lines. For example, the Muslim owner of a café in Rogatica recalls that while at first his clientele was mixed, during the course of 1991 Serbs stopped coming to his café. "There were now Serb cafes and Muslim cafes" (Cohen 1998, 195). Likewise, a Muslim school teacher from a town in northwestern Bosnia noted that "tensions between the various ethnic groups and discrimination against non-Serbs surfaced in Prijedor before fighting broke out in late May" (Human Rights Watch 1992, 43). The same situation prevailed in the villages of northeastern Bosnia.

> By late fall of 1991 Muslims from Zlijeb were no longer sending their children to the primary school in Odzak. Down in Visegrad, Muslim and Serb men were no longer sitting together in any café except for the bar hotel beside Mehmed Pasha's bridge. This café was Visegrad's illegal gun bazaar. (Sudetic 1998, 89)

In the eastern Bosnian town of Bijeljina, some of "the first violent incidents occurred in 1991 between the clients of the newly opened Istanbul and Serbia cafes" (Cohen 1998, 195). However, this polarization produced only limited violence.

Conflict "Ethnification" as a Result of Violence

Rather than translating deep divisions into violent conflict, the anecdotal evidence suggests a situation of rapid "ethnification" of violence *once the war began*. Once the war began, it endogenously generated additional waves of violence and further polarization, through the mechanism of revenge; this process consolidated, magnified, and hardened ethnic identities. A soldier overlooking the hills of Sarajevo said that "he had volunteered because a relative was killed by Croatian forces near Derventa early in the war" (Cohen 1998, 137). "A Muslim soldier seeking revenge for the death of a relative, a military police chief killed near Skelani, had used the butt of a revolver to smash the skulls of a Serb man and his elderly mother" (Sudetic 1998, 172). The pace of killing accelerated in the Susica camp after a local Serb hero was killed in a Muslim ambush a few miles from Vlasenica (Cohen 1998, 214).

During the later years of the conflict, people who had witnessed the brutal deaths of their loved ones were driven to behave in a violent manner and became an important recruitment reservoir for the Bosnian Muslim forces. Some of them were known as *torbari* or "bag people." They were active around Srebrenica and were responsible for atrocities against Serbs in the villages of Podravnje, Grabovacka, and Kravica

(Sudetic 1998, 157). In Travnik, Muslim refugees formed the legendary 17th Krajiska Brigade commanded by Colonel Mehmet Alagic, himself a refugee from Sanski Most (Cohen 1998, 292). The Srebrenica massacre may have been driven, in part at least, by revenge. Philippe Morillon, the commander of the UN force in Bosnia, is quoted as saying a few days before the fall of Srebrenica that "the Serbs were not stopping their offensive in eastern Bosnia, not so much because they needed to capture the territory, but because they had become enraged after the discovery of a mass grave in Kamenica" (Sudetic 1998, 181).

The spirit of revenge could even subvert attempts to control it by the authorities, as in the town of Vares (Silber and Little 1997, 300). An armed Croat unit arrived from Kiseljak, the hard-line Croat stronghold to the south, and proceeded to imprison the local Croat mayor and police chief. Then, Muslim men were rounded up, and Muslim homes were raided and looted. Within days, almost the entire Muslim community had fled to the village of Dabravina to the south, where they waited and planned their return.

The anecdotal evidence suggests that the members of the more organized military forces tended to be more restrained and controlled in their behavior than their more loosely structured counterparts. In Herzegovina, witnesses reported that the jails of the Hrvatske Odbrambene Snage (HOS) were very much worse than those run by the Hrvatska Vojska Odbrane (Croatian Army of Defense), the official army of Bosnian Croats (Human Rights Watch 1992, 331). Likewise, the camps run by the regular Bosnian Serb army were more regulated than those run by Serb paramilitary groups (Gutman 1993, 29). And, although there were widespread allegations of the systematic use of rape as a weapon of war, there is evidence suggesting that the regular military and police units were actually the organizations to which raped women often turned to for assistance after their ordeals (Engelberg 1992, A8; Human Rights Watch 1992, 175). On the other hand, the worse single massacre of the war, in Srebrenica, was implemented mostly by regular forces, albeit with local assistance.

