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The Dynamics of the Colombian Civil Conflict: A New Data Set

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Abstract We present a detailed, high-frequency data set on the civil conflict in Colombia during the period 1988–2002. We briefly introduce the Colombian case and the methodological issues that hinder data collection in civil wars, before presenting the pattern over time of conflict actions and intensity for all sides involved in the confrontation. We also describe the pattern of victimisation by group and the victimisation of civilians out of clashes.

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1. Introduction

Civil conflicts are a major obstacle to economic and human development. Yet, the field of development economics has tended to neglect conflict, focusing mainly on the development problem under calm conditions. In fact, in our literature search we found thirteen development economics textbooks, none of which mentions the subject of conflict.

There is, however, an existing empirical literature that World Bank (2003) draws on and extends, presenting many useful ideas on the causes of and

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possible cures for civil conflicts. The strongest theme running through this work is to emphasise the financial basis of civil conflicts more and their ideological and ethnic underpinnings less than has typically been the case in previous work. The standard approach in this literature is to work with a large data set of many countries and to run cross-country regressions. A rare exception is Deininger (2003) who analysed a household survey in Uganda that had civil war related questions on it, allowing him to study issues such as the pattern of victimisation and the determinants of participation in the war.

There is also now a rapidly growing theoretical literature on the economics of conflict that is surveyed in Garfinkel and Skaperdas (1996), Sandler (2000) and Breton et. al (2002). This literature tends to see civil conflicts as a struggle over resources, consistent with the above empirical work. However, the development of these models has been hampered by the absence of solid micro-empirics on actual conflicts. An important exception is the literature on terrorism where there are good data and a healthy interplay between theoretical and empirical work (e.g., Enders and Sandler 2000), but this work is only partially related to civil conflicts.

Finally, there are many case studies of civil conflict, typically written by military analysts or political scientists.[1] These can be very valuable but, of course, there is much to be added by empirical work on particular conflicts based on solid data sets. Unfortunately, such data are rare, rendering many of the assertions in the case studies difficult to prove.[2]

We present here for the first time a time series data set for a civil war that is detailed, high-frequency and long. This allows us to study the actions of all participants in the Colombian civil conflict over a long time period. In fact, our main contribution here is simply to introduce the data set that we have collected over the last two years. Beyond that, we present its basic contours including the pattern over time of fundamentals such as the number of attacks, clashes, and casualties arranged by group and the victimisation profile. We hope this contribution will stimulate further empirical and theoretical work on the Colombian conflict as well as the subject of civil conflict in general. In particular, we expect that the methodology and learning process of setting up this data set will enable us to start collecting micro data from other internal conflicts around the world, allowing us to further test some of the hypotheses offered here.

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[1] For the case of Colombia see, e.g., Marks (2002).

[2] The only other civil conflict data set we have seen is the Index of Deaths for the Northern Ireland conflict compiled by Malcolm Sutton (1994), listing deaths as a consequence of conflict activities in Northern Ireland.

04/11/2004 09:09 09-21-2 Restrepo.doc

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2. The Colombian civil conflict

The Colombian conflict is a contest for political power of long duration and low intensity. In these respects it is a characteristic civil war and is, therefore, an interesting object of study since its lessons can potentially apply to other civil conflicts.

At the same time, the Colombian conflict has particular features that further enhance its interest as a case study. There are no ethnic, regional or religious cleavages defining the conflict, allowing us to focus purely on its economic, political and military features.[3] A second special feature relates to political institutions. Colombia's democracy is one of the most stable in the Americas, with only one non-democratically elected government in the last century (during 1953–57), no major periods of government organised political repression, continuous political reform and a sound tradition of civil liberties and freedom of speech. Nonetheless, Colombia has been subject to atrocious periods of political violence both between the two main parties that have historically dominated the political landscape (Liberals and Conservatives) and, more recently, against political minorities, leading to their political exclusion.[4] The conflict itself has arguably increased political exclusion as armed groups tend to restrict political activities where they dominate *de facto*. This political ambivalence repeats itself in the economic realm. Colombia has had a positive economic performance, exhibiting an average per capita growth rate of 2% since 1950 and only one recession since 1928. On the other hand, widespread poverty persists, with more than 50% of the population subsisting on less than two dollars a day, and the country has one of the most unequal distributions of income in South America (ECLAC, 2003).

A standard, although arbitrary, definition of civil war is that more than 1,000

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[3] Over 90% of Colombians are Roman Catholics and there is no militant minority in either religious or racial terms. Most of the population is of mixed racial origin with no minority making up more than 2% of the population. The political system has increased the inclusiveness of minorities, reserving two Senate seats for indigenous people (Political Constitution, art. 171) and two Chamber seats for communities of blacks. There are also extensive programs for securing property titles for indigenous and black communities. Even though these ethnically defined groups continue to lag behind the rest of the population in most development indicators, they are not overrepresented in armed groups.

[4] During the *La Violencia* period that we will refer to below, the confrontation was between the two traditional parties. In recent history, the most significant episode of political violence was the systematic assassination of members of *Unión Patriótica,* a leftist party connected to the FARC (the main guerrilla group), created during peace negotiations in the early eighties. It is estimated that more than 800 of its members, including two presidential candidates, were assassinated. During the eighties and nineties other demobilised guerrilla groups were also subject to violence. Labour unions have as well suffered continuously from political violence.

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people per year are killed in combat (Singer and Small 1982). By this measure Colombia has long had sufficient violence for its conflict to qualify as a civil war. Still, some (e.g., Posada 2001) have argued that the Colombian conflict today is not in a strict sense a civil war, as the country is not split along supporters of the main warring factions. Indeed the vast majority of the population supports Colombian institutions generally and the armed forces and the police in particular, and shows almost complete opposition to the guerrillas and the paramilitaries (Gallup Poll 2003). Many would argue as well that the conflict is fought against an extremist minority fuelled by narcotics money, kidnapping, extortion and expropriation that particularly victimises civilians, mainly in isolated and poor areas of the countryside and is, therefore, not a civil war.

Other authors see the current civil strife as emanating from a single continuous conflict since the independence of the country from Spain (Fischer 2000, Eisenstadt and García 1995) and several commentators see it as one of the world's longest running civil conflicts, starting in 1946 during the so-called period of *La Violencia* (see references provided by Posada 2001). However, there have been various periods in the conflict, including some long ones of relative peace.

Apart from the *La Violencia* period (1946–66) in which the country was split along the lines of the Liberal and Conservative parties, fighting has been mostly between several guerrilla groups and government forces with the more recent participation of paramilitary forces also fighting against the guerrillas. The origin of the guerrilla groups can be traced back to leftist peasant self-defence organisations aligned with the Liberal party, even before *La Violencia*. The Liberals and Conservatives started to negotiate an end to *La Violencia* beginning with the formation of a government of "consensual" dictatorship (1953–57) during which most guerrilla groups were dismantled. This led to a substantial reduction in conflict activities, although the pacification process continued into the 1960s. Military rule ended with an agreement between the Liberal and Conservative parties to alternate in power, the so-called *Frente Nacional,* which lasted until 1974. This pact required that only one of the two leading parties would run candidates in the presidential elections and that they would share equally in government positions. Of course, this arrangement restricted democracy and increased political exclusion. On the other hand, elections were conducted regularly and contested by outside candidates.[5]

[5] Some of the elections were remarkably competitive. For example, in 1970 the military dictator Gustavo Rojas ran for president outside the framework of the *Frente Nacional* and lost to the Conservative candidate Misael Pastrana by a few thousand votes. Some of Rojas' followers did not accept the result and created the M-19 guerrilla movement, which argued that the political system was exclusive, undemocratic and elite-dominated, and needed to be fought with armed struggle.

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During the *Frente Nacional* and until 1989, the Colombian conflict was essentially a Cold War proxy fight, with some partisan guerrillas transforming themselves into established guerrilla groups, most of them associated with various communist factions. Soviet bloc countries supported guerrilla groups with arms, ammunition, military training and sometimes money. On the government side, the US influenced the conflict through the development and dissemination of its "National Security Doctrine" of counterinsurgency, mostly via the *Escuela de las Americas*.

There are two significant guerrilla groups currently active in Colombia. The Armed Revolutionary Forces of Colombia (FARC, in its Spanish acronym) was founded in 1964 after the government ordered an attack on one of the partisan self-defence agrarian movements that had originated in *La Violencia*. Today the FARC is estimated to have between 16,000 and 20,000 combatants, making it the largest guerrilla group in the world. The second largest guerrilla group in Colombia is the National Liberation Army (ELN), which was founded in 1965 with support from the Cuban government. The ELN faced a profound crisis during the eighties but was reborn, thanks mainly to extortion targeted at multinational companies trading in natural resources. The ELN is thought to have from 4,000 to 6,000 combatants. These guerrilla groups are largely rural and follow typical guerrilla tactics in a protracted conflict, attacking mainly fixed government positions and public infrastructure. On several occasions the FARC and ELN entered into peace talks with the government, most recently during a three and a half year period under the Andrés Pastrana government (1998–2002) leading to the demilitarisation of a large zone in the south of the country known as the zone of *Despeje*.

The paramilitary groups are for the most part gathered under the umbrella alliance United Self-Defence groups of Colombia (AUC), which was formally created in 1997, although paramilitary groups and self-defence organisations can be traced back to the end of the seventies (Pizarro 2003). In the late eighties and the beginning of the nineties these groups acquired notoriety due to strong links with the narcotraffic cartels. 1994 marked a turning point for the paramilitaries because that was when they first began localised operations against guerrilla groups (more on this below). Within a few years the paramilitaries became a major factor in the conflict. In 2003 the AUC started demobilisation talks with the government, leading to an initial decommissioning act at the end of that year.

