Civilian Casualties in the Colombian Conflict: A New Approach to Human Security[1]

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Abstract

We develop a new, quantitative approach to the analysis of human security during armed conflict and apply this methodology to the Colombian conflict, 1988-2003. We consider 21 different attack types (unopposed events) plus clashes between pairs of armed groups. For each event type we determine the number of civilian killings and injuries (casualties), the armed group(s) involved and the population density of the municipalities where these events occur. We also study the dynamics of civilian casualties for the various combinations of event-and-armed-group types. We argue that policy must focus on three very specific circumstances for civilian casualties in the Colombian conflict: massacres by illegal right-wing paramilitaries in rural areas, massacres by left-wing guerrillas in rural areas, and guerrilla bombings, particularly causing injuries, in both the biggest urban areas and rural areas. These events account for almost 40% of all conflict casualties in attacks with known authors. Thus, improving rural security is Colombia's central human security issue with urban terrorism becoming an important problem.

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[1] We base our analysis on a database which we built with the significant contribution of Juan Fernando Vargas who also provided comments to an early draft of the paper that was prepared for the workshop "Techniques of Violence in Civil Wars" organised by the Centre for the Study of Civil Wars at PRIO, Oslo. We thank the conference participants, especially Mauricio Rubio, for their comments. We also wish to express our gratitude to Cristina Restrepo for superb research assistance. The Economics Department at Royal Holloway and the College itself provided funding for this research. Restrepo acknowledges financial support from Banco de la República. Responsibility for any errors remains our own.

1. Introduction

The fate of civilians caught in the middle of civil conflict is a burning humanitarian concern. Any assessment of the costs of conflict must place special emphasis on civilian casualties. Moreover, the strategies adopted by national and international institutions to address conflict situations can have enormous implications for human welfare. For example, aggressive pursuit of insurgents may maximize the chance of bring a conflict to a swift conclusion but might also leave civilians highly exposed. Civilian casualties are also central to the battle for legitimacy between different sides in any conflict, suggesting the possibility that short-run gains obtained from imperfect targeting of rebels groups could backfire if they produce significant setbacks in the battle for the "hearts and minds" of a civilian population. Thus, the issue of civilians and conflict must be at the core of our thinking about conflict. In the present paper we focus squarely on this question, studying violence against civilians in the Colombian conflict.

The Colombian conflict is a complicated and devastating affair. Government forces face two left-wing guerrilla groups called the Revolutionary Armed Forces of Colombia (FARC) and the National Liberation Army (ELN).[2] Illegal right-wing paramilitaries tied together under the umbrella known as the United Self-defence Forces of Colombia (AUC) also combat the guerrillas.[3] Guerrilla and paramilitary coffers have swollen in recent years from diverse income sources that include drugs, kidnapping and extortion, taking the conflict to new intensity levels. Tens of thousands of people have been killed, injured or kidnapped and hundreds of thousands have been displaced due to the conflict. There has been massive property damage and large-scale theft of property, notably land.

[2] There are at least three other guerrilla groups, the EPL, PRT and JBC, some of them splinter factions of former demobilised groups. But they are so small that we will ignore them in this paper.
[3] We will generally use the terminology "illegal paramilitaries" or, for short, "paramilitaries" rather than AUC since the latter is a rather loose, and not entirely comprehensive, collection of groups.

Commission on Human Security (2003) launched an ambitious new initiative aimed at reorienting security discussions toward the wellbeing of individuals rather than states. The concept of Human Security has generated much discussion and controversy.[4] For example, Paris (2004) argues that Human Security lacks definitional focus, limiting its usefulness in rigorous academic analysis. Indeed, the Human Security concept has been endowed with many wildly varying definitions. Some are narrow, focusing on the human cost of armed conflict (Hubert, 2004), while others are expansive, including, e.g., environmental, health and economic threats (Axworthy, 2004). One goal of the present paper is to steer discussion away from definitional controversy and toward practical analysis. We use precise quantitative methods to study the killing and injuring of civilians in the Colombian conflict. By illuminating the critical threats against civilians in Colombia, including where, when and by whom they are harmed, we contribute to policy development for reducing these dangers. In addition, we offer this investigation as a model methodology for analysing conflict through the lens of human welfare. This approach can be applied to many conflicts in the future and we propose that it should become a central technique in Human Security studies

Of course, the human impact of the Colombian conflict extends well beyond civilian killings and injuries. In this paper we do not address combatant casualties, forced internal displacement, kidnapping, property appropriation, rape, threats and other forms of violence.[5] Nor do we quantify violations to human rights or international humanitarian law. However, we do think they are important and hope to attend to them in future work.

This paper has a number of specific and unusual features. First, we study not only civilian killings but injuries as well. This extension yields rich reward as we find that killings and injuries are generated through completely different means. Killings are caused primarily

[4] See the special section on Human Security of *Security Dialogue* (2004) for a wide-ranging discussion of the concept of human security. Most of the articles support the Human Security concept in one or another variant but there are critical views as well.

[5] Forced displacement and kidnapping are well treated by themselves in Ibañez (2004) and Rubio (2004).

by illegal right-wing paramilitaries and secondarily by left-wing guerrillas. These killings mainly take the form of massacres in isolated rural areas. Injuries, on the other hand, are caused overwhelmingly by the guerrillas, and mainly come from bombings that occur primarily in the biggest cities and secondarily in isolated, rural areas. Thus, we find that Colombia's human security issues largely consist of a big rural security problem plus an urban terrorism problem.

A second special feature of our analysis is that we work with highly detailed information on specific techniques of violence. In previous work we have employed an aggregate category of "attacks" to cover all single-authored violent events implemented without effective resistance. However, in this paper we disaggregate attacks into twenty-one sub-categories, considerably enhancing the richness and depth of our analysis. We establish not only the numbers of civilians killed and injured annually in conflict events organized by the armed group(s) involved, but also the types of events in which these casualties occur. We believe that the depth of detail on threats to human security that we provide in this paper is a unique form of analysis.

Our Colombia work is based on our database described in Restrepo, Spagat and Vargas (2004a) and, less extensively, in section 3 below. Restrepo et al. (2004a) presents the basic contours of the data including the pattern over time of the number of attacks, clashes, and casualties (i.e., killings and injuries) arranged by group, the victimisation profile and various other aspects of the conflict. It also divides the conflict since 1988 into three periods characterized by distinct levels and dynamics of conflict intensity. Restrepo and Spagat (2004a) extend the data through the end of 2003 and show that there was a dramatic structural break for the better in the conflict toward the end of 2002 arguably associated, amongst other factors, with the new government of Alvaro Uribe. Restrepo, Spagat and Vargas (2004b) compares the treatment of Colombia in large cross-country conflict datasets with our own

information, finding a general tendency for the big datasets to underestimate the magnitude of the Colombian conflict and to mischaracterize its dynamics.

We now briefly describe our main results, starting with five basic findings. First, civilian casualties began a steep ascent in 1997-98 that was strongly reversed in 2002-03, with the exact dating of these changes depending on whether the focus is on killings or injuries. Second, most direct killings in the Colombian conflict are of combatants rather than civilians. Third, most civilian casualties occur not during clashes between armed groups, in which civilian casualties are often unintended, but during attacks, i.e., one-sided events perpetrated by a single armed group, which are often specifically directed against civilians. This finding further motivates our focus on the disaggregation of attacks by type. It also means that in most of the analysis below we are able to clearly attribute blame for the killing and injury of civilians. In clashes, which always have at least two sides, responsibility for civilian casualties is often ambiguous. But in attacks, which always have a single author, blame is straightforward. A fourth important finding is that Colombia's non-state armed groups cause the overwhelming majority of civilian casualties. More specifically, the paramilitaries have been the main killers and the guerrillas the main injurers of civilians. Fifth, the ELN over the years has been less dangerous to civilians than has the FARC.

The breakdown of attacks by type and perpetrator reveals fundamentally different natures for the guerrillas and the illegal paramilitaries. The paramilitaries do very little other than massacring civilians, although they have significantly reduced these actions during the last two years.[6] The paramilitaries' ratio of killings to injuries is very high, leading to two related conclusions. First, their killing is overwhelming intentional rather than the "collateral damage" of actions aimed at other goals. Second, the killing is at close range so that they are almost always able to accomplish their goal. Indeed, these characteristics are virtually

[6] The illegal paramilitary groups claim that most of their victims are guerrilla supporters and, consequently, legitimate targets. However, in our methodology most of these victims are defined as civilians since they do not actively participate in the hostilities, do not wear insignia or uniforms and are not armed

necessitated by our definition of massacre which requires intentional killing of at least four defenceless people.

The guerrillas kill and, especially, injure many civilians but most of their actions amount to economic sabotage and/or challenges to government authority. The four most frequent types of guerrilla attacks are check points and/or road blockages, attacks on infrastructure, attacks on means of transport and bombings.[7] Most guerrilla-caused injuries come in bombings. The two main locations for these bombings are Colombia's least densely populated municipalities and its biggest cities. An important dynamic has been toward the use of increasingly dangerous explosives, with especially severe implications for civilian injuries. Another interesting finding is the rather large number of civilians killed in guerrilla road blockages.

Almost two thirds of all killings of civilians in the conflict occur within the context of massacres. These are usually paramilitary massacres but guerrilla massacres are common as well. Therefore, from a human security viewpoint the most burning Colombian issue is how to reduce the massacre toll. We are able to shed some significant light on this question, finding that most occur in the country's least densely populated municipalities. Thus, the improvement of rural security is of supreme importance for Colombia.