Why was ethnic cleansing so central to the war? By inferring the origins of the practice and the goals of those who used it from the actual outcome, one can conclude that the intention was to create ethnically homogeneous states. Another way to approach this issue is to examine the patterns of violence.

Although violence was depicted as uniform, it varied widely. This variation was both spatial and temporal: "In most regions of Bosnia the conflict retained a distinctly local character. Whole sectors of the front remained relative untouched by the war, loosely defended by local militia" (Burg and Shoup 1999, 138). Maas (1996, 20) reports that "it was one of the odd features of Serb controlled territory that while Muslims were being tortured at a prison camp a mile down the road others who had sworn their loyalty to the local Serb warlords remained at liberty." Yet, most descriptions come from the most violent parts of the country, indicating selection bias.

In general, violence tended to occur in areas that were of strategic or economic importance. The first outbreak of large-scale violence occurred in northwestern Bosnia, in the village of Hambarine which bordered the Croatian region of Krajina, where violence had already broken out in the Croatian war. Most importantly, north-

western Bosnia was strategic in that it linked Serb territory in Croatia and Bosnia. Hambarine itself lay in an important position connecting the larger town of Prijedor with the Ljubija mine. Northeastern Bosnia was another scene of intense fighting because it linked Serbia proper with the Serb-held areas of Croatia and eastern Bosnia.

Most notorious Bosnian Serb prison camps were also located in northeastern and northwestern Bosnia. Four of the largest camps (Omarska, Keraterm, Manjaca, and Trnopolje) were located in the northwest. Additionally, all of these camps were situated near the center of Serb power, Banja Luka. Likewise, the camps run by the Muslim and Croatian forces were also near their respective centers of power. The HOS operated a facility in Capljina (their stronghold of Herzegovina) and in Orasje in northern Bosnia, while the most notorious Muslim-run camp, Celibici, was near their stronghold of Konjic.

The concentration of violence in these particular areas emerges as well from a compilation of the data on human rights violations collected by various organizations. For the purposes of this chapter, we coded the evidence gathered by the UN, the U.S. State Department, and Human Rights Watch. Figure 7.1 shows a remarkable convergence in the evidence produced by these three bodies: Violence is clearly concentrated in northern Bosnia, and especially the northwest. Consistent with these results, figure 7.2, which graphs UN data on the size of mass graves, suggests that northwest Bosnia was the epicenter of violence.

Turning to temporal variation, we observe significant variation as well, which is consistent with the anecdotal evidence. Using the same data as above, we find that the violence is concentrated in the first months of the war, roughly the spring and summer of 1992, when the initial phase of territorial consolidation took place (figure 7.3).[31]

It has also been suggested that the impact of international diplomacy on violence was not negligible. Attempts to settle the conflict often led to military activities by the warring parties intended to consolidate or capture as much territory as they could prior to settlement. For example, the Bosnian Serb army undertook a major offensive in northeastern and southeastern Bosnia immediately after the United Nations proposed the division of Bosnia into largely autonomous provinces "in which an ethnic group would retain de facto control of designated areas" (Human Rights Watch 1992, 221). The anthropologist Tone Bringa (1993, 1995) recorded a similar outbreak of violence following the Vance-Owen plain in the Kiseljak area, northwest of Sarajevo.

Ethnic cleansing has been interpreted as an expression of ethnic hatred and intolerance. However, ethnic cleansing is hardly a constant feature of ethnic civil wars, even when ethnic polarization is high. Although the war in Chechnya has obvious ethnic characteristics, ethnic cleansing has not been used. Additionally, ethnic cleansing was not always implemented immediately after one warring side gained control over a certain territory. For instance, Serb forces entered the village of Hambarine on May 23 but its Muslims inhabitants remained until July 19. It was only on July 20 that the Serbs began to kill the inhabitants and take them to detention

Figure 7.1 **Spatial Variation of Reported Human Rights Abuse Incidents and Mass Grave Locations**