Government forces include the military (army, navy, and air force), the National Police and other small security corps like the security service (DAS). The National Police is in charge of internal security and normal policing duties. The former function corresponds to what is known in military and security terms as "paramilitary" operations in which forces, usually armed with automatic weapons, conduct internal security operations, without large numbers of

04/11/2004 09:09 09-21-2 Restrepo.doc

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operatives and without the use of artillery, restricting themselves to urban areas. These actors must be distinguished from what we call "paramilitary" groups in our data set as the latter neither belong to the institutional apparatus nor are under command and control of the state.

There is much speculation on the quantity and sources of funding for the guerrillas and paramilitaries. Kidnapping, extortion and the appropriation of rents derived from narcotics crops play a large role with the approximate shares being uncertain. Looting of local budgets seems to be another source of guerrilla funding that is important in townships that are able to tax local natural resource rents.

The conflict has ebbed and flowed over the years. The guerrillas made very little military progress from 1962–1980 (Pizarro 1996). Indeed, guerrilla activity in those years was so low that during the sixties Colombia's homicide rate conformed to the Latin-American average.[6] By the data set-inclusion standard of Singer and Small (1982) and Marshall and Gurr, (2003) of more than a thousand battle-related deaths per annum, the Colombian conflict might have disappeared during those years.

Just before the end of the Cold War the conflict intensified, coinciding with several political and economic events. First, there was the emergence of strong narcotraffic cartels and the criminality associated with them. Second, the peace process of the Belisario Betancur government (1982–86) failed. Third, the FARC formed a political wing, the *Unión Patriótica*, but virtually all its members were systematically exterminated. Fourth, associated with narcotraffic, paramilitary groups became stronger. Finally, the guerrillas suffered a drastic reduction of support from the Soviet bloc. The escalation of guerrilla activity despite a decrease in outside patronage was probably enabled by stocks of weapons unused during the long truces of the Betancur government as well as new money accumulated from a sharp increase in kidnapping and extortion targeted on multinational enterprises during this period.

Our raw data source allows us to pick up the story in 1988; two years after the reintensification of the conflict began. Several successful peace processes led a number of guerrilla groups to abandon armed fighting and create political movements.[7] Nevertheless, the intensity of the conflict remained roughly

[6] The World Health Organization estimates that for the year 2000 the murders per 100,000 inhabitants in countries of low and middle income of the Americas was 27.5, which is similar to the observed rate from 1963 to 1980 in Colombia, whereas Colombia's murder rate in recent years has been between 60 and 80 per 100,000 inhabitants. Some of the latest murder rates available for Latin American countries (WHO, 2002) are (year in parenthesis): Brazil, 27.7 (1995), Chile 9.0 (1994), Mexico 19.8 (1997) and 23.2 for Venezuela (1994).

[7] The successful processes involved the M-19 (1990), and a series of smaller groups called Quintín Lame (1991), EPL (1991), CRS-ELN (1994) and the PRT (1991).

04/11/2004 09:09 09-21-2 Restrepo.doc

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constant until 1994 when it began to accelerate continuously up through to the present. Although there is significant continuity of actors in the conflict going back to the 1950s, in terms of both intensity and qualitative characteristics the last 15 years can be considered as a valid unit of analysis. Our dataset includes the hottest period of war while allowing a significant degree of historical perspective.

3. The data set

There are few detailed databases of internal conflicts available. Data gathering during a civil strife is highly complicated and even life-threatening. Armed groups issue threats and generate fear, severely hampering the flow of information and many military and guerrilla actions are clandestine or illegal. Civil wars also take place disproportionately in poor countries and, in many cases, institutional deficiencies tied to underdevelopment and poverty hamper data gathering. In addition, data collection tends not to be a priority when a regime is under siege. Even in rich countries that experience civil conflicts, e.g., Ireland and Spain, few data are available.

Even when data sets on civil conflict exist they have serious failures. They tend to have low frequency, a short time span and the criteria for data inclusion are usually poor. The main problem is that the data sets are not designed to measure both specific actions and the intensity of a conflict, causing a lack of information on the real impact of particular events.[8] There could also be inclusion bias since the organisations gathering the data can be blamed for events depending on whether or not these events are included in the data or, given inclusion, blame may depend on classification. For example, a government army has strong incentives to classify as many as possible out of the people it kills as enemy combatants rather than civilians. Another inclusion problem derives from the way in which conflict data are often a sub sample of other data sets, for example health and criminal justice data, that were designed for different purposes. Thus, the paucity of case studies of civil wars and civil conflicts that are grounded in proper data is hardly surprising.

In the case of Colombia, existing data sets have the above and other problems. For example, the criminality DIJIN-Data set from the National Police includes information on guerrilla attacks. This data set has daily information, though only

[8] When we refer to the intensity of a conflict, we refer to an objective measure of the impact that each conflict event has. This distinction was introduced by Singer and Small (1982) in their seminal work on conflict data and wars. Usually intensity is measured by the number of casualties (killed and injured individuals) or by the size of the geographical area affected by hostilities.

04/11/2004 09:09 09-21-2 Restrepo.doc

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from 1993 when the conflict was well under way. More importantly, the data list events but without any intensity measure such as the number of people killed, as we have in our data set. The main basis for data inclusion is reports to police authorities or events known to police authorities in townships, excluding events that are not reported, particularly those that occur outside of institutional presence. Clashes between military forces, guerrillas and paramilitaries are not usually registered in this database because they do not involve the police. All police operations are registered but not all attacks by the guerrillas or paramilitaries are. Criminality data sets are available annually since 1960, but the formal classification is either that of health statistics or is criminological typology, making it difficult to isolate the effect of the armed conflict from various forms of organised crime, common crime and other types of violence. There are other data sets at the Colombian internal security agency (DAS) and at the Ministry of Defence, devised mainly for strategic purposes, but typically researchers are only allowed access to highly aggregated low-frequency subsets of them. Some NGO's such as *País Libre* and *Codhes* produce data sets, but they are limited to specialised aspects of the conflict (kidnapping and internal displacement, respectively).

We created our database using events listed in the periodicals *Justicia y Paz* and *Noche y Niebla* published quarterly by the Colombian NGO'S CINEP and the Comisión Intercongregacional de Justicia y Paz. These organisations joined forces in 1987 to provide detailed documentation of "political violence" in Colombia and to measure the impact of the conflict on the population. *Justicia y Paz* first appeared in the second quarter of 1988. In 1996 its data collection methodology was revised leading to a new conceptual and theoretical framework in which internationally accepted legal definitions of Human Rights and International Humanitarian Law (IHL) were added to the previous sociological categories as criteria for the data classification process. At that time *Justicia y Paz* was replaced by the new periodical *Noche y Niebla.*[9]

The publications present a detailed description of chronologically ordered violent events in Colombia. This description includes date of occurrence, geographical location (at the township or municipality level) and the group, or groups, deemed responsible for causing an event or intervening in the event if they do not cause it. There is also a description of the results of the action on individuals killed and injured and the group to which the victims are thought to belong which is either an armed group or civilians. Some events include other effects on individuals such as threats, kidnappings and detentions (legal or arbitrary). There are two primary sources for data gathering. The first is press articles

[9] Recent issues of the periodical are available to the public at www.nocheyniebla.org.

04/11/2004 09:09 09-21-2 Restrepo.doc

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from more than 20 daily newspapers of both national and regional coverage. The second is reports gathered directly by members of human rights NGO's and other organisations on the ground such as local public ombudsmen and, particularly, the clergy. Since the Catholic Church maintains coverage even in the most remote areas of the country we can be very confident of the coverage and accuracy of these data, although, of course, there is no way to guarantee that they have captured every single event. The data are intended to include all acts of "political violence", defined as those violent acts "… exerted as a means of political-social fighting aimed at maintaining, modifying, substituting or destroying a model of state or society or directed to the destruction or repression of a human group, organised or not, identified by social, political, occupation, ethnic, racial, religious, cultural or ideological traits." (*Noche y Niebla* 2003, our translation).

A large share of events included in the publications follows the methodological criterion of motivation behind a violent act. Another key criterion is that violent interactions be definable in terms of groups causing them.[10] This turns out to be consistent with the view of social conflict, as distinct from organised crime, espoused recently in the economic literature as conflict between organised socially defined groups (Esteban and Ray 1999). Therefore, strictly adopting these two criteria allows us to exclude from our sub sample violent events that are purely criminal in nature. It is this feature of our data set that makes it so valuable for civil war research. Of course, the boundary between political violence and criminal violence is often blurred and the two types of activity interact with each other.[11] Nevertheless, both the methodological definition and a detailed investigation of cases in the data set reveal that the research conforms well to intuitive concepts of political violence.

CINEP itself has produced interesting work with the use of these records.[12] Their main goal is to quantify the number and nature of human rights violations and violations to IHL. They also measure, although differently from us, the number of bellicose actions but with a shorter time horizon than in the present paper.

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[10] The World Health Organisation refers to "collective violence" as the instrumental use of violence by people who identify themselves as members of a group – whether this group is transitory or has a more permanent identity – against another group or set of individuals, in order to achieve political, economic or social objectives.