There has been some interesting recent literature on civil war and civilian deaths. Kalyvas (1999 & 2004) provides extensive discussion on the logic of violence against civilians in civil wars that we utilize below. Kalyvas' effectively dispels the widespread notion that most violence against civilians is simply senseless and irrational. To the contrary, armed groups often target their violence well with the aim of deterring civilians from supporting the opposing side in war. Such targeting is at the heart of the strategy of

[7] Henceforth to save space we will write simply "road blockages" rather than the cumbersome "road blockages and/or checkpoints".

Colombia's paramilitaries as explained by Carlos Castaño, the leader of paramilitaries during their most active period, 1997-2002:

> "Since we could not combat [the guerrillas] where they were, we chose to neutralize the people who brought to their camps food, medicine, messages, liquor, prostitutes, and these types of things. And we realized that we could isolate them and that this strategy would give us very good results. Incredible." (quoted in Kirk, 2003, p. 152)

The targeting of civilian government or paramilitary supporters cannot be a large part of guerrilla activity as massacres account for only 2% of all guerrilla attacks. Bombings, which are generally more random and indiscriminate than massacres, are the guerrillas' primary highly violent activity.[8] However, this lack of full discrimination is unproblematic for the guerrillas pursuing a tactic of generating fear and economic and political disruption.

Azam and Hoeffler (2001) also view violence against civilians as a strategically calculated choice. They develop a model in which, under certain conditions, a government will terrorize civilians in areas where rebels enjoy civilian support with the objective of displacing these civilians to prepare the ground for an effective challenge to the rebels in these areas. The authors find some empirical support for their scenario in African data. However, our data clearly show that the Colombian government does not employ this tactic, although it is quite plausible that the illegal paramilitaries do. We do not pursue this hypothesis below but may do so in the future after incorporating forced displacement information into our dataset.

Ghobarah, Huth and Russett (2003 & 2004) employ WHO health data on a cross-section of civil-war-afflicted countries and statistical methods to argue that the indirect effects of war, working through disease and disability are very large and long-lasting and

[8] Of course, bombings often contain some degree of targeting. For example, the bombing of the El Nogal health club in 2002 was directly aimed at the Colombian elite, although the specific individuals harmed in the event formed a fairly random selection from that elite.

disproportionately affect women and children. We will, nevertheless, focus exclusively on the direct consequences of the Colombian conflict and not attempt to apply the observations of Ghobarah et al. (2003 & 2004) in this paper.

Humphreys and Weinstein (2004) study violence against civilians in civil war and find that the internal structure of armed groups explains much about their patterns of abuse. We do not delve inside the Colombia's armed groups, instead studying overall behavioural patterns.

The plan of the paper is as follows. In section 2 we argue for the importance of Colombia studies. Section 3 is a brief description of our database. In section 4 we use the database to isolate the main ways in which civilians are killed and injured. Section 5 delves in detail into these main threats. We draw some conclusions in section 6.

2. The Importance of Studying the Colombian Case

A deeper understanding of this long-running conflict will clearly be welcome in Colombia. Scholars, policymakers and other analysts also should take a close look at the Colombian conflict for a variety of reasons. First, it spills over Colombia's borders particularly through the narcotics business and the flow of refugees and immigrants. Second, the outside world exerts strong influences on the Colombian violence and cannot in good conscience ignore these effects that work primarily through two channels: the culture of illegal drug consumption in the West that keeps Colombia's non-state armed groups well supplied with cash and the military and economic assistance programs of the US and, to a lesser extent Europe, that are important for Colombia.

A third, and underappreciated, reason to study Colombia is that it is a particularly revealing case study for conflict researchers. For a country embroiled in a serious conflict, Colombia is quite wealthy. The country, therefore, has managed to develop a rather good

information base, including much statistical data, on the conflict. Moreover, Colombia has a vibrant intellectual and academic environment out of which have emerged many interesting insights into and analyses of the conflict.[9] There is even a special academic field in the country know as 'violentology', a highly useful consequence of Colombia's long and unfortunate history of conflict.[10] Thus, Colombia offers a unique, and possibly unparalleled, opportunity for conflict researchers to develop their field.

3. The Data

Our dataset contains events from the Colombian conflict, 1988-2003. Our main sources are the events listed in the quarterly publications of the Colombian non governmental organisation CINEP on human rights and political violence in the country. The CINEP reports have two primary foundations. First, CINEP has an extensive network of local sources, including members of religious communities, government officials, union leaders and other non governmental organisations members. CINEP researchers also digest virtually all printed media reports on political violence and human rights in Colombia.

We begin with CINEP's event list and proceed in several stages. First, we screen out events we judge to be not clearly related to the conflict. Many events in the CINEP reports involve pure criminal activity, including family violence, pursuit of personal vendettas or property crime. Some of these events may be linked to the conflict through some complex channels. But we endeavour to include only actions of clear and direct military significance. We log all the qualifying events into our system.

Next, we perform extensive quality checks on the data. This mainly involves investigating in the press record all of the large events plus a big random sample of all of the events to ensure that CINEP has properly treated them and that we have recorded them

[9] See the papers edited by Berquist et al (1992) and the recent papers by Bejarano y Pizarro (2004a and 2004b)
[10] Three key references for the study of contemporary violence in Colombia are the classic Guzmán, Fals Borda and Umaña (1980), Comisión de Estudios sobre la Violencia (1987) and Deas and Llorente (1999).

correctly in our database. We also search independently through a variety of sources, including newspapers and reports of human rights organizations, for events that CINEP might have missed, occasionally adding events on this basis. Finally, we continuously improve the data as we analyze it, systematically searching for possible problems whenever we find curious or interesting new results. A major focus of our current work is to collect data from a wide variety of other sources, including Human Rights Watch, Amnesty International, the Colombian government and even the FARC. This effort will enable further quality checking and augmentation of the database.

We believe the quality of the data is quite high. We have developed considerable confidence in the CINEP source through our quality control procedures. We are also quite certain that we have faithfully transferred the raw information into our database. Moreover, we have only added events or changed the rendering of events after extensive investigation so we are particularly sure of ourselves in these instances. Our data should be especially reliable on killings because killings receive much attention and dead bodies provide evidence. Nevertheless, the Colombian conflict, like any conflict, is complex so it is impossible to record everything that happens in it. For example, threats are part of the conflict but they are amorphous and tricky to measure so we have simply left them out of the dataset. We also suspect that our data underestimates the prevalence of some types of events such as mine explosions and oil pipeline attacks, since these are often not reported in the media and can be missed by CINEP's field network. In the short run we hope that our data faithfully reflects the right trends over time for these variables. In the long run we plan to improve the database by supplementing it with data from other sources and rating the quality of these sources.

Some of the main characteristics of the current version of the database are as follows. It is very large, including more than 21,000 single-day, self-contained events. It is geographically referenced down to the level of roughly 1,100 municipalities. It distinguishes

between more than 40 types of events, ranging from clashes between armed groups to massacres, road blockages and even the explosion of bombs that spew propaganda pamphlets. It records killings and injuries of both civilians and combatants, classified by group membership, as well as takings of combatants by both non-state armed groups and the government. It contains information on the type of weapons used in violent events, including firearms, explosives and mines. Finally, there is a rather long and high-frequency time dimension covering sixteen years.

In this paper we focus on two dimensions of the dataset: time and type of event. We first divide events into two main categories: clashes and attacks. Clashes are fights between two armed groups.[11] Attacks are one-sided, i.e., they are events carried out by a single armed group without effective resistance. Table 1 summarizes our attack typology. We have designed these categories to provide maximum explanatory power for the purpose of this paper, specifically to study violence against civilians in the Colombian conflict. Some of the attack types can be further disaggregated but we judge that doing so would obscure rather than enhance the analysis.

Table 1 is largely self-explanatory but we wish to clarify a few points. The dataset contains nearly 1800 compound events, i.e., events composed of two or three closely connected actions. Compound events are an interesting object of study but we do not pursue them in this paper. Rather, for each compound event we determine which action we consider to be the primary one and classify the event into that category. In other words, we collapse compound events into their main single components. A particular consequence of this procedure is to treat attacks leading to clashes as simple clashes.

[11] There are a tiny number of three-sided fights in the dataset which we will ignore in this paper.

Table 1 Typology of attacks

	Type of action	Description
1	Aerial bombardment	Aerial attack from an airplane or helicopter.
2	Ambush	Surprise attack by concealed people lying in wait.
3	Anti-kidnapping operation	Attempted rescue of kidnapped people or hostages.
4	Armed Robbery	Stealing or looting by an armed group.
5	Artillery attack	Shooting of artillery or other heavy fire from armed personnel carriers.
6	Attack of unknown type	Information is insufficient to determine the precise type of attack.
7	Attack on means of transport	Damaging cars, buses, trucks, trains, etc..
8	Bombing	Detonation of an explosive device not covered in categories 1, 12, 16 and 17.
9	Electoral interference	Disruption to electoral process such as an attack on a voting booth.
10	Harassment to fixed position	Minor action against a fixed structure or place, such as a police station, military base or town, without attempting to take the position.
11	Incursion	Entry of a non-state armed group into a town or village.
12	Infrastructure attack	Actions against energy transmission networks, pipelines, roads, railroads, etc.
13	Local police station attack	Assault on a local police post (CAI in Spanish).
14	Mass kidnapping	Simultaneous kidnapping of more than 4 people.
15	Massacre	Killing of more than three defenceless people with some selectiveness against either the people killed or the place where they are killed.
16	Mine explosion	Explosion of a land mine.
17	Registry and control	Government searching accessible areas not requiring judicial orders.
18	Propaganda explosion	Detonation of device that spreads propaganda pamphlets.
19	Raid	Judicially sanctioned searches.
20	Road blockage and/or check point	Search of vehicles and questioning of occupants and/or blocking of public road.
21	Taking of town or village	Entry into a town or village leading to at least temporary control.