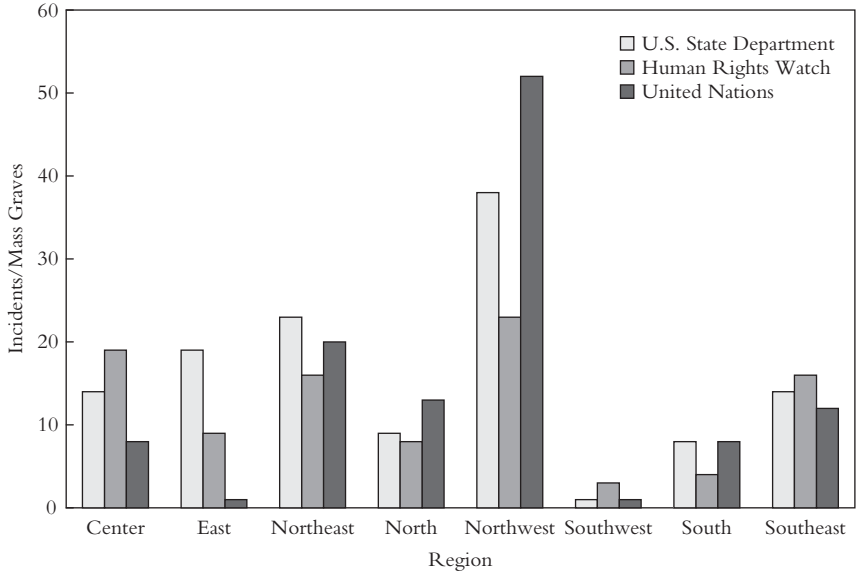


Figure 7.2 **Estimated Number of Bodies in Mass Graves (1992–93)**

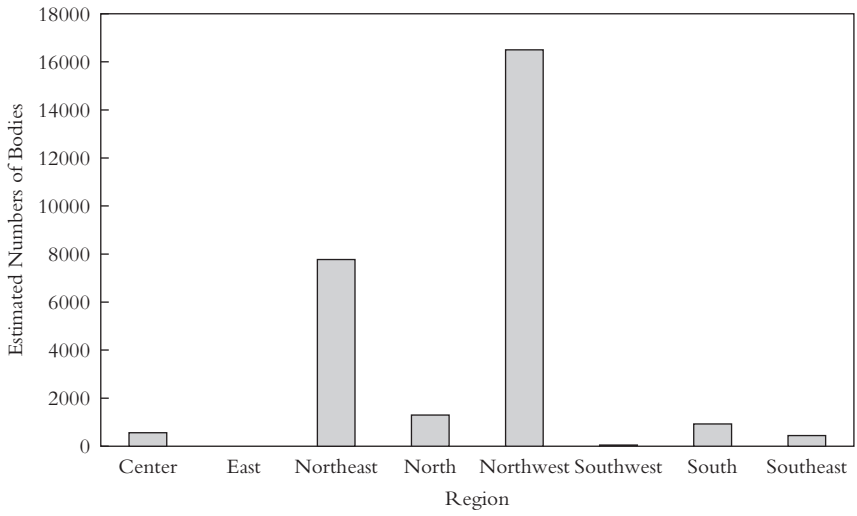
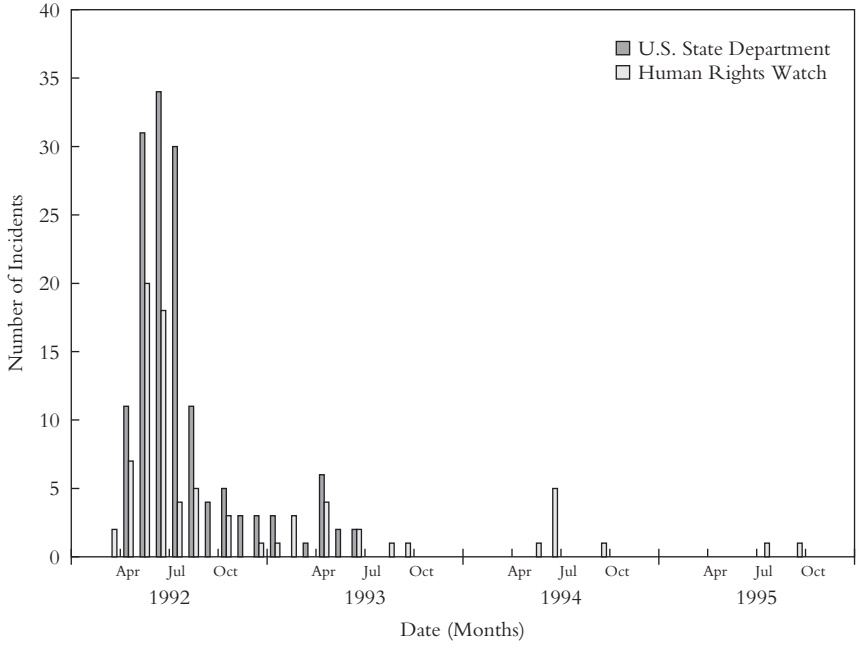