[11] In recent reports on civil wars both Marshall and Gurr (2003) and the World Bank (2003) stress the significance of organised criminal activities in financing violent conflicts in, amongst others, Afghanistan, Algeria, the Balkans, Colombia, Peru and Turkey. Gaitán (2001) discusses in detail the problems associated with the use of criminality data sets in an environment of changing legal statutes and a weak judiciary such as Colombia. See also Díaz et. al. (2003) that argues that for Colombia the conflict drives criminal activity.

[12] González et al (2003) presents a reading of the data that concentrates on the Human Rights dimension of the conflict.

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As bellicose actions can violate both IHL and human rights, there are large intersections between categories leading to overestimation of the impact of events in the raw data. However, we eliminate this problem in our data set.

In building our database, we included only those actions that, given the description found in the publication, we considered as bellicose by following the criteria of motivation and group action.[13] In this way, we concentrate on the "classical" side of the war; i.e., those violent episodes that are part of the Colombian internal conflict and not cases of ordinary crime, while solving the problem of over counting arising from having overlapping criteria for inclusion.[14] We also believe that this classification procedure is more objective than the criteria of the other categories included in the original publications, as it is based on a clear characterisation of "warfare actions" as defined by the Geneva Convention as bellicose actions.[15] It follows that there is a wide range of events including not only clashes but also incursions, shootings, attacks on military targets, ambushes, attacks on pipelines and energy and communication infrastructure, etc.

Our database records a set of characteristics for each event, including intensity as measured by the number of individuals killed, injured, detained and retained.[16] For each event we include general descriptors: date and location (township and department); whether or not there was a clash and, if so, the groups involved; whether or not there was an attack and, if so, the type of attack and the group(s) responsible; finally killings and injuries, the intensity measures.

When as part of a single action various bellicose events take place, we include these events in multiple ways. If, for example, during a guerrilla incursion to a township there is a shooting and an assault on a police station, we code both events with the corresponding description and intensity. We have two major descriptive categories for each event – clash or attack – and, as one might expect,

[13] This means that we included most, but not all, of the events that are classified in *Noche y Niebla* as bellicose actions and occasionally there are others that we consider bellicose according to our criteria that are not classified in this way by *Noche y Niebla*.

[14] In any case, we expect the "non-classical" side of the conflict, i.e., that involving threats and terror, to be strongly correlated with the variables we measure here. Bellicose actions are precisely those conflict events that can be measured most accurately with very low underreporting.

[15] Specifically this means "all the actions that have to do with *legitimate* matters of war in the sense that they have a well defined military aim". Some of these actions are *legitimate* in the sense of the Geneva Convention, but not all of them are. We do not pursue here this distinction.

[16] The difference between detained and retained rests on the fact that detained individuals are in the hands of government officials, either with fulfilment of all legal requirements or not, and retentions are done by non-state armed actors. The last category includes kidnappings only when they are massive or result from warfare actions. We do not register kidnappings of individuals as such not only because it is an activity high on the list of actions for both armed groups and organised crime in Colombia but also because there is substantial underreporting of kidnappings. Note that for the rest of the paper we work only with killings and injuries as intensity measures.

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these categories are closely related. We define a clash as a direct encounter between two or more groups of armed individuals that results in armed combat. We define an attack as a violent event in which there is no direct, armed combat between two groups. Still, on many occasions a clash is preceded or followed by an attack. This distinction is vital for internal conflicts due to the preponderance of non-clash situations over clashes. We can observe a clash without an attack, for example a direct confrontation between paramilitary forces and a guerrilla group without a previous attack on a guerrilla camp; an attack without a clash, for example the destruction of a bridge; and we can register an attack followed by a clash, e.g., if a shooting in a town precipitates a military reaction leading to a clash. In these cases we would have coded the events respectively as a clash, an attack and a clash with an attack.

We followed a stringent quality control regime in cleaning the data that proceeded in four stages, covering both event inclusion and the coding of events. First, we randomly sampled a large number of events and checked against the CINEP source that they were properly included and coded. Second, we did another big random sample of events, looked up these events in press archives and again verified our inclusion and coding. This was a test both of the transfer of information from the CINEP source to our database and of the quality of the CINEP information itself, which turned out to be extremely high. Third, we found all the big events in the dataset and carefully investigated each one in the press record. Finally, we compared lists of significant events from other sources with our data, such as Human Rights Watch and Colombian government reports.

Finally, it is important to mention a couple of methodological definitions used by CINEP and *Justicia y Paz* in their coding. Responsibility is attributed to the active group executing an action, even if other armed groups suffer casualties. Also, on many occasions there are different types of actions associated with one event (e.g., ambush and attack on the military, minefield and ambush, etc.). In these cases the type of event presented is the one that offers the "greatest descriptive richness" (CINEP 2002).

Our database has several desirable characteristics. We have daily data. Since groups not directly involved in the conflict collect the data, the above-mentioned biases are kept to a minimum. We account for all armed group actions. Data gathering is designed from the beginning to measure the impact of the conflict, i.e., the data set is not derived from data collected for other purposes such as measuring health or criminality. Of course, it is not a complete set of all conflict-related actions by all participating groups. An internal conflict is fought by multiple means, violent and non-violent, and much important activity is difficult to measure, such as the results of a particular propaganda campaign. Even violent actions are often clandestine and many actions, such as threats or

04/11/2004 09:09 09-21-2 Restrepo.doc

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kidnappings, are poorly reported. Other methods besides force and the threat of force play a large role in the dynamics of a conflict. Yet our data allow us to perform a real in-depth analysis of the pure conflict activities of armed parties in an internal conflict. As such, it represents a substantial improvement over the previously available data, not only for the Colombian case, but also for civil conflict in general.

4. Looking at the data

4.1 *The dynamics of the conflict*

We begin with basic activity and intensity levels. Figure 1 (see Appendix) shows the time series of the number of clashes and attacks, a measure of intensity (killings plus injuries) and the homicide rate all per 100,000 inhabitants.[17] The number of clashes and attacks has increased continuously since 1998, reversing a slow decline starting in 1992. The intensity measure reverses itself earlier (in 1995) and rises much faster than the other series. Clearly the conflict has become more active and deadly. It is clear that the intensity and events measures are quite poorly tied to the homicide rate. Therefore, studies of the conflict that rely on the homicide rate as intensity measures are likely to be rather misleading. As a result, we can already see good potential for new insights into the conflict based on our data.

Guerrilla wars are frequently referred to as "low intensity conflicts" and the designation fits the Colombian case well. During the 15 years of our data set, we can attribute 47,420 casualties directly to the conflict. This is an average of 3,161 casualties per year, including about 2,127 killings. Some figures are useful for comparative purposes. The number of American personnel killed during World War II was 291,557 while 33,651 were killed in the Korean War and 47,378 in Vietnam (US Department of Defence Records, 2001). The conflict in Sri Lanka has produced around 2,000 conflict-related deaths per year over the last 19 years while that in Nepal had around 1,000 deaths per year since 1997. The total number of homicides in Colombia, which must include most if not all of our registered killings, reached a peak of 28,837 in 2002 after falling in 1998 to 23,095 from its previous peak of 28,280 in 1991.

The average ratio of killed to injured individuals over the period, a measure of the degree of lethality of conflict events, was 2.05. This ratio declined almost continuously until 1999 when it jumped to 2.55, eventually reverting to its long-run

[17] Recall that a clash is a direct confrontation between two armed groups with fire exchanged while attacks are unopposed events.

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average in 2002. The average number of casualties per action over the entire period is only 2.5. There were about 108 actions per month for a total of 19,380 actions.

Guerrilla wars typically do not have large battles. Nevertheless, the increase in the lethality of conflict activities in Colombia can be explained by an important change in the pattern of activities in the conflict beginning in 1998 when attacks began to clearly surpass clashes as the main type of event in the conflict (Figure 1), despite both growing rapidly. An associated phenomenon is the faster increase of killings relative to injuries during this period shown in Figure 2 (see Appendix). Attacks are primarily perpetrated by the guerrillas and the paramilitaries, accounting for much of the killing in the data.

The conflict literature stresses another key characteristic of internal conflicts: the asymmetry of fighting technologies across contestants. Guerrilla forces concentrate on attacks and avoid clashes while the military and other government forces fight almost exclusively in clashes (Figures 3 and 4).[18] This pattern of activity allows the guerrilla groups to create advantages for themselves and to economise in the development of operations against their opponents. In this respect the paramilitaries resemble the guerrillas. Note also the sharp increase in attacks by both of these illegal armed groups beginning in 1996 (Figure 3, see Appendix).

In Figure 4 (see Appendix) note the wedge in the number of clashes between the guerrillas and the government that appeared around 1997 and is filled by the paramilitaries. This phenomenon is part of what we call the "paramilitarisation" of the conflict (Chernick 1998 and 2001), described later in section 4.3, a feature of various internal conflicts.[19] The paramilitary forces also seem to follow the old Marxist dictum of combining all forms of struggle, performing a significant number of attacks. This has imposed some costs on the guerrillas who have taken part in more than 4,125 clashes since 1995 while the government forces have only had to participate in 3,798 fighting events.

We distinguish between three main stages of the conflict (Figure 1). These stages are most apparent in the intensity series but present in the attacks and clashes series as well. We call 1988–1991 the "adjustment period", in which the guerrillas and the government were responding both to tightening financial constraints due to the end of the Cold War and to the failure of peace processes. During this period there was a slow increase in both actions and intensity, with a

[18] Many of the attacks (around 60%) involving the government were aerial bombardments or hostage rescue operations. The former has recently been the government's main source of strategic superiority against the guerrillas.

[19] Just to name a few, the conflicts of Aceh-Indonesia, West Timor, Kosovo, Bosnia, Guatemala, and Mexico (Chiapas) have all spawned strong paramilitary groups.