Many actions, such as incursions or infrastructure attacks, include the use of explosives. Our category of "bombing" does not cover all of these explosions for two reasons. First, we have separated out certain types of explosions such as mine explosions, specified in the table, that we consider sufficiently interesting to merit their own categories.

Second, as discussed above, when bombings are a secondary feature of a larger event we do not classify the event as a bombing.

Note that attacks, by definition, have a single author which, in the overwhelming majority of cases is the government, the FARC, the ELN or the illegal paramilitaries. There are many claims of collusion between government forces and the illegal paramilitaries. For example, such allegations feature centrally in the annual reports of Human Rights Watch and Amnesty International.[12] The Colombian government concedes that such links do exist but that they are contrary to government policy which is to vigorously persecute them. The nature of government-paramilitary ties and the evolution over time of their strength and character is a very complex issue that we are currently pursuing through theoretical modelling (Mandler and Spagat, 2003) and the application of statistical methods to our dataset (Restrepo and Spagat, 2004b). But presently we lack sufficient reliable information on these ties to allow us to integrate them into the present analysis. We will, therefore, treat all attacks as pure single-authored events.

4. Analysis

4.1. The Aggregate Level

Figure 1 gives the annual time series for total civilian killings and injuries. There is a sharp rise in killings and injuries beginning in 1998 and 1997 respectively followed by equally dramatic turnarounds starting in 2002 and 2003 respectively. This "upsurge period" as we called it in Restrepo et al. (2004) overlaps closely with the period from the end of 1998 until January of 2002 when the government of Andres Pastrana had granted a demilitarised zone,

[12] In its 2004 Annual Report, Amnesty International argues that there are "…reports pointing to the ongoing consolidation of paramilitary forces in heavily militarized areas and indicating strong collusion between paramilitaries and the security forces." (Amnesty International, 2004). Human Rights Watch has written extensively about "persistent ties" between illegal paramilitary and security forces, see, for example Human Rights Watch (2001) and Human Rights Watch (2002).

the "despeje", to the FARC as a good-faith gesture during peace negotiations. The United States also increased its military assistance to Colombia substantially starting in 1999.

Figure 1 Total civilian killings and injuries

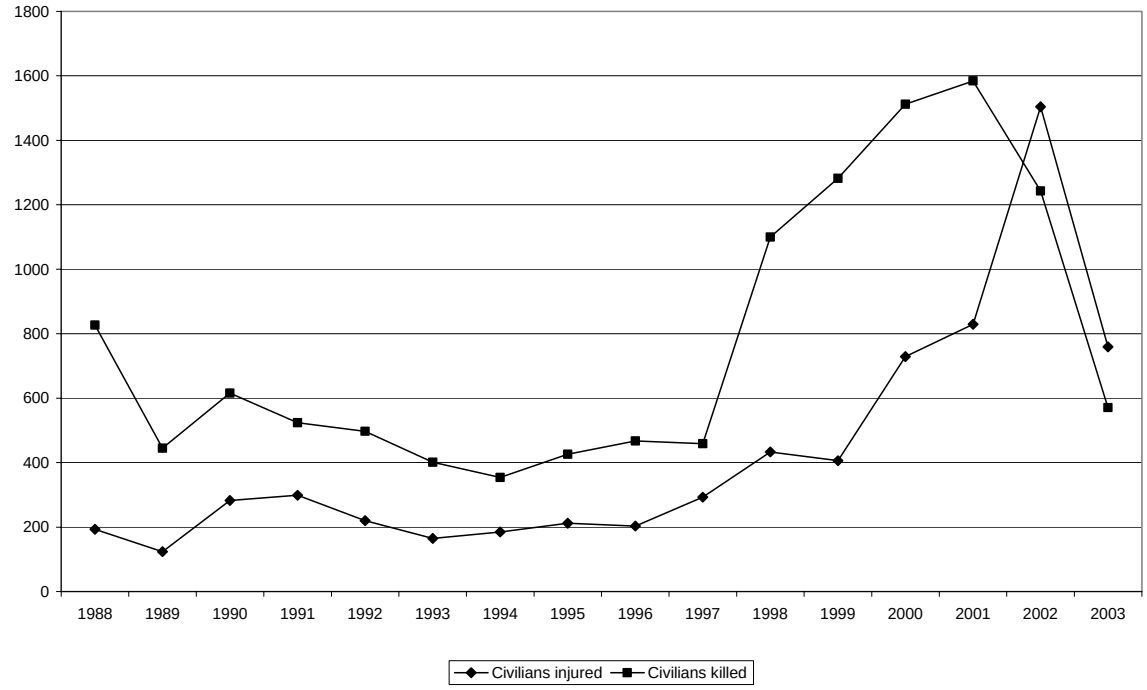
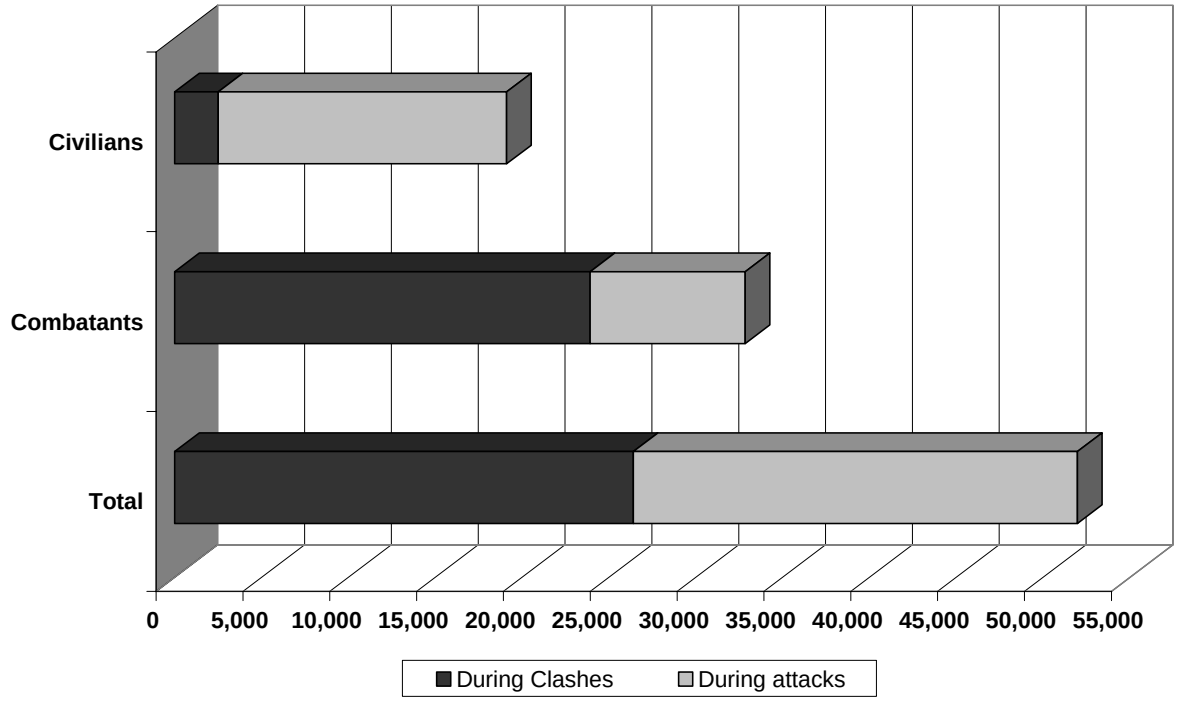


Figure 2 gives the number of casualties (killings plus injuries) in attacks and clashes respectively, organized by group, over the whole period 1988-2003. First, note that combatant casualties outnumber civilian casualties by almost two to one, contrary to the common claim that deaths in civil conflicts are overwhelmingly civilian.[13] This is similar to the finding of Hultman (2004, p. 13) which used data of the Uppsala Conflict Data Program for 2002-03 and found that in those years that battle-related deaths exceeded intentional killing of civilians by a factor of almost ten. Second, the figure shows that while there are many civilian casualties due to clashes, more than 85% of all civilian casualties occur during

[13] See, for example Poveledo (2004), International Herald Tribune, August 13, 2004

attacks. Therefore, we focus primarily on attacks in this paper although we return to clashes in section 4.10.

Figure 2 Casualties 1988-2003



4.2. Attacking profiles for the illegal armed groups

Figure 3 gives the breakdown of all guerrilla attacks by type aggregating over the whole time period, 1988-2003. It shows that the guerrillas engaged in a broad spectrum of activity, encompassing economic sabotage and challenges to government authority as well as intimidation of civilians. Figure 4 reveals a paramilitary portfolio of attacks that is considerably less diversified than the guerrillas', consisting mainly of the massacring of civilians. Restrepo and Spagat (2004c) explores these differences in much greater detail to illuminate the differing objectives of the various armed groups.