Figure 7.3 **Temporal Variation in Reported Incidents of Human Rights Abuses**



camps (Human Rights Watch 1993, 54). This was not the only case in which an army that overtook a city held it for weeks before engaging in mass violence and deportation.

A possible explanation is suggested in an interview given by a Croatian woman, who witnessed the takeover of the town of Prijedor by the Bosnian Serb forces, to Human Rights Watch. She claimed that "the takeover occurred without bloodshed because the Muslims and Croats did not resist with weapons at first" (Human Rights Watch 1993, 43). In Prijedor, the ethnic cleansing of the Muslim population began weeks after the Serbs took over, when the Muslim forces launched a counterattack. Likewise, the Serb forces began to cleanse the Muslims in the town of Kozarac only after the Muslim forces launched an attack on the town on May 26 (Human Rights Watch 1992, 44). Pervanic (1999) provides a similar account from the Bosnian Muslim point of view that also mentions sporadic guerrilla action and harassment by Muslim groups during the initial phase of the war.

The first move consisted of an announcement on radio or TV in which all the members of the opposing ethnic group were asked for their support. Support could be shown by handing over one's weapons or swearing an oath of loyalty. The inhabitants were then allotted a certain time period in which to make the decision on whether or not to give their support. Before they attacked Kozarac, Serb military

leaders gave the village leaders seven days to consider signing an oath of loyalty to the Serb authorities, otherwise they would be considered a threat; the villagers of Grabska were also warned that they would be shelled unless they gave up their weapons by noon on May 10, 1992. The Serb forces announced to the people of Hambarine that they would be attacking the village the next day at 12:15 if they did not surrender their weapons (Human Rights Watch 1992, 53, 61, 216). Noncompliance led to large-scale violence. Conversely, there is evidence that people in villages that did not resist the Serbs were treated more leniently (Pervanic 1999, 78–80).

Overall, this pattern suggests that ethnic cleansing may have also been an answer to the problem of population control. Actors lacking the ability to control populations whose loyalty is questionable may choose to deport them instead in order to consolidate their defenses. The question is, why do strategies of population control vary so much across ethnic wars, from genocide, to ethnic cleansing, and to simple coercion?

Conclusion

Our conclusion must begin with an overview of the CH model's fit to the case of Bosnia. Table 7.5 provides such an overview, summarizing our analysis in this chapter. Drawing on these lessons from Bosnia, how might we propose expanding or revising the CH model?

One suggestion is that the *peacetime* variable should not be the only variable used to capture the conflict-specific capital generated by prior conflict. Related to this, contagion and diffusion effects should not be ignored. The war in Croatia was decisive in shaping public opinion in Bosnia, as was the successful secession of Slovenia and Croatia, which pushed Bosnian Serbs and Krajina Serbs to demand independence and annexation to Serbia. Direct external intervention by Serbia in Croatia and Bosnia, by Montenegro in Croatia, and by Croatia in Bosnia had a clear effect on the duration of the civil war, and the expectation of such intervention might well have figured prominently in the parties' decision to go to war. To explore further the relationship between external intervention and civil war onset, one must endogenize intervention and model the effects of an expectation of partial intervention on the probability of civil war onset.