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marked peak in 1991 corresponding to the introduction of a new political constitution. The FARC did not participate in the relevant negotiations, elections or the constitutional assembly and initiated violence as part of its rejectionism. This period also contained the first noticeable activity for the paramilitaries (Figure 7), probably associated with the narcotic mafias rather than anti-insurgent operations. During the second period of 1992–1995, what we call the "stagnation period", both the intensity of the conflict and the frequency of attacks and clashes decreased almost continuously (Figure 1). Finally, from 1996 to the present, the "upsurge period", there were strong increases in intensity and in activities, the latter driven by an increase in attacks and clashes.

4.2 *Victimisation*

Here we present the pattern of victimisation by group resulting from bellicose events. We add up the number of casualties of every group, including civilians, for those actions in which a particular group took part actively.[20] This means that for Figures 5 through 7 some information in each figure will reappear in the other two as, for example, a FARC guerrilla casualty in a clash with the National Police will appear as a guerrilla casualty in those clashes in which the guerrillas took part and as a guerrilla casualty in those clashes in which the government forces took part. Still, each of the three figures accurately represents what we intend it to do.

We start with victimisation in bellicose events in which guerrillas were actively involved. Note that the guerrillas are unique in that they are the only group that inflicts significant casualties on all the other armed groups as well as on civilians. Figure 5 (see Appendix) shows the number of people of various types killed or injured in events in which the guerrillas were active participants. We observe two clear periods. During the "adjustment" and "stagnation" periods, the guerrillas concentrated on fighting government forces causing a relatively low and stable level of civilian casualties. During the "upsurge" period the guerrillas began to kill or injure a large and increasing number of civilians. Guerrilla casualties to paramilitaries also increased sharply while their victimisation of government forces increased only a little on average, though with large fluctuations. Interestingly, the numbers of casualties of the government and of the guerrillas parallel each other rather well except for 1996–99, despite the fact that they have completely different fighting technologies.

[20] We will use various phrases about belligerent groups such as that they "were actively involved", "participated in" or "took part in" an event synonymously. None of these phrases is meant to imply that that party initiated or caused an event although this might have been the case.

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Guerrilla gains against the government starting in 1996 are reversed beginning in 1999. The high level of government casualties of 1997–1998 reflects several well-planned attacks against isolated military outposts. However, from 1998 the government substantially improved its use of air firepower and became better able to defend itself. Paramilitary casualties hardly existed until just before the "upsurge" period, confirming the view that before this period they were more involved in drug trafficking than in anti-insurgent warfare. From 1997 onwards the paramilitaries consolidated as a national organisation (the AUC), enabling them to organise large offensives against guerrilla forces, leading to a big increase in anti-guerrilla operations. The rise of paramilitary casualties during the "upsurge" paralleled the trend of civilian casualties suffered in guerrilla-involved events while the guerrillas themselves where also suffering increasing losses. The rise in civilian casualties was probably connected to the fierce rivalry between the paramilitaries and guerrillas, with both groups targeting civilian "infrastructure" thought to be supporting the other group (Spencer 2001). Thus, in their own defence both groups would claim that people classified as dead civilians in our data set were, at least in part, military assets of the other side.

Figure 6 (see Appendix) shows the victimisation classification for bellicose events in which government forces were actively involved.[21] Note that government casualties appear much lower in this picture than they did in the previous one, reflecting the relative importance of attacks over clashes for the guerrillas. When the government is an active force it has the lead, and in most cases these events are clashes, inflicting larger losses on the guerrillas than the guerrillas inflict on the government forces. This fact contrasts with the relatively similar number of losses of guerrilla forces and government forces in guerrilla operations that we noted above, suggesting that the government should maintain an offensive posture to the extent possible. We also observe again the effect of guerrilla operations against isolated military and police bases during 1997–98. Government involvement in civilian casualties in our data set occurs mostly for aerial bombardments of guerrilla columns, kidnapping rescue operations and judicially sanctioned search operations. The nature of these operations indicates that the government probably did not initiate them with intent to harm civilians. A further indication that these casualties could be described as "collateral damage" is the fact that approximately 65% of them are injuries rather than killings. The figure indicates that civilian casualties peak in 1999 with continuous improvement thereafter. Figure 8 (see Appendix) displays an improvement in government human rights performance and we will return to this issue. Finally,

[21] The reader might expect that figures 5 and 6 would be identical. But recall that this is essentially a three-sided conflict. In particular, figure 5 includes events between paramilitaries and guerrillas with no government active involvement that are not included in figure 6.

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it is important to observe that the paramilitaries barely register as a target of government forces, at least until the very end of the sample period.[22]

Figure 7 (see Appendix) shows the victimisation classification for events in which paramilitary forces were actively involved. Large-scale paramilitary activity is a relatively new phenomenon in the conflict, although the paramilitaries did kill significant numbers of civilians before the "upsurge" period of the conflict. After a few years of decline paramilitary activity began to increase in 1994–95, coinciding with a short-lived government policy that encouraged the creation of local "self-defence" groups. By 1998 the paramilitary threat to civilians became dire, shortly after the already mentioned consolidation around that year, which was announced publicly in December 1997. At about the same time suddenly there were many paramilitary casualties. It was not until 1999 that the paramilitaries began to kill many guerrillas. In fact, guerrilla casualties have almost always been lower than the paramilitaries' own casualties. This suggests that the paramilitaries are rather ineffective in clashes.

As mentioned above the AUC views its killings of civilians as "anti-infrastructure" activity (Aranguren 2001). Patterns in our data support this characterisation. First, the ratio of civilians killed to injured in operations involving paramilitaries is at least quadruple the corresponding ratio for government operations, pointing to the intentional killing of unarmed individuals. Another indication we glean from inspection of the database is that most paramilitary killings of civilians were in zones actively contested with guerrilla forces, often in "selective" massacres in which the paramilitaries enter a village with a list of alleged guerrilla supporters and attempt to kill everyone on the list.[23] They have concentrated on this strategy despite the distractions of clashes with the guerrillas and suffering several major setbacks at the end of the period (e.g., footnote 22).

4.3 *Victimisation of civilians*

The number of civilians killed or injured out of clashes by the different armed groups is a good proxy for the level of atrocities committed during the course of

[22] It seems that typically when there is an encounter of paramilitary and government forces the former rapidly surrender to avoid fighting, leading to the detention of many paramilitaries in Colombian jails. The peak of government involvement in paramilitary casualties was in 2002 due to a particular aerial bombardment against a paramilitary position being attacked by guerrillas. This was a major setback for the AUC.

[23] A massacre is defined as the simultaneous killing of four or more individuals unable to defend themselves.

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the war, as these are identified as non-combatant individuals that have "protected" status under IHL. Moreover, when there is no clash there can only be one armed group involved in an incident so it is easy to attribute blame. In a clash attribution can be very difficult. For example, in cases where guerrillas enter a village and kill civilians drawing a government response and a clash, these killings will nevertheless turn up in Figure 6 as government-related. Thus, out-of-clash casualties are a useful measure of human rights violations.

As Figure 8 shows, the number of civilians killed has increased dramatically during the whole of the "upsurge" period. For both paramilitary and guerrilla belligerents the increase was very sharp. During the "adjustment" and "stagnation" periods the paramilitaries closely followed by the guerrillas inflicted the most civilian victimisation. During the "upsurge" the paramilitaries inflicted the majority of civilian casualties out of clash, except for the last year of the sample.[24] For the guerrillas, inspection of the data shows that it was not only attacks against civilians suspected of paramilitary or military links that caused the increased number of casualties, but also attacks against villages that were trying to maintain neutrality during the conflict in order to instil fear and create "allegiance". The increased guerrilla killing of civilians is also related to their use of landmines and gas-canister projectiles, weapons that are extremely inaccurate and unstable, especially since the guerrillas build these weapons themselves without special expertise.

The pattern of civilian casualties generated during government attacks is more complex. It decreases and remains very low, except for 1991–92, until 1998 when the government weakly followed the general trend of more civilian casualties, but then the pattern reverses in 2000.[25] This timing is relevant because late 1998 marks the beginning of "Plan Colombia", the American aid program that made Colombia the third largest recipient in the world of American aid. Plan Colombia contains elaborate human rights conditions. Even though these

[24] At the end of 2002 paramilitary forces declared a unilateral truce and entered into negotiations with the new government of President Alvaro Uribe, leading to a reduction in the intensity of their operations toward the end of that year.

[25] The majority of cases correspond to civilian victims of military or police operations in which there were also dead or injured members of armed groups or to bombardments over areas in which there were previous conflict events. In 2002 antisubversive urban operations increased the number of civilian victims of government actions. Several large massacres occurred during 2000-2001 by paramilitary groups with which officials of the Colombian military were accused of collusion. Our data set shows those events both in the series of the paramilitaries and that of the government, and hence we can safely say that we are not underestimating the number of civilians killed out of clashes during government operations. Those cases that were included correspond to cases in which Colombian courts (both military and criminal ones) have indicted army officers for failing to prevent the massacres despite having the means to do so. Still, in most cases there has been no definitive verdict from the courts.

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can and have been waived by American presidents, the Colombian government unquestionably feels pressure for good human rights performance. Figure 6 suggests that this pressure might be working and Figure 8 supports this view as well (and footnote 25). When one considers that during Plan Colombia the government substantially increased the number of casualties it inflicted on the guerrillas, Plan Colombia starts to look very successful.[26] However, to the extent that the growth in guerrilla and paramilitary atrocities can somehow be tied to Plan Colombia, this aid program appears less positive. In fact, Restrepo and Spagat (2003) and Mandler and Spagat (2003) have both, in different ways argued for such linkages.