Figure 3 Portfolio of attacks by the guerrilla groups

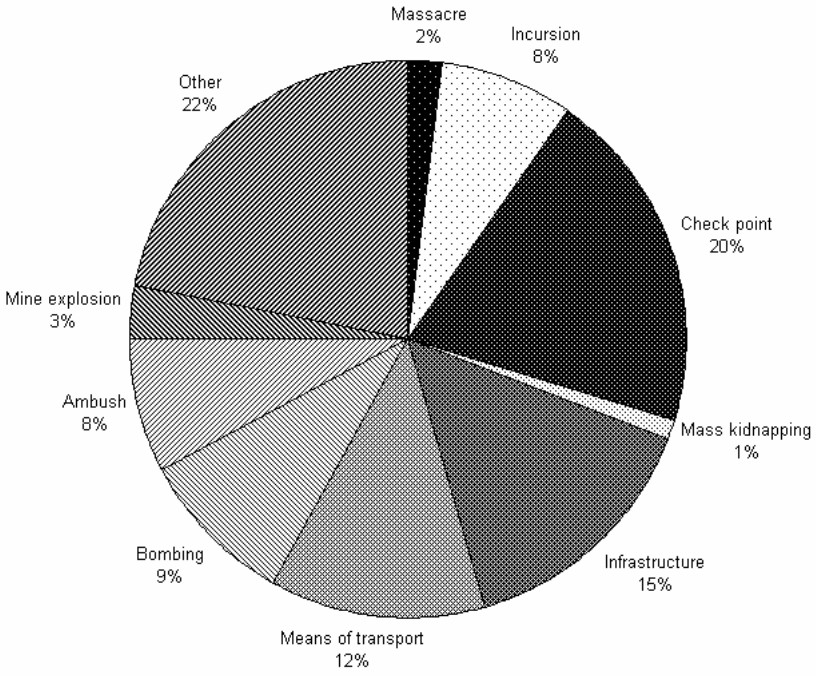
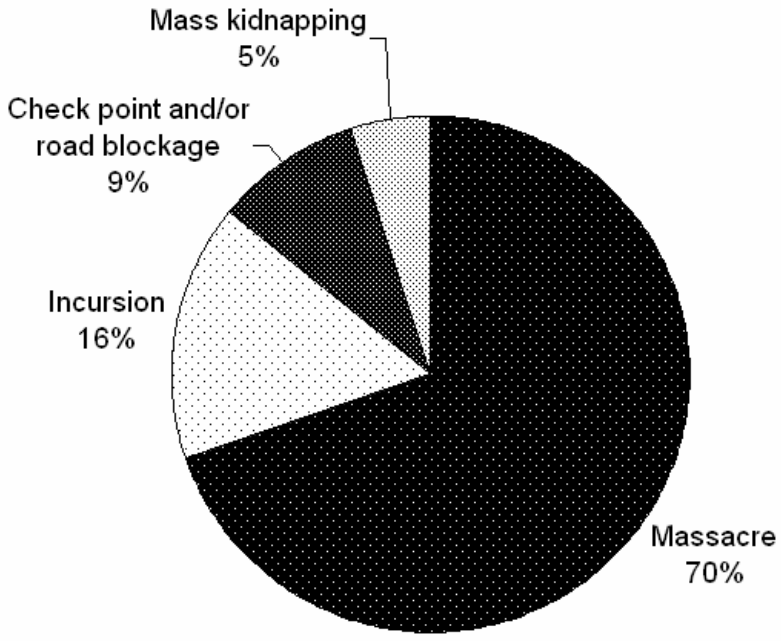


Figure 4 Portfolio of attacks by the paramilitaries

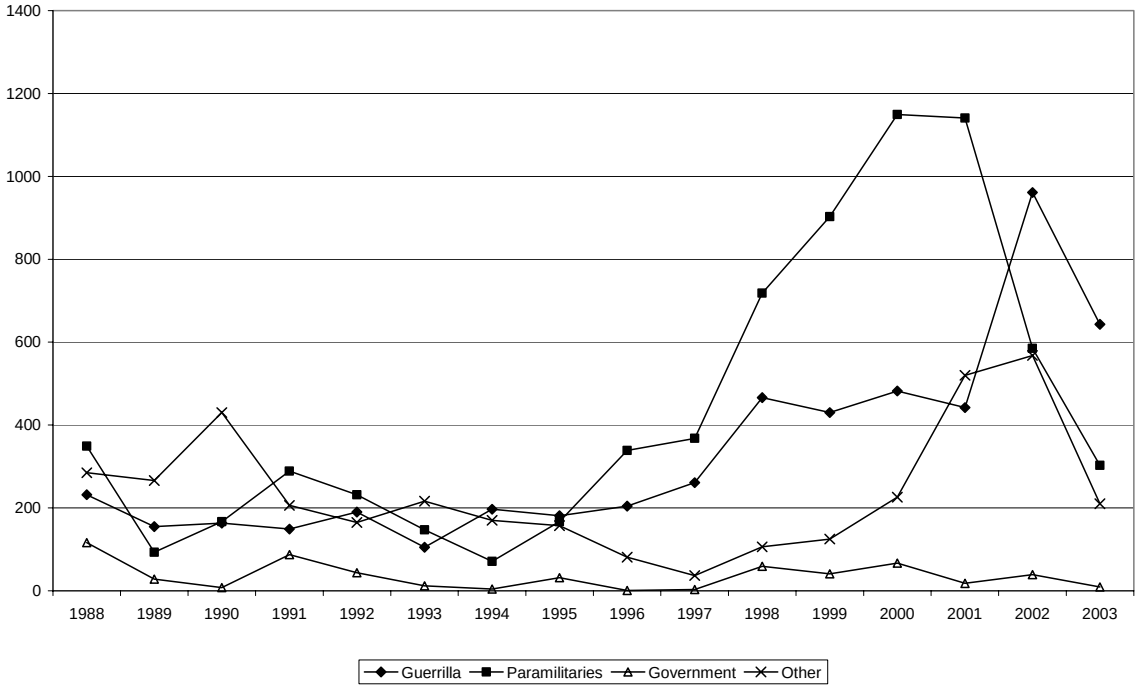


4.3. Civilian casualties by group

Figure 5 gives the number of civilian casualties in attacks organized by group in every year from 1988 to 2003, where the series labelled “other” refers to attacks with unknown authors.

The illegal paramilitaries are behind the majority of the attributed civilian casualties, closely followed by the guerrillas. The guerrillas have, however, surpassed the paramilitaries for the last two years. Government forces tend not to cause civilian casualties in unilateral operations and have even improved their record in recent years.

Figure 5 Civilian casualties due to attacks



4.4. Killings of civilians by type of attack and group

Annex 1 gives full civilian killing information by group. Massacres account for almost forty percent of guerrilla killings of civilians in attacks. Bombings, incursions and road blockages are also important, together accounting for slightly more civilian killings than massacres. We record few guerrilla killings of civilians in mine explosions. Interestingly, the guerrillas have killed only six civilians during mass kidnappings, exhibiting strong discipline in these money-making operations.

Figure 3 and Table A1 together demonstrate that the most prevalent guerrilla activities are generally not the ones in which they kill the most civilians. For example, the guerrillas killed few civilians in infrastructure attacks. Moreover, two thirds of the civilians they did kill in infrastructure attacks were killed in a single event in 1998 in Machuca, Antioquia when the ELN blew up an oil pipeline, causing a fireball to sweep through a nearby village, killing 84 and injuring more than 60 people.

We stress the number of lives lost through road blockages. This is the only category that is high on both the event count and the casualty list. One of the most visible aspects of the present government's security policy has been re-establishing government control over Colombia's sparse but vital network of roads. This effort has been popular largely because it has reclaimed vacationing possibilities, especially for the middle class. Some people have criticized the emphasis on roads as excessively expensive and propagandistic. However, our numbers indicate that the policy has delivered significant benefits for civilian safety, albeit at a high financial cost.

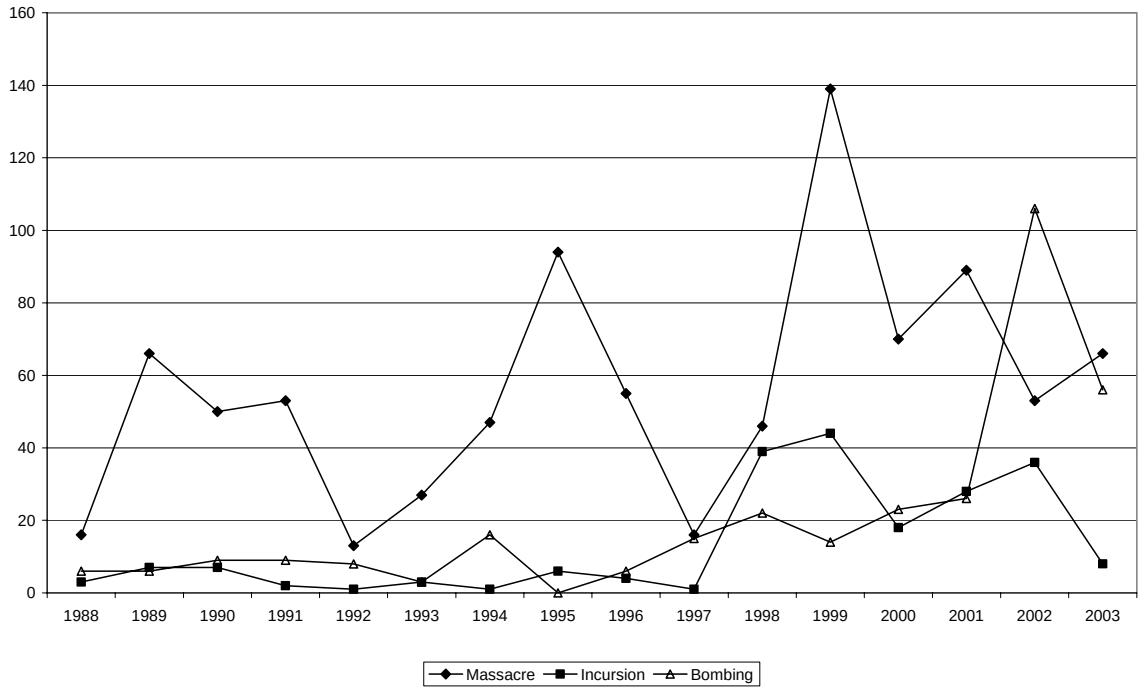
The illegal paramilitaries have killed more than twice as many civilians in attacks as have the guerrillas (A1). More than three fourths of these killings are in massacres. Of the remaining paramilitary killings in attacks, well over half are in incursions. The paramilitaries operate dangerous road blockages as well.