A second suggestion is to consider the effects of political institutions in greater depth. The lack of democratic institutions that could help sustain the democratic transition was important here. The CH model should control not only for the level of democracy, but also for the change in regime type. Leadership looms large as a factor in the Bosnian war, but it is hard to differentiate its effects from the effects of ethnic polarization, international shocks, and unresolved ethnic antipathies that were solidified during Tito's authoritarian rule.

Several improvements on the ethnic measures are also suggested by this case. First, polarization seems more significant than either fractionalization or dominance. Polarization should ideally be measured not simply in terms of the numerical size of

Table 7.5 **Checklist: CH Model "Fit" to the Bosnian Civil War**

Collier-Hoeffler variable	*Association with war onset in CH model*	*Bosnia 1990–92; values for variable*	*Variable values consistent with war in Bosnia?*
Primary commodity exports/GDP	Positive or inverted-U	No natural resources of note	Inconsistent (no resources); but logic of the argument seems to apply (other looting present)
GDP per capita	Negative	Yugoslavia's GDP high relative to other civil war countries; Bosnia is GDP higher than the median	Inconsistent (with respect to Yugoslavia); Bosnia closer to the CH model, though GDP was higher than the population median
Diaspora	Positive	All three groups (Croats, Serbs, Bosniacs) received diaspora support	Consistent (with respect to the effect of prolonging the war)
GDP growth	Negative	Large decline in Yugoslav rate of growth (15–20 percentage points) from 1988 to 1992	Consistent (but growth likely affected by war in Croatia, so concern with endogeneity)
Mountainous terrain	Positive	Very mountainous, with a score of 4.11 (the average for all countries is 2.17 and maximum 4.55)	Consistent
Geographic dispersion	Positive	Croats, Serbs, and Bosniacs largely dispersed, with several small areas of concentrated majorities across the state	Consistent
Population size	Positive	Slightly lower than the average for all country-years (9.04) at 8.11	Inconsistent—though there was only a small difference from the population mean
Social fractionalization	Negative	Interacting ELF and religious fractionalization gives Bosnia a very high index value	Inconsistent; yet consistent if we consider the modifications to ELF proposed in this chapter

Ethnic fractionalization	Negative, but nonsignificant	High fractionalization at 0.697 (population mean is 0.385, with 0.925 most fractionalized)	ELF is not significant in CH; ELF is lower if we consider coalitions among groups
Religious fractionalization	Negative, but nonsignificant	Very high 0.709 out of a population maximum of 0.78 (population mean is 0.367)	Consistent, but variable is not significant in CH
Ethnic dominance	Positive	Low: Bosniacs (Muslims) are the largest group with 43.7 percent of the population	Inconsistent; yet measure used by CH seems inappropriate
Income inequality	Negative, but nonsignificant	Fairly high—large rural-urban divide, corresponding to perceptions that Muslims were better off than Serbs	Variable not significant in CH; yet measure used by CH seems inappropriate; regional inequality is more relevant
Democracy	Negative, but nonsignificant	Nondemocratic regime (polity score = 0)	Consistent (low democracy); yet this is not a significant factor in CH and regime transition was more important than the "level" of democracy
Peace duration	Negative	Considering all Yugoslav wars as related, the Croatian war increased the risk of war in Bosnia	Consistent (if we code 0 months at peace prior to war onset, taking into account the Croatian war in 1991)

the groups, but also in terms of their ideological opposition to each other. Second, ethnic and cultural differences between regions may be important in explaining violence in pursuit of self-determination in federal states.