4.4 *The dynamics of the Guerrilla groups*

The FARC causes most guerrilla actions (Figure 9, see Appendix). However, before 1995 the ELN was as active as the FARC. There was an impressive degree of co-ordination of joint actions at that time. There was even a designation for those strictly joint operations that were carried out by both groups until 1993: the CGSB.[27] Starting in 1996 this co-ordination almost disappeared as the FARC consolidated its tremendous expansion that began in 1995. The ELN hardly grew during this period, although it did briefly increase its activity in 2000 when peace talks collapsed. Still the ELN is far from being a spent force. Most of the other groups correspond either to guerrilla actions that are not attributable to any one group or to minor guerrilla groups, some of which have disappeared after peace processes.

4.5 *Paramilitarisation of the war*[28]

One of the most common phenomena in civil wars is that they spawn paramilitary activities. There is a need for local long-term security operations and interested parties tend to organise paramilitary corps to provide this security. Not all

[26] At the beginning Plan Colombia was restricted to anti-drug activities but considering the involvement of the combatant groups in the narcotics trade the distinction between anti-drug and anti-insurgent activity is blurred. Moreover, the scope of activity allowed under Plan Colombia has steadily broadened.

[27] The *Coordinadora Guerrillera Simón Bolívar* (CGSB), launched in 1991, was an effort of several guerrilla groups, including the FARC and the ELN, to operate jointly against government forces. In August 2003 the FARC and ELN recommitted themselves to co-ordinate their forces against the government and paramilitary groups.

[28] Chernick (2001) provides this felicitous phrase.

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civil conflicts generate paramilitaries, but most do. There are different degrees of control or collusion between government forces and paramilitaries, depending on factors such as the degree of institutional failure in the society, the type of political system and the willingness of the society and foreign patrons to tolerate atrocities (Mandler and Spagat 2003).

In Colombia paramilitarisation of the war started around 1997 (Chernick 1998 and 2001). The degree of separation is large: paramilitary forces are completely independent of government forces, both in operational and institutional terms. Nevertheless, there undoubtedly are and have been links between the Colombian military and the paramilitaries. These links do not reflect the policies of the governments and do not dictate the overall strategy of either group. Attempts by the government to integrate and control recently created paramilitary groups were aborted in 1995 and today this possibility is anathema to public opinion, which shows little tolerance for atrocities. In fact, after public outrage at several large massacres of civilians in guerrilla dominated areas by the paramilitaries around 2000, the latter group publicly committed itself not to massacre or kill large numbers of individuals and to increase their "selectiveness". The degree of institutional development is precarious in many regions of Colombia in which there is violent conflict and the extent of government military operations is constrained by a lack of material resources and difficulties of geography. Inspection of the data suggests that paramilitary activities tend to be located in zones of concentrated land tenure, previous guerrilla activities and presence of coca crops, although we have not yet attempted to demonstrate this statistically.

Even more interesting is how the paramilitaries seem to fill a gap in antisubversive operations involving a large number of atrocities, i.e., they fight with a dirtier technology than does the government. Thus, under Plan Colombia government forces have been able to improve their human rights performance while the anti-insurgent side of the war as a whole (government forces plus paramilitaries) has still been able to maintain inherently dirty anti-infrastructure activities. The US has used Plan Colombia to apply pressure on the Colombian military to improve its human rights performance, a goal that finds much support in the Colombian population itself. At the same time Plan Colombia provides technology, such as night and thermal vision equipment and training programmes for government troops and military judges intended to help improve the cleanliness of government operations. Recall that Figures 6 and 8 indicate definite improvement in these areas. However, a possible dark side of this success is that it might have actually encouraged the paramilitaries to step into a void and increase their dirty activities.

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4.6 *Illegal rents and internal conflict*

The connection between the financial viability of warring parties and the existence of a conflict has been stressed at least since the seminal work of Haavelmo (1954) on predation. Recently, the World Bank has concentrated on showing the importance of viability factors in determining the course of modern civil wars (World Bank 2003). In cross-country studies Collier and Hoeffler (1998 and 2001) have found a link between predation of natural resource rents and civil conflicts, although these effects are not large.

Here we simply provide a graphical illustration for Colombia using the value of narcotraffic revenues as calculated by Rocha (2001) and the activity and intensity measures from our data set (Figure 10, see Appendix).[29] We find a very high correlation between the value of narcotics revenues and conflict activities, giving credence to the notion that finances are driving the conflict. Nevertheless, this link falters beginning in 1997 when the war heats up just as drug revenue is decreasing. This is about two years after the Colombian government really began to fight an anti-drug war seriously, scoring a big success by breaking up the large cartels. This result took the larger rents associated with the transport and distribution stages of the business out of the hands of Colombian-based organisations, weakening these structures, and creating an opportunity for armed organisations to prey on a larger scale off the small parts of the drug business close to production that were left behind. So plausibly the dismantling of the large narcotics cartels provided an opening for both the guerrillas and the paramilitaries to increase their appropriations, especially at the first stages in the chain of production.[30] Thus, victory over the cartels might actually have fuelled the conflict.[31] Neither the paramilitaries nor the guerrillas have the necessary skills to rebuild full cartel structures and in the few cases when they have tried to do so enforcement efforts have been successful. However, the above discussion suggests that progress against narcotraffic should not automatically be equated with progress against the guerrillas.

As noted above drug money is just one income source for the guerrillas and

[29] The Rocha (2001) figures are not the potential retail value of the crops. Rather, they are the potential wholesale value of the estimated production.

[30] Even when the drug cartels were strong the guerrillas profited from the early initial stages of the production of cocaine and opium, namely the cultivation of coca and poppy plants and the production of the coca paste and opium resin. Both activities tend to occur in areas under control of an armed actor or contested by several such actors and these groups have long taken a cut or a "tax" of the value of production.

[31] Another possible complementary mechanism for this phenomenon is that peasants whose crops have been destroyed in an eradication operation might see joining an armed groups as their best survival option.

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paramilitaries, kidnapping being an important second source. In fact, Colombia has the highest kidnapping rate in the world. Figure 10 shows a rapid rise in kidnappings between 1996 and 2000 during the upsurge in the conflict.[32] This suggests another possible unintended consequence of the drug war in the form of a substitution of kidnapping revenues to replace drug money. Moreover, this substitution effect might also apply to other revenue sources such as extortion, predation of local government budgets and rents derived from land expropriation and protection rackets, on which reliable information is not available.

5. Conclusions

We have only just begun to analyse our data set. Yet it is already yielding interesting information and hypotheses. We are intrigued by the suggested links between developments in the drug business and the conduct of the civil conflict, including the possibility of some unintended consequences of the drug war. We are also interested in the effects of Plan Colombia, particularly the improved human rights performance of the government in the midst of a general and severe deterioration of the overall human rights environment. In theoretical work, Restrepo and Spagat (2003) and Mandler and Spagat (2003) have focused on this phenomenon and in the future we will be using our data to study these models further. We are also interested in the complex relationship between criminal activities and conflict actions and in the dynamic analysis of the high-frequency data.

There remains much more potential in the data. For example, so far we have barely exploited its geographical dimensions. We expect this aspect will allow us to analyse a variety of questions such as possible co-ordination between the paramilitaries and government forces, links between the conflict and the narcotics trade, and possible connections between economic inequality and conflict where both vary by region. Eventually, we should be able to provide a rich empirical description of the Colombian conflict and hopefully some new ideas on how it might be resolved.

Finally, we are convinced that the methodology for collecting civil conflict data that we apply to the Colombian case can be used and improved in order to build data bases for other civil conflicts. We hope soon to embark on the building of databases for at least another country. This will allow us to contrast the findings of the Colombian case and further test our findings.

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[32] The kidnapping series was provided by the National Police (Policía Nacional, *Revista Criminalidad*)