Government forces have killed significantly fewer civilians in attacks than have non-state armed groups. More than one fourth of these were killed in 1988 in a convoluted incident that began with a massacre by the EPL[14] at San Pedro de Urabá, Antioquia leading to a clash between the EPL and FARC in a populated area. The government intervened and caused heavy civilian casualties with an aerial bombardment.

[14] The EPL (from Ejército Popular de Liberación) used to be the third largest guerrilla group until it demobilised in 1992 and became a political organisation.

Figure 6 shows the pattern over time in civilian killings by the guerrillas in massacres, incursions and bombings. The first seems to trend up with much variation. The second jumps up between 1998 and 2002 but appears to revert back to the long-run average in 2003. The last has moved up steadily since 1995 and had a huge spike in 2002, largely due to several big attacks by the FARC. These incidents include the bombing of the "El Nogal" social club in Bogotá, the explosion of a so-called gas canister bomb in a church where civilians had taken as refuge during guerrilla-paramilitary fighting in Bojayá, Choco and several bombs detonated in towns just outside the demilitarised zone where the government was conducting peace talks with the FARC.[15]

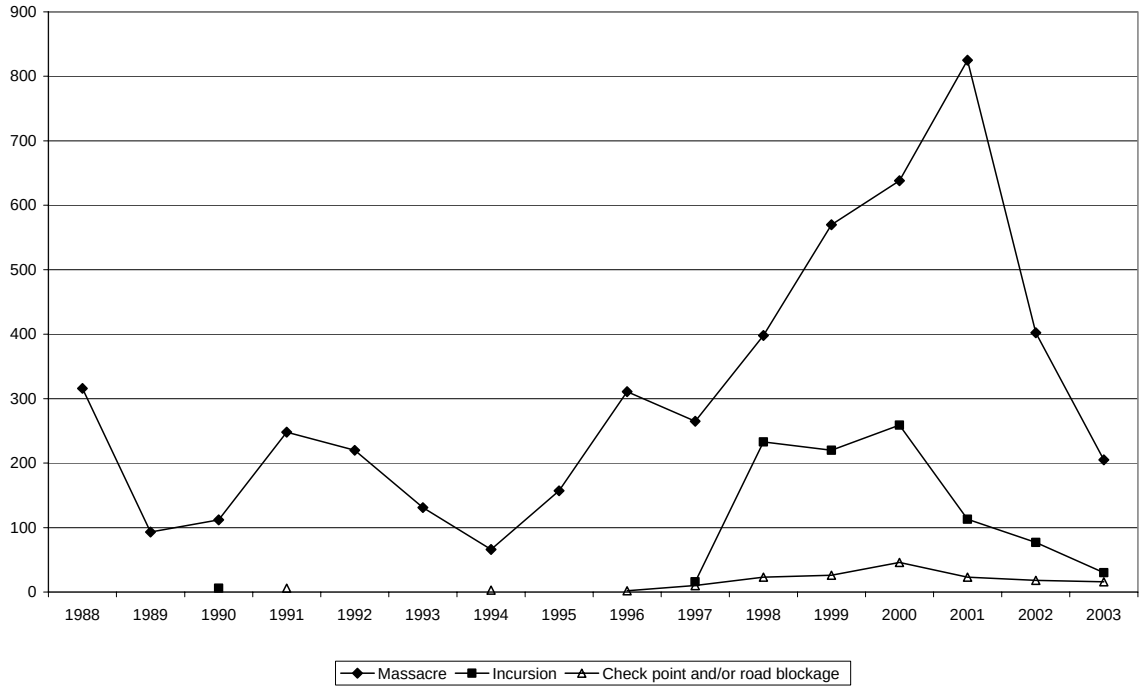
Figure 6 Killings of civilians during main guerrilla attacks



[15] In the El Nogal bombing the civilian casualty counts were 32 deaths and 162 injuries while at Bojayá they were 119 deaths and 90 injuries. These bomb attacks occurred one year after the Colombian government arrested three Irishmen travelling on false papers in the demilitarised zone which was de facto controlled by the FARC. The government accused the three of belonging to the IRA and, aside from some minor crimes, of transferring bomb-making skills to the FARC. However, it appears at the moment that the authorities will not be able to muster sufficient evidence to convict them.

Figure 7 gives the dynamics of civilian killings in massacres, incursions and road blockages for the paramilitaries. There are essentially only massacre killings until 1997 and even these were dropping steadily between 1991 and 1994. In 1995 massacre killings began a sharp ascent, peaking in 2001 before declining dramatically. From 1997 onwards the other two series rise to peaks in 2000 or 2001 and then fall back rapidly with the reversal somewhat predating the paramilitaries' official ceasefire.[16]

Figure 7 Killings of civilians during main paramilitary attacks



4.5. Civilian Injuries by Type of Attack and Group

Annex 2 gives full detail on civilian injuries and differs significantly from Table A1 on killings. The guerrillas emerge as unrivalled in their propensity to injure civilians, accounting for more than 80% of all attributed civilian injuries in attacks. As with killings, only a small percentage of these injuries come during the most common types of guerrilla

[16] We do not provide a figure analogous to figures 6 and 7 for the government because there are not enough government attacks to make it interesting.

attacks. Almost half of the civilian injuries generated by the guerrillas in attacks come from bombings, which are rather random and inaccurate, injuring many more people than they kill. In fact, guerrilla bombings produce nine times as many civilian injuries as do guerrilla mine explosions. Even allowing for possible weakness in the mine coverage in our data it is clear that mines are the lesser of the two dangers for civilians, although mine explosions do rank higher on the injury list (A2) than on the killing one (A1).

Remarkably, the paramilitaries have killed twice as many civilians in attacks as have the guerrillas, while the latter have injured more than seven times as many civilians as have the former. However, upon reflection this finding is fully consistent with paramilitaries' fundamental strategy of killing civilians suspected of helping the guerrillas. Note that few people are injured in massacres in which defenceless people are normally killed on purpose at close range and, therefore, perpetrators leave behind few people who are injured but not dead.

The guerrillas also conduct massacres of civilians. But, as noted above, they also work hard to disrupt the economy and government control. For the latter two purposes the random character of bombing is quite effective. Sowing fear, discouraging foreign and domestic investment, forcing expensive repairs and jamming infrastructure arteries can be pursued effectively and cheaply through rather indiscriminate bombings that injure many civilians.

The government inflicts the fewest civilian injuries of all groups. Aerial bombardments once again appear as the most hazardous government activity. There is a close parallel with the killing figures because most of the injuries in this category again come from a single event, this time in 1991 in El Bagre, Antioquia.

The trends over time in guerrilla-induced civilian injuries are of great interest. The impact of guerrilla bombings gyrates considerably, consistent with the random character of bombings and mine explosions. Still, these injuries have tended to increase rapidly. Those in

mine explosions have grown steadily since 1999 while the incursion injuries peak in 1998 and then decline. The increasing number of civilian injuries from bombs and mines reveals a progressively more indiscriminate, terrorising FARC and is perhaps suggestive of desperation. We think the big spike in bombings, and hence injuries, in 2002 may be an attempt to force the Colombian Army to tie up big resources in defending cities, freeing the guerrillas in the countryside.

Much of the increase in bombing-related casualties comes from FARC gas canister bombs.[17] Table 2 provides information on civilian casualties from gas canister bombs. The erratic relationship between the number of explosions and the casualty counts underscores the indiscriminate nature of these devices. The huge casualties in 2002 are mostly due to the event in Bojayá described above. It is difficult to determine whether the decrease in bombing, including gas-canister, casualties in 2003 is part of a trend or simply a random fluctuation.

Table 2 Civilian casualties during gas canister events

Year	Events	Killed	Injured
1998	2	10	0
1999	18	4	28
2000	21	20	59
2001	36	10	20
2002	24	136	170
2003	8	1	2
Total	109	181	279

4.6. Killings per attack

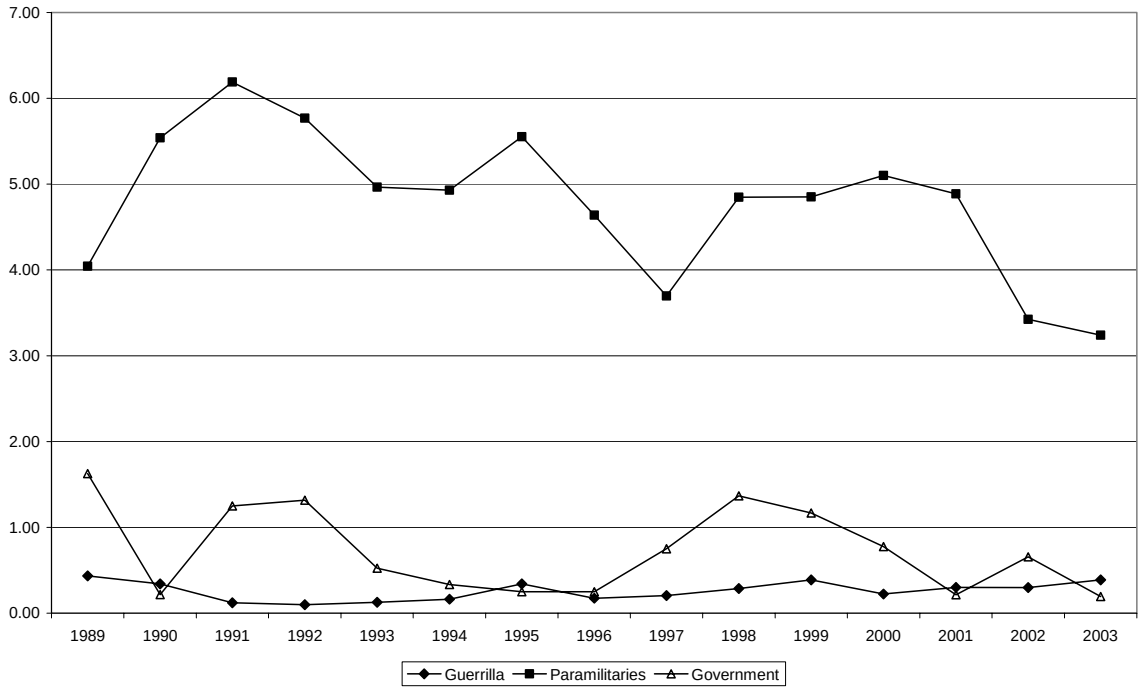
Annex 3 gives the time series and grand totals for civilian killings per attack of various types for each group. We do not print these ratios for group-type combinations that occur very infrequently, because in these cases the numbers are both unreliable and uninteresting. For