Another suggestion is to consider the Sambanis-Milanovic interregional inequality hypothesis as well as the related hypothesis about interregional ethnic difference. This is consistent with Woodward's argument about the effects of international economic shocks, and Woodward's focus on external shocks offers another valuable, plausibly generalizable addition to the CH model. Shocks can prompt secessionist action, but interregional inequality provides the foundations for latent demand for self-determination. That demand was revealed at the time of weakness of the Communist regime at the Center. The effects of interregional economic inequality and ethnic difference suggest some potentially important differences in the causes of separatist violence as compared to other forms of violence and these differences deserve to be theorized better.[32]

Turning to the dynamics of violence, we inquired about the relationship between ethnic polarization and ethnic violence, and about the centrality of ethnic cleansing. The evidence indicates that although there was ethnic polarization before the outbreak of the hostilities, it was much enlarged by the war. This suggests that measures of ethnic polarization must be dynamic rather than static (as in the CH model), sensitive to the ways in which a conflict unfolds. It is also possible to suggest the logical strategy supporting the killing and ethnic cleansing, influenced by three factors: territorial control, the military balance of power, and the nature of the secession process in Yugoslavia. First, the imposition of full territorial control could be achieved only if the Serbs were able to invest superior military resources, which they were clearly lacking. Second, the initial Serb military superiority was certain to decline, thus placing a premium on rapid action at the very outset of the conflict in order to create facts on the ground, most obviously via mass deportation rather than the most costly and time-consuming policing of all potentially "disloyal" localities. Third, Yugoslavia's inability or unwillingness to prevent the secession of Bosnia created a geographical space to which Bosnian Muslims could be deported. It is telling that the Serbs were willing to contemplate the existence of a rump Bosnian state as opposed to try to control the entire territory of Bosnia. In a way, ethnic cleansing can be seen as the perverse effect of a process of "twin secession," where the Yugoslav state could not prevent the Bosnian Muslims and Croats from seceding from Yugoslavia, while the Bosnian Muslims and Croats could not prevent the Bosnian Serbs from seceding from Bosnia.

Notes

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1. The war is also dropped in Fearon and Laitin (2003), as data for gross domestic product (GDP) are missing for Bosnia. The other former Yugoslav republics are also missing data.

2. We could not find data on primary commodity exports for Bosnia, so we used data on primary commodity exports for Yugoslavia (0.032).
3. This problem is not addressed by any existing quantitative studies of civil war, which treat regime type as exogenous (except Elbadawi and Sambanis 2002). So, we do not consider the endogeneity problem further here, either.
4. The ELF is computed as follows: 100*{1 − [(0.437*0.437) + (0.314*0.314) + (0.173*0.173) + (0.076*0.076)]} = 67.473.
5. *Frac* is defined by Collier and Hoeffler as the product of *rf* and *elf,* but a slightly different figure is given in Collier and Hoeffler and the figure varies over time, although *rf* and *elf* do not vary.
6. We use the 1995 value for forest cover also for 1992.
7. The model was estimated as a pooled logit just as in the CH model. We regressed war onset on real income, growth rate, primary commodity exports and their square, fractionalization, democracy, peacetime, and log of population.
8. If we plotted the change in Pearson's χ^2 by the predicted probability of war onset, and each observation is weighed by its relative influence on the estimation, we would find that Bosnia is one of four most influential observations. This figure is available from the authors. If we dropped three outliers—Cyprus, Bosnia, and Yugoslavia—the model fit increases dramatically: the pseudo-R^2 rises to 22.5 percent and all variables except democracy are highly significant.
9. The average change in Pearson χ^2 statistic is 0.95. For Bosnia, this statistic is 66.41. The computed influence statistic has a mean value of 0.11 for the entire sample and the corresponding value for Bosnia in 1990 is 0.37. The most influential observation is the Congo in 1995 (0.45). Figures showing these results are available from the authors.
10. The within-sample prediction for Bosnia is 0.08 with *peacetime* coded 0; it drops to 0.0149 if we code *peacetime* equal to 532 (months at peace since 1960). The average probability estimate for the entire sample is 0.071.
11. For data on ethnic intermarriage in Yugoslavia, see Petrovic (1986) and Bromlei and Kashuba (1982).
12. If the intermarriage rate was a sign of interethnic affinity, then the relationship between that and separatism or war would run counter to expectations.
13. Rates in Kosovo dropped from 9.4 percent in 1962–64 to 4.7 in 1987–89; in Macedonia, they dropped from 13.5 percent to 7.8 percent in the same periods (Botev 1994, 469). By contrast, intermarriage rates increased from an already high rate of 22.5 percent to 28.4 percent in the same period.
14. Yugoslav was a political, not an ethnic identity. See Burg and Berbaum (1989, 536). Others (Botev 1994, 465) do not attribute any political significance to this category, because it includes people who simply do not wish to declare their own identity. However, the sharp changes in the percentages of Yugoslavs in different regions indicate that there is some significance to this identity as it responds to political events.
15. In 1971, there was another peak in nationalist conflict in Yugoslavia (Burg 1983), which might explain the shift away from the Yugoslav identity and toward the Muslim identity in Bosnia.
16. Note that all these ethnic percentages must be interpreted as approximate figures, because there is evidence of manipulation and pressure on small groups to declare