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Appendix

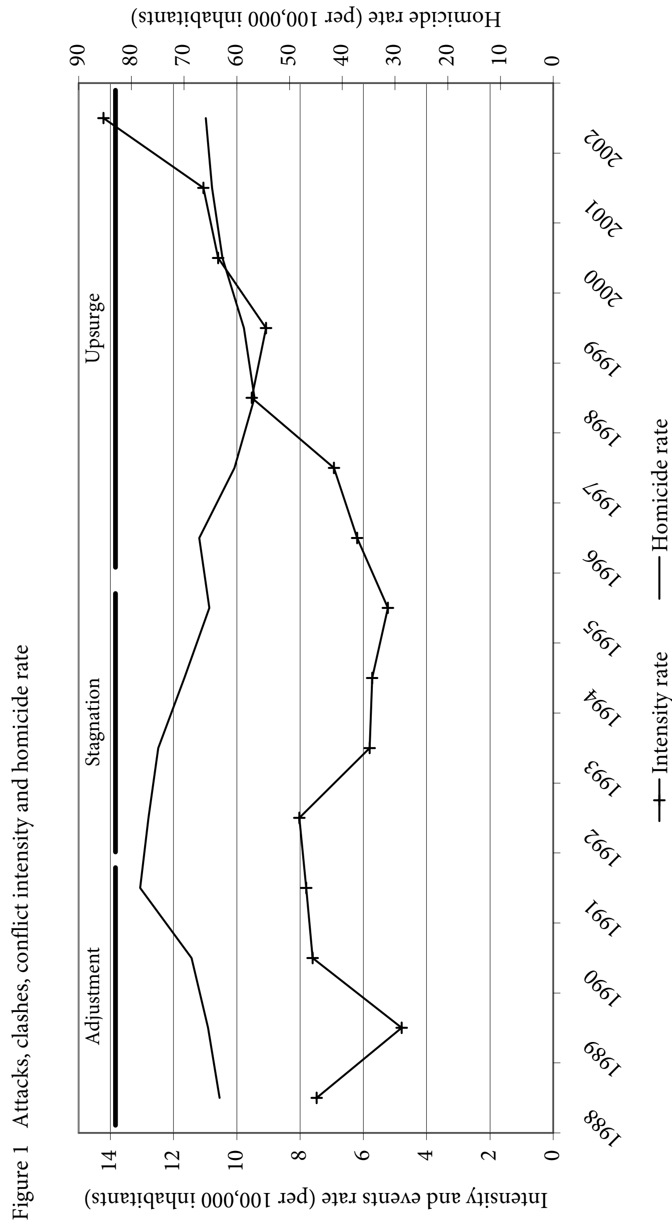

Figure 1 Attacks, clashes, conflict intensity and homicide rate

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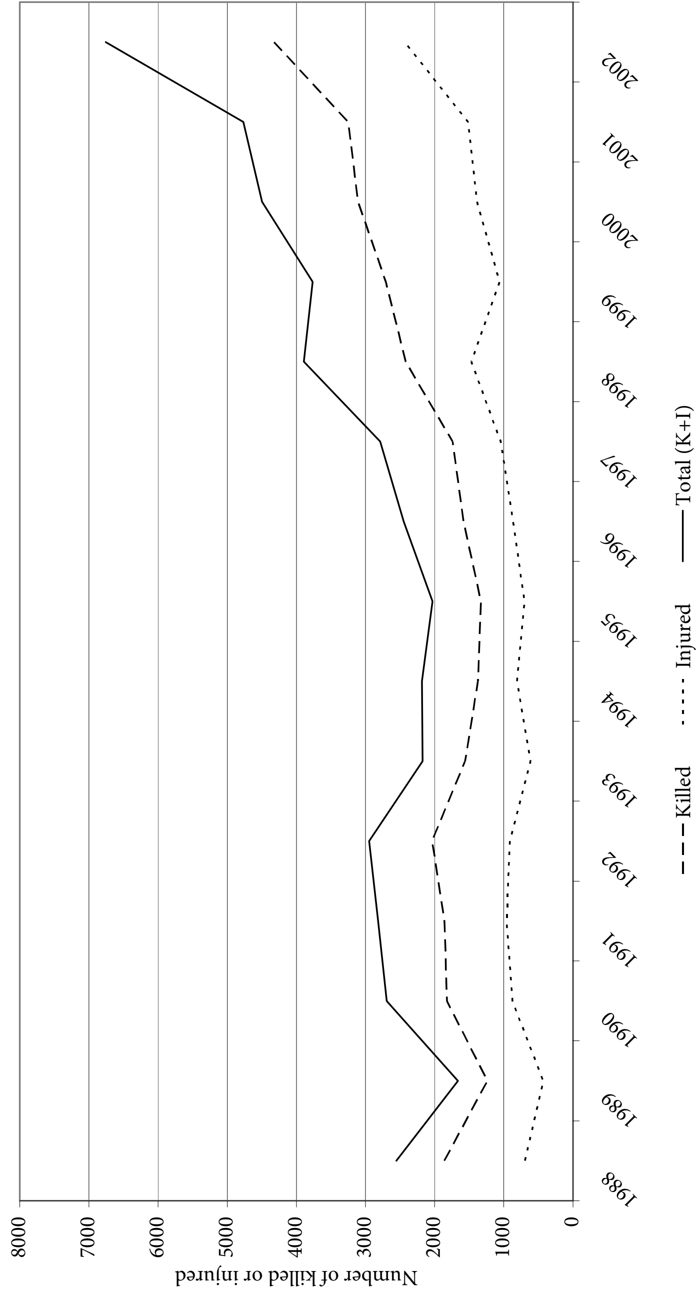

Figure 2 Intensity as killed and injured

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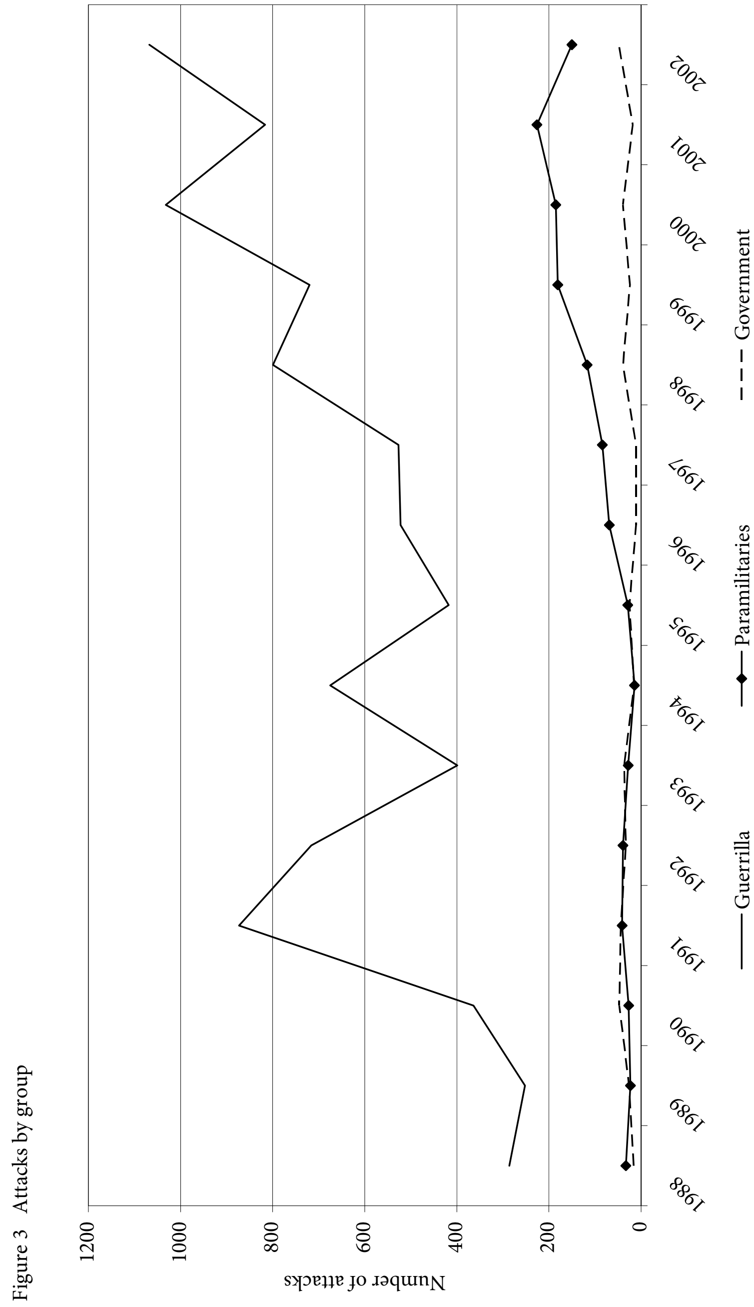

Figure 3 Attacks by group

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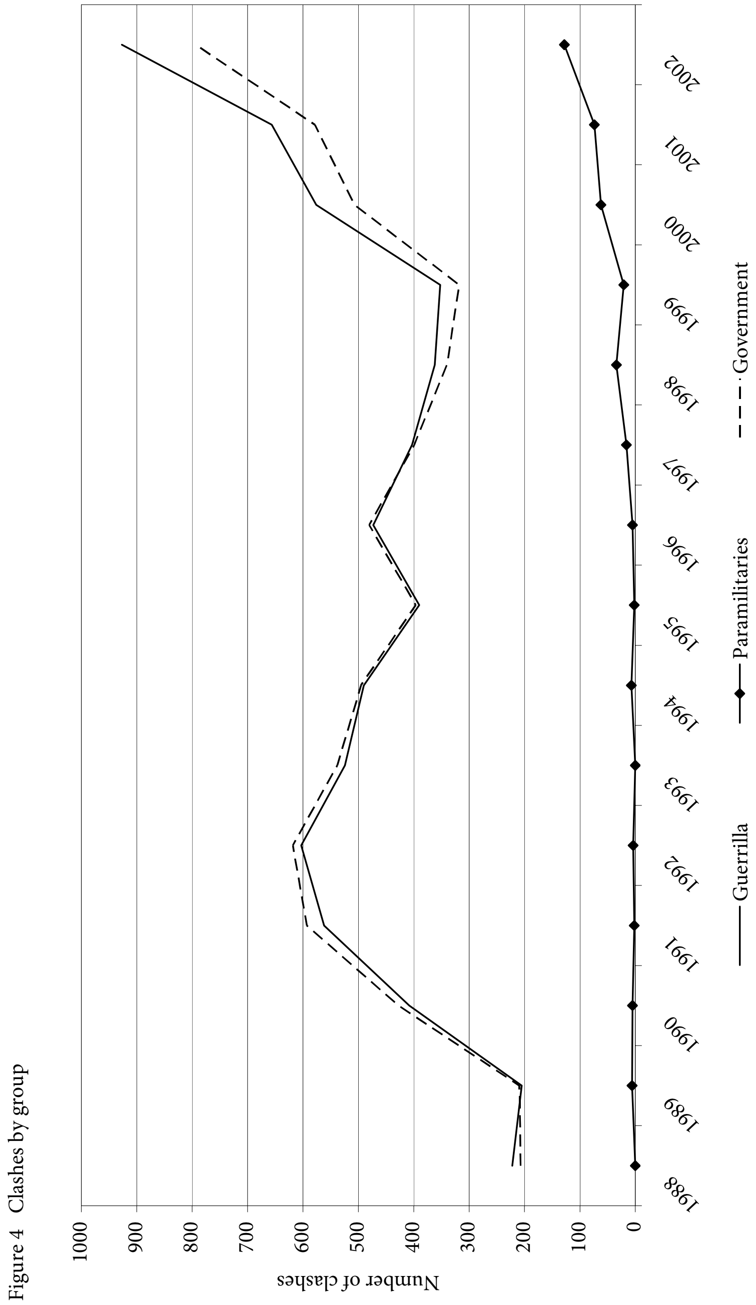