[17] These are made from small gas canisters normally used for cooking which are emptied out and usually filled with fertilizer explosives, whatever kind of metal shrapnel is available and sometimes even rotten bananas to infect the wounds of the victims. The smallish canister is then launched from a mortar-like tube made from a larger gas canister. These devices are notorious for their inaccuracy and instability.

example, we omit the fact that 1.67 civilians died on average during the three government artillery attacks we have in our dataset. Unsurprisingly, massacres are exceptionally dangerous. For the guerrillas they beat bomb attacks by a factor of ten. Road blockages are not very deadly per occurrence. It is the high frequency of bombings and road blockages through which the guerrillas kill so many people, not their lethality per event. For the paramilitaries, incursions are the only types of attacks they utilize other than massacres that pose any danger to civilians. The only type of government attack that is relatively frequent and relatively dangerous to civilians is aerial bombardment, although this danger would virtually disappear without the one big event from 1988.

Figure 8 gives the series for each group of the number of civilians killed in attacks divided by the number of attacks. None of these series have really strong trends over time. As expected, the paramilitaries always kill far more civilians per event than do the other groups. The government is erratic due to its small number of attacks but generally somewhat more lethal to civilians per attack than are the guerrillas.

Figure 8 Ratio of killed civilians per attack, by group



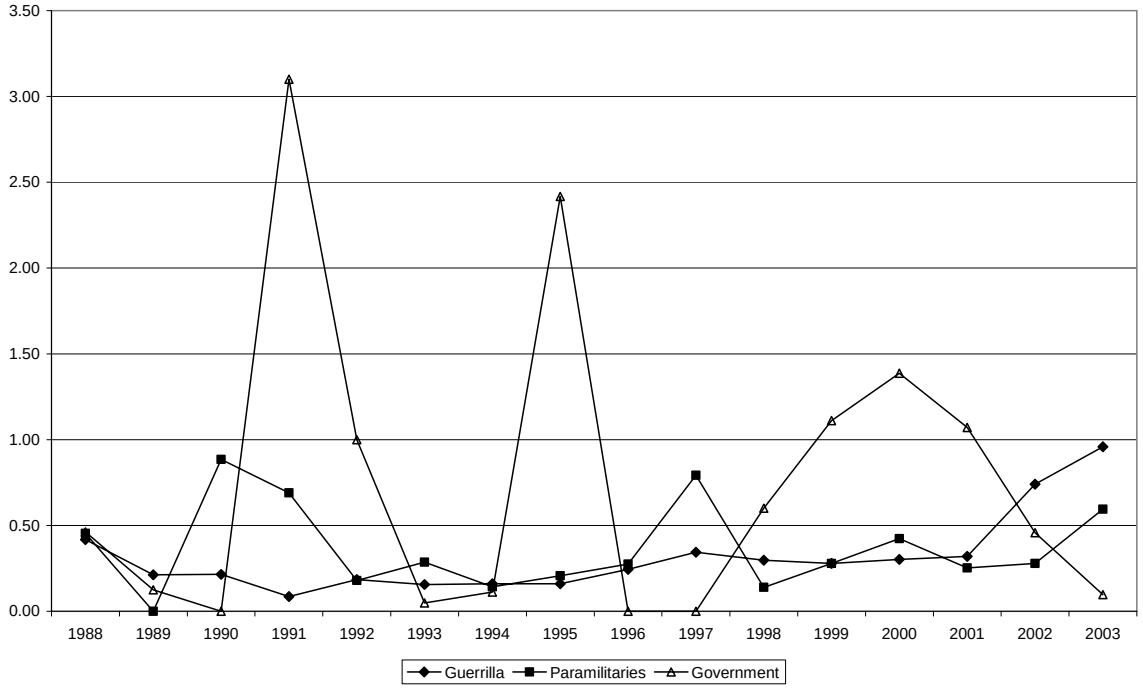
4.7. Injuries per attack

Table A4 of the appendix gives time series and grand totals for civilian injuries per attack for the same attack types as in Annex 3 for each group. The civilian injury rate from guerrilla bomb explosions rose steadily over the years before leaping up in 2002. Injury rates per guerrilla mine explosion have also increased continuously.

Figure 9 shows the path over time of civilian injuries per attack for each of the three groups. Again, the government series fluctuates wildly due to the small number of government attacks, but it is often quite injurious per event. However, note the rapid improvement of the government beginning right after the introduction of the Plan Colombia aid programme. The guerrilla and paramilitary curves trend up and track each other quite well. The latter fact is rather surprising since the guerrillas injure vastly more people than the paramilitaries and hold a much more diverse portfolio of attacks compared to the paramilitaries. The paramilitaries are almost completely specialized in massacres which do

not cause huge numbers of injuries. The guerrillas do many bomb and mine explosions that injure numerous civilians but also perpetrate hundreds of economic attacks that injure few civilians. Overall the guerrillas attack much more than the paramilitaries and end up injuring roughly equal numbers of civilians per attack.

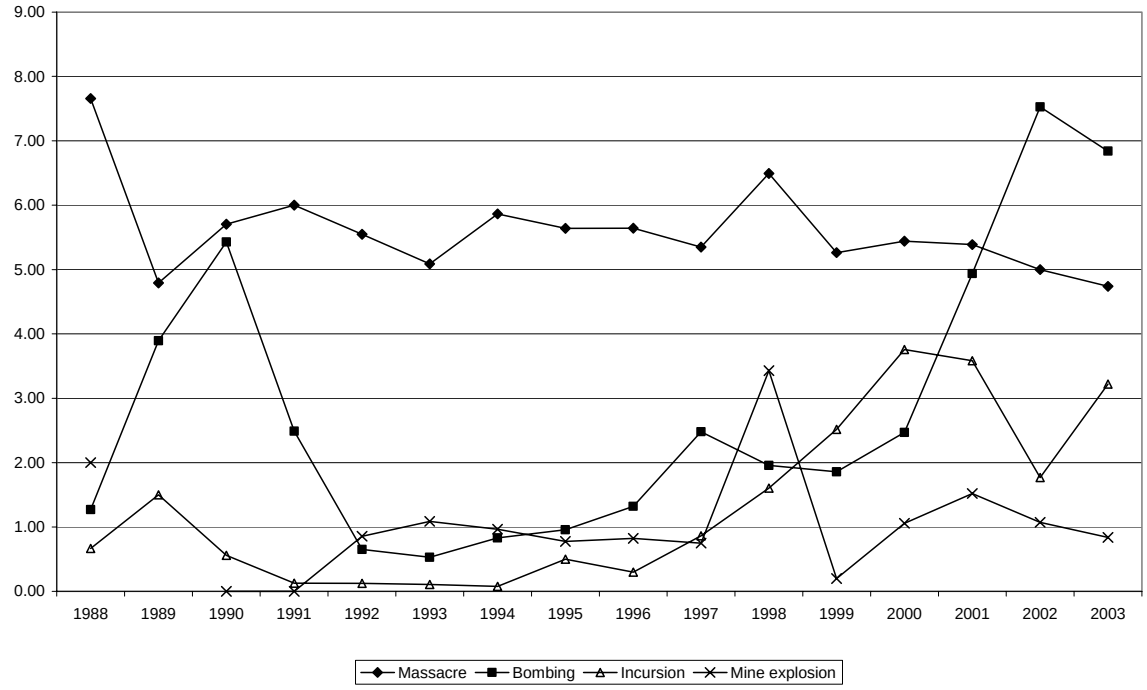
Figure 9 Ratio of injured civilians per attack, by group



4.8. Casualty ratios for the most dangerous events

Figure 10 aggregates over all groups and focuses on the danger of the main types of events that undermine human security in Colombia. The curves give killings plus injuries per event for massacres, bombings, incursions and mine explosions. Both massacre and mine technologies do not seem to have changed over the whole time period. Bombings, on the other hand, have increased dramatically in intensity after completing a big "V" between 1988 and 1992. Incursions have also grown much more dangerous over time.

Figure 10 Ratio of casualties per attack, by type of attack



4.9. The FARC vs. the ELN

Figure 11 shows the number of casualties per attack for both the FARC and the ELN. It shows that that ELN has always been less dangerous than the FARC, except in 1998 due to the Machuca incident mentioned above. Note also the strong rise in FARC-caused casualties per attack since 1998.