themselves part of the dominant group—Serbs during the time of the Federation. On this issue with reference to the 1953 census, see Botev 1994, 465.

17. That argument is developed in Sambanis and Milanovic (2004). They also provide data to code ethnic difference among all regions of all federal and politically decentralized countries.
18. Sambanis and Milanovic (2004) develop a theory of the demand for sovereignty that is based on the idea of a tradeoff between sovereignty and income. Both sovereignty and income are normal goods, but there are economies of scale for the provision of public goods that make the costs of sovereignty prohibitively high for some small states.
19. Even though these subsidies were small as percentages in GDP, the loans were never repaid and the political perception was one of heavy and unfair subsidization.
20. See Hechter (2001) for a discussion of a typology of nationalisms. The story presented here is consistent with Hechter's theory of the spread of nationalism. As control over a national minority becomes direct, overturning previously acquired rights during a period of indirect rule, Hechter argues that the minority would develop nationalist ideology. The Serbs' previously privileged position in Serb-dominated Yugoslavia was analogous to a shift from indirect to direct rule by a hegemonic, hostile ethnic group.
21. Bookman 1994, 181.
22. Murdoch and Sandler (2004) provide estimates of this neighborhood effect both for the short and long run using spatial econometric methods.
23. Percentage of people aged 15 or higher with no formal schooling in 1981. *Source:* Flere 1991, 189.
24. Fifteen war onsets are dropped in the CH analysis because of missing income data. Some of these countries were very poor when the war started (e.g., Afghanistan, Cambodia, Laos, Liberia, Sudan, Vietnam, and others). The mean income for the population of countries might have been lower if these countries were included, in which case Bosnia would have been closer to the mean.
25. The simplest way is to cluster on the predecessor country/federation, correcting the standard errors, as in Sambanis (2000). A more sophisticated correction would actually model the spatial dependence of civil war risk in the former Yugoslav and Soviet republics.
26. Perhaps this is why Collier and Hoeffler ultimately do not find a significant association between war onset and diaspora support, but they do find an association for war duration.
27. The threat was a political one with reference to the entire Yugoslavia. If the Muslim population eventually grew so large as to be clearly dominant over the Serbs, who were not dominant in Bosnia, then Serb power in Yugoslavia would be reduced. However, the Muslim population growth rate in Bosnia was lower than in Kosovo.
28. Hegre at al. (2001); Elbadawi and Sambanis (2002); Fearon and Laitin (2003). With respect to international war, see Snyder (2000) and Mansfield and Snyder (1995).
29. Sambanis (2005) shows in a cross-country regression that inequality is significantly associated with regime transition.
30. See Doyle and Sambanis (2006) for a case study of the effectiveness of UN peacekeeping in Brcko (Bosnia) and Eastern Slavonia (Croatia).

31. We code reported incidents of violence rather than the intensity of violence; as a result, the massacre of Srebrenica, arguably the largest single massacre of the war, is coded as one incident.
32. See Sambanis and Milanovic (2004) for a theory of the demand for self-determination.

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