Figure 4 Clashes by group

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Figure 5 Guerrilla-related casualties

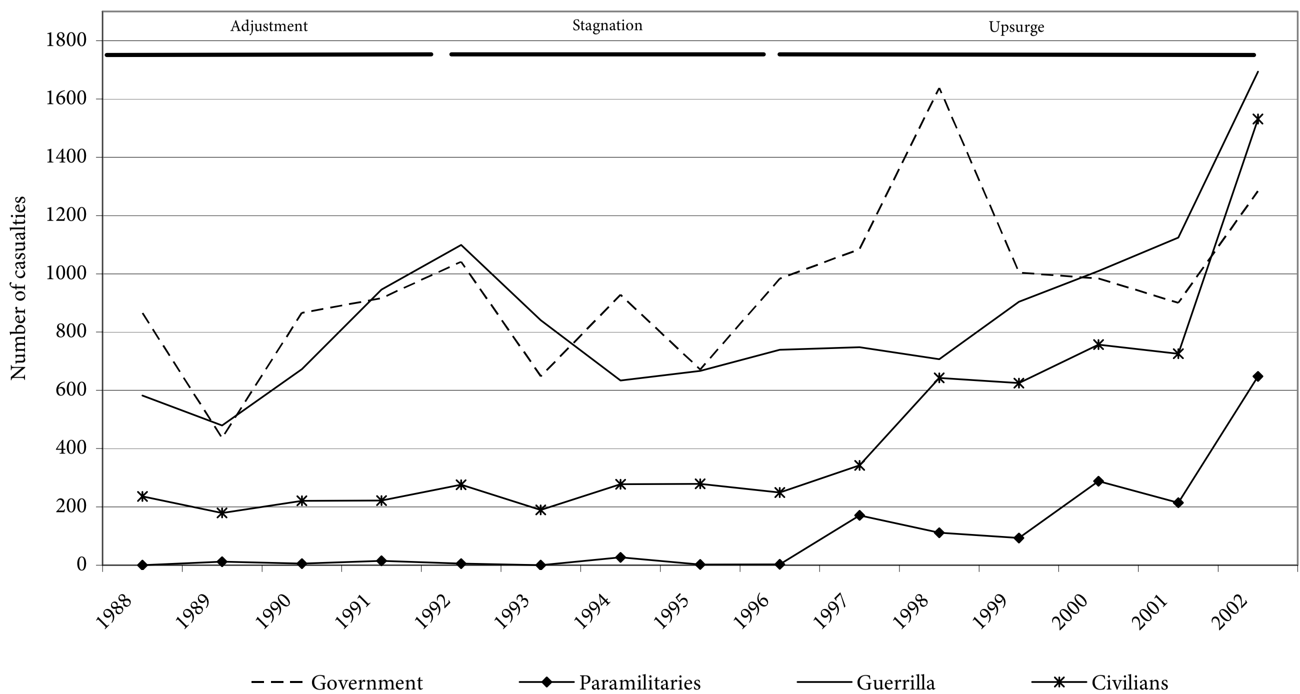

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Figure 6 Government-related casualties

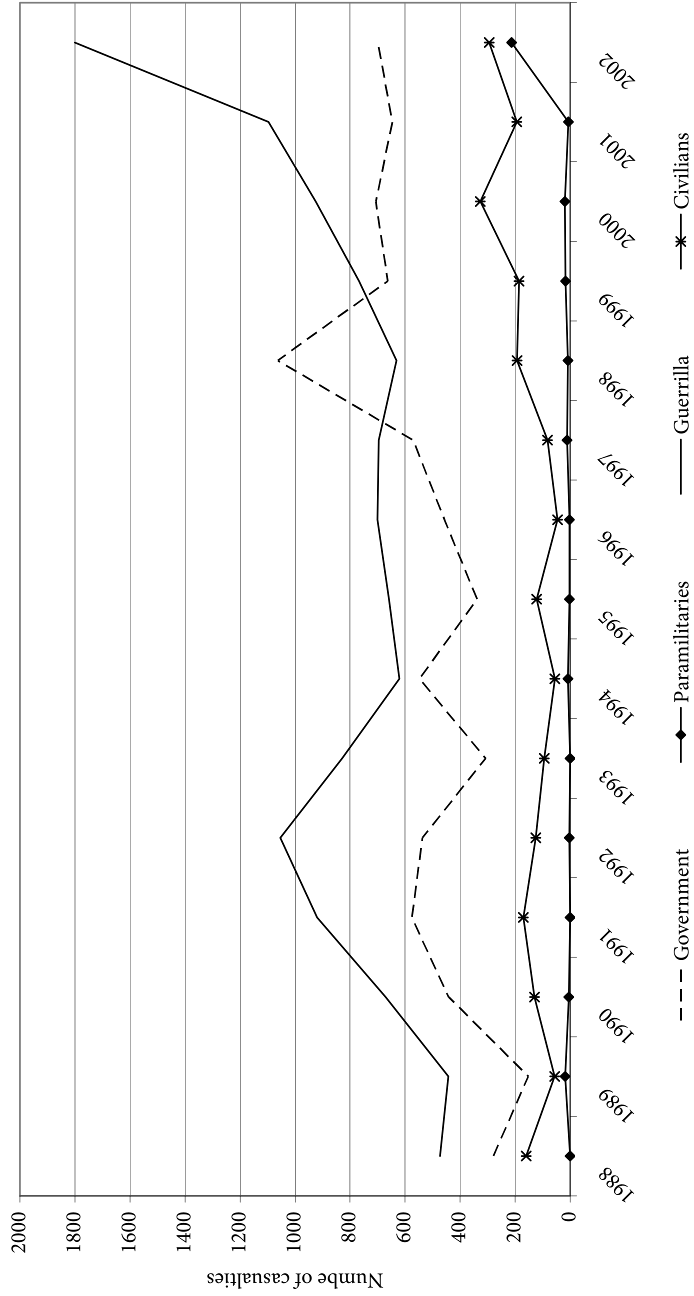

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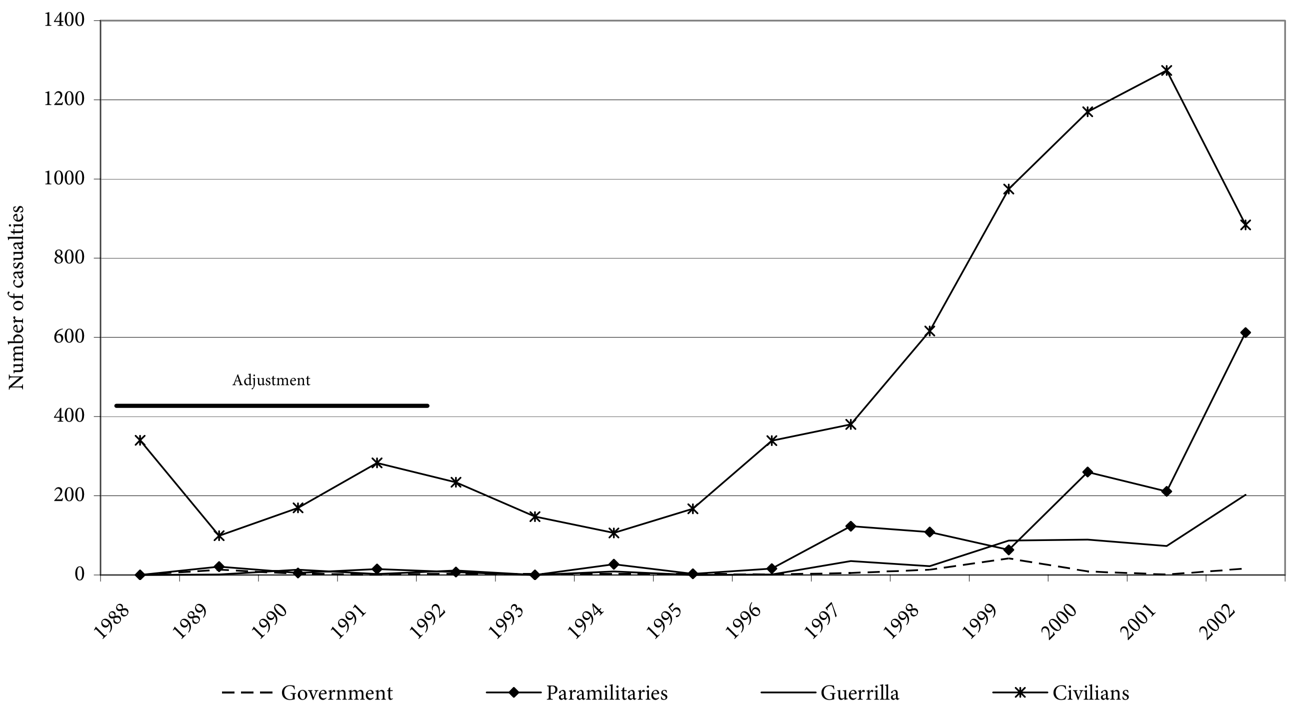
Figure 7 Paramilitary related clashes