Figure 11 Ratio of civilian casualties to number of attacks for the FARC and ELN guerrillas

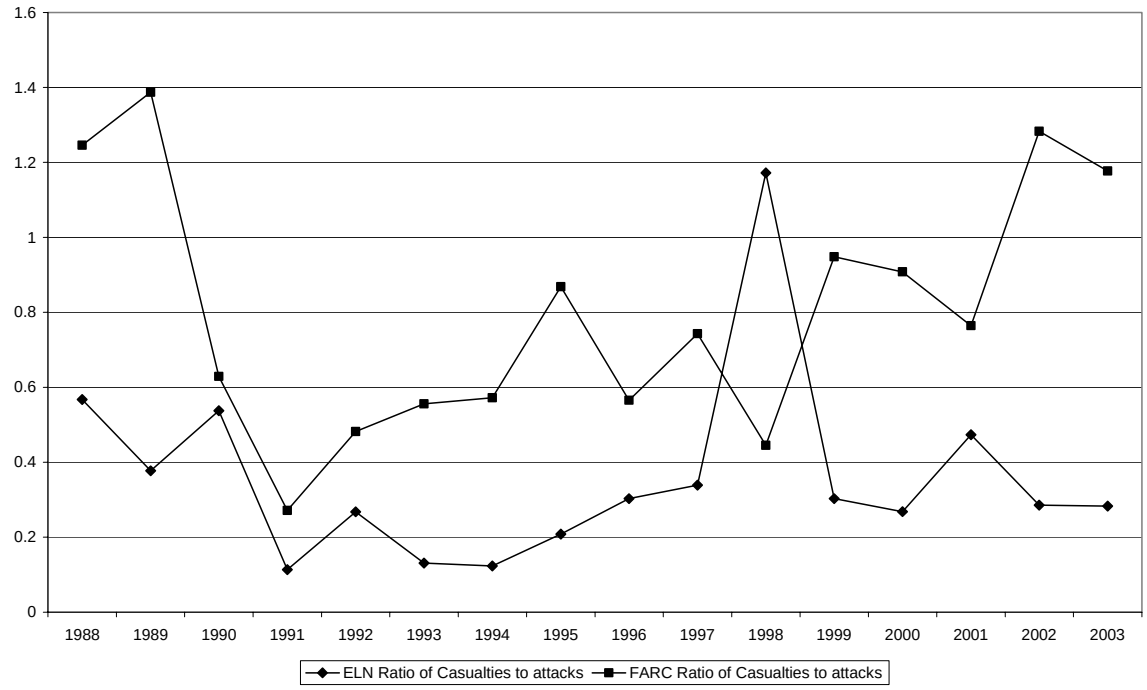


Figure 12 and Figure 13 give the breakdown of civilian casualties by type of attack for the FARC and ELN. A higher percentage of FARC killings have come in massacres and bombings while infrastructure attacks loom much larger for the ELN. The influence of the Machuca event again looms large in the ELN picture.

Figure 12 Distribution of FARC-related civilian casualties by type of attack

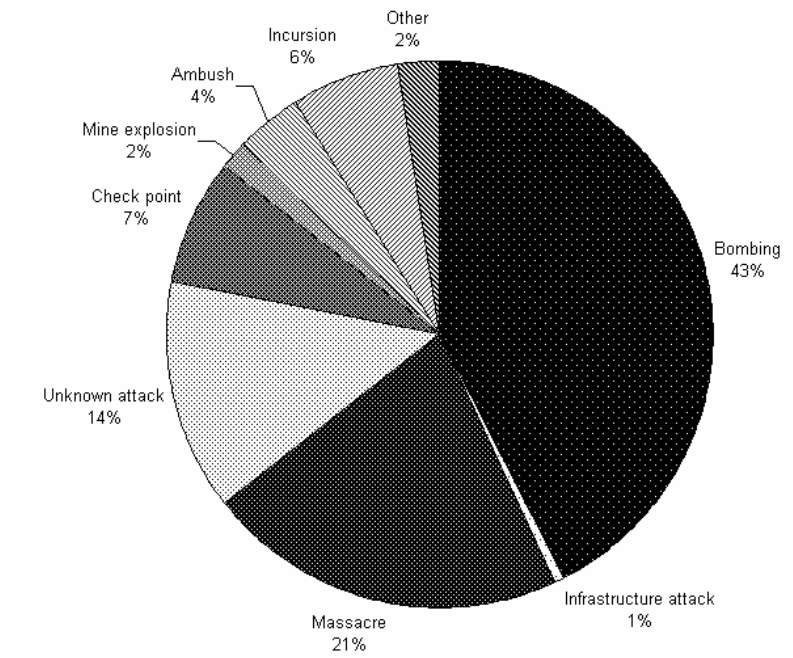
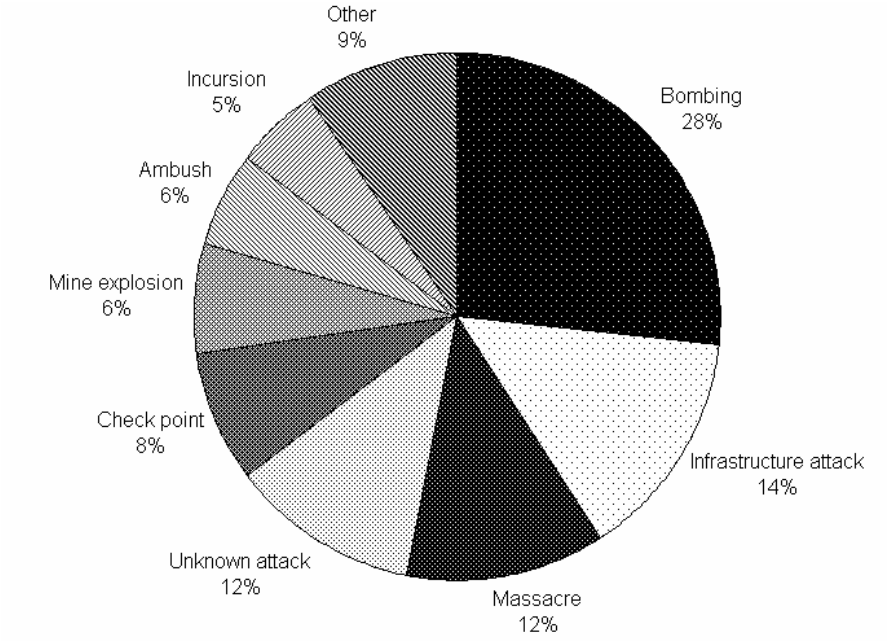


Figure 13 Distribution of ELN-related civilian casualties by type of attack



4.10. Clashes

Table 3 gives the number of clashes and the number of civilians killed in these clashes for each combination of groups clashing in each year.[18] Government-guerrilla clashes are by far the most common and have risen dramatically since 1999. There were hardly any guerrilla-paramilitary clashes until the sharp rise that began in 1997 and was reversed in 2003. Guerrilla-paramilitary clashes are much more lethal to civilians than are guerrilla-paramilitary clashes.

Government-paramilitary clashes have always been rare but have shown a tentative upward trend in recent years. It is interesting that the government became slightly more challenging to the paramilitaries precisely when the paramilitaries have decreased their violence and entered demobilization negotiations. But the larger fact overshadowing this recent curiosity is the long history of very little government-paramilitary clashing. Evidently, the government considers the guerrillas as the country's fundamental security threat whereas the paramilitaries are viewed as a response, however misguided, to that threat. However, the paramilitaries are such a colossal menace to human security in Colombia that we think the government should rethink this strategy, especially if the demobilization discussions with the paramilitaries fail.

[18] In this table, a zero means that there is information, for example, of no civilian casualties during clashes for a given year. A space means that there is no certainty that either clashes or victims were present.

Table 3 Clashes by groups clashing and killed civilians during clashes

Year	Government-Guerrilla		Guerrilla-Paramilitaries		Government-Paramilitaries		Total	
	Number of clashes	Civilians killed	Number of clashes	Civilians killed	Number of clashes	Civilians killed	Clashes	Civilians killed
1988	200	16					200	16
1989	192	10	2	0	4	1	198	11
1990	366	26	2	0	3	1	371	27
1991	461	18	1	0			462	18
1992	533	35	1	2	2	0	536	37
1993	500	43					500	43
1994	468	25	4	30			472	55
1995	382	42	1	0	1	0	384	42
1996	459	13	3	0	2	0	464	13
1997	388	25	13	0	3	0	404	25
1998	328	64	30	19	6	0	364	83
1999	311	52	20	35	1	4	332	91
2000	498	112	61	35	2	0	561	147
2001	560	47	74	115	1	2	635	164
2002	768	67	124	191	4	0	896	258
2003	767	24	57	47	12	2	836	73
Total	7181	619	393	474	41	10	7615	1103

5. The Main Threats in Depth

Figure 14 gives the relationship between municipality population density and the fraction of the total number of people massacred by the paramilitaries, 1988-2003. For each population density on the horizontal axis the height of the curve gives the number of people massacred by the paramilitaries in municipalities of that population density or less divided by the total number of people massacred by the paramilitaries. Thus, we see that more than 70% of paramilitary killings of civilians in massacres are in municipalities with population densities of 3 people per square kilometre or less. In other words, these events occur overwhelmingly in very lightly populated areas. The shape of the curve also contains important information. Between the population densities 0 and 3 it becomes progressively flatter. Within that range, roughly speaking, a person's risk of getting massacred is decreasing in the population density in which he lives.[19]

[19] The rapid increase at the end of figure 16 is largely an artefact of the compression of the scale for population density at the high end which is necessary to enable the picture to cover the whole range of population densities.