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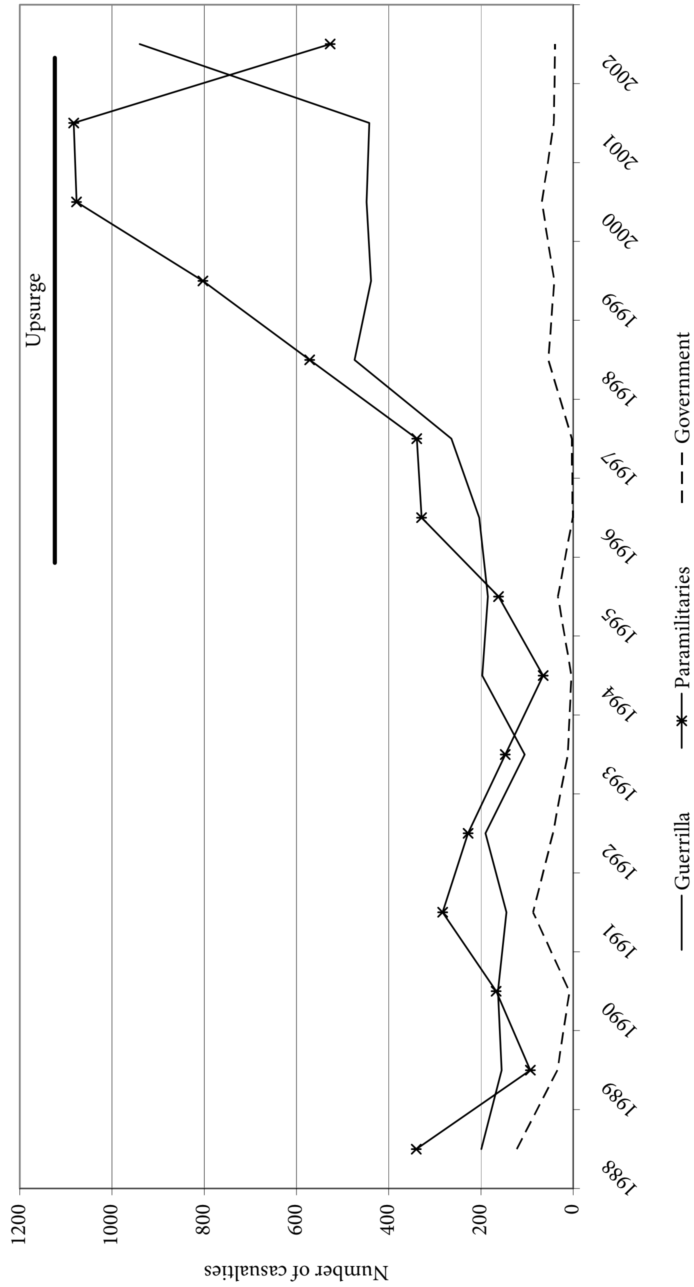

Figure 8 Civilian victimisation by group, out of clashes

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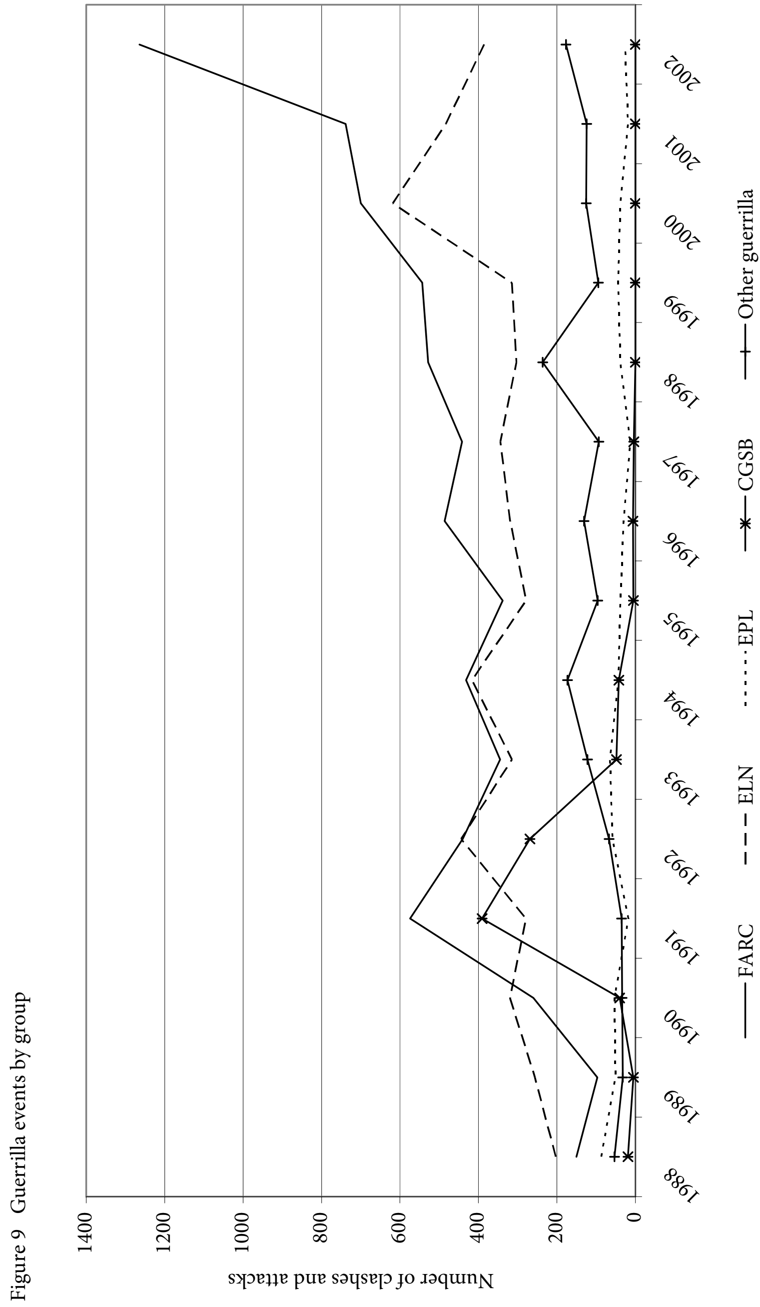
Figure 9 Guerrilla events by group



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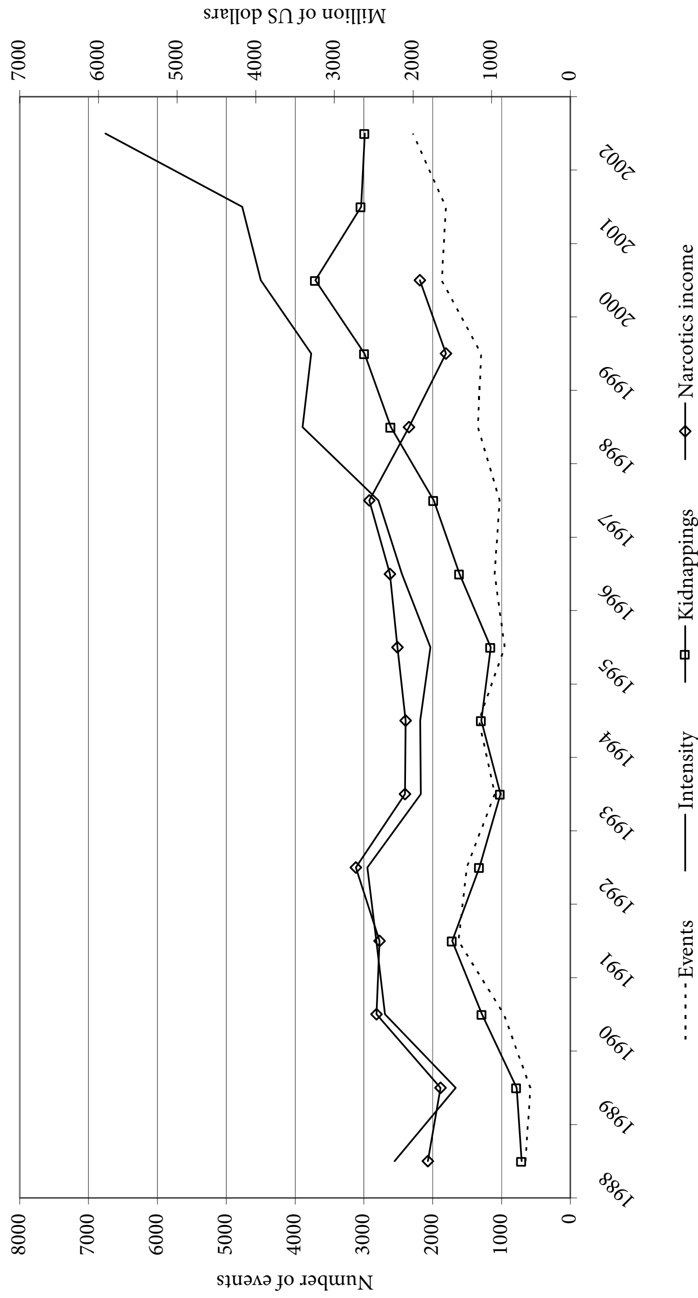

Figure 10 Events, intensity, kidnappings and value of narcotics production

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