Figure 14 Civilians killed in massacres by the paramilitaries: cumulative distribution function

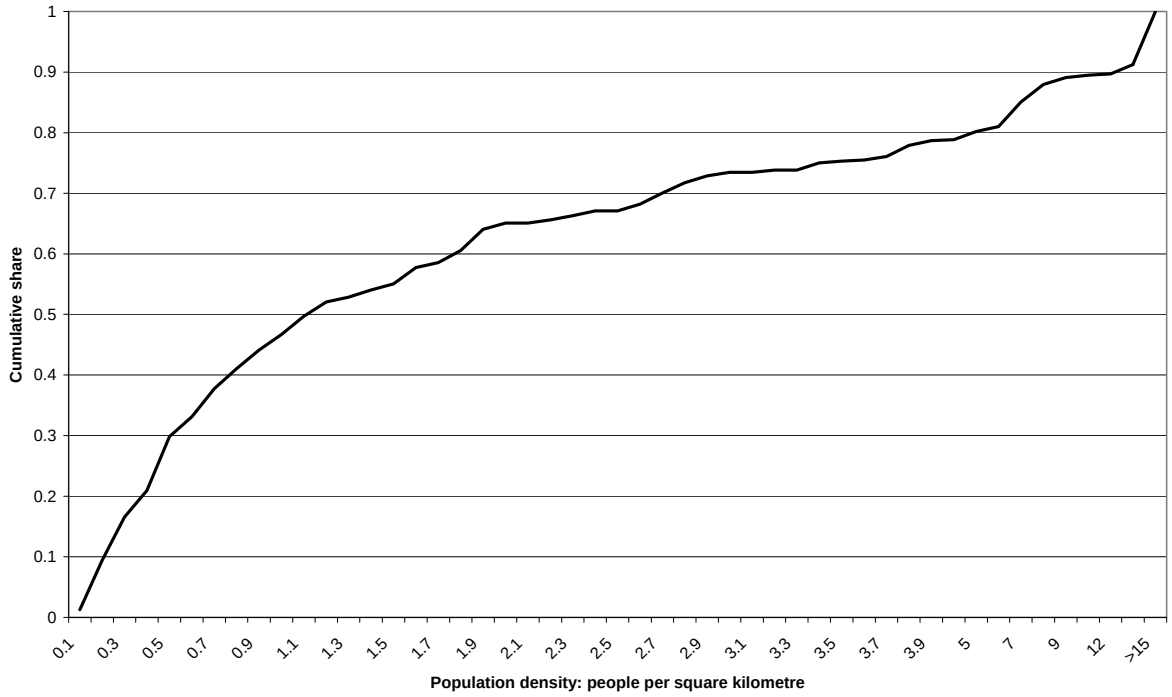


Figure 15 Civilians killed in massacres by the guerrillas: cumulative distribution function

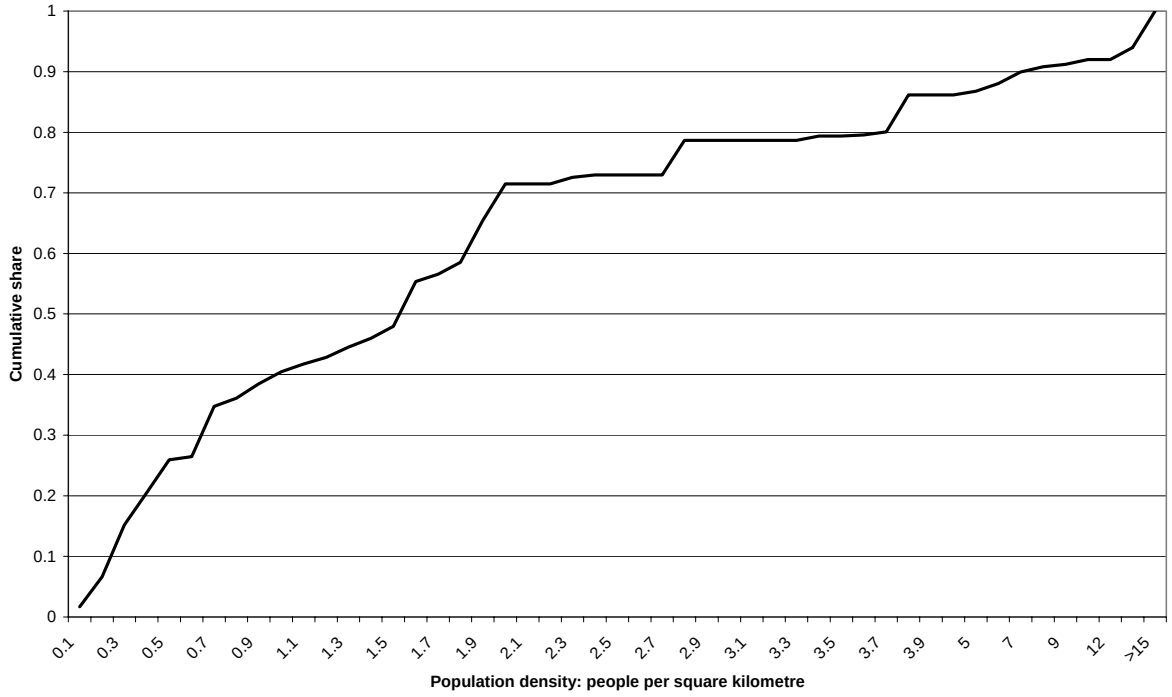


Figure 15 follows the same procedure as Figure 14 but for the guerrillas rather than the paramilitaries. The results are similar but even more extreme: the guerrillas reach the 70% threshold at only 2 people per square kilometre. The guerrilla curve is less jagged than the paramilitary one because the smaller number of guerrilla massacres allows for less smoothing out of random factors. Nevertheless, the tendency for danger to increase in population sparsity is clearly visible.

Figure 16 Civilians injured in guerrilla bombings: cumulative distribution function

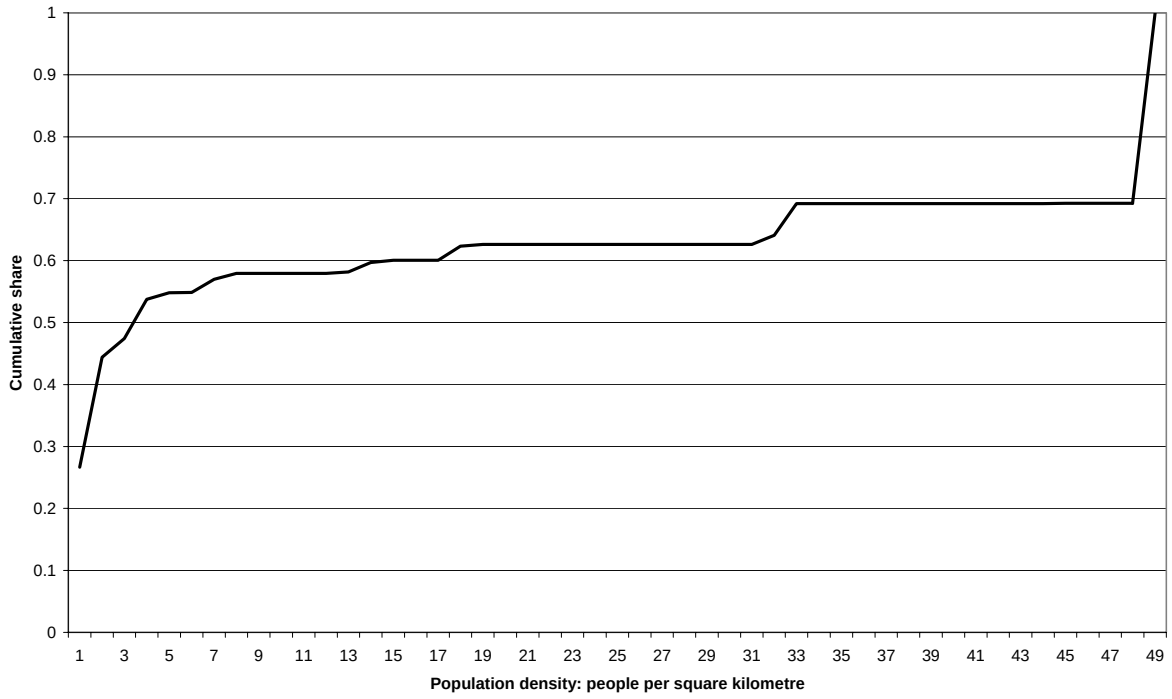


Figure 16 is constructed in the same way as the previous two pictures but it shows the distribution of civilians injured in guerrilla bombings, with rescaling of the horizontal axis to properly display the important information for high-density municipalities. Again we see great insecurity at low population densities, although this phenomenon is less pronounced than it was for massacres. Still, almost 60% of civilian injuries in guerrilla bombings occur in municipalities of less than 9 people per square kilometre. The risk almost disappears in the

intermediate range before spiking up for the country's five largest cities in which 31 % of these injuries occur.

6. Improving Human Security in Colombia

The biggest conflict-related threats to human security in Colombia come from the country's illegal armed groups. More than 1/3 of all civilian casualties occurring in attacks with known authors fall into three very specific categories: killings in paramilitary massacres in rural areas; killings in guerrilla massacres in rural areas and; injuries in guerrilla bombings in rural areas.[20] This figure is remarkable since it includes only two out of the many different types of attacks, only municipalities with very low population densities, only the guerrillas and the paramilitaries, and only killings in the case of massacres and injuries in the case of bombings. Yet the main human security threats can be pinpointed as occupying only a very small space within the set of all of the possibilities. If we add injuries in guerrilla bombings in the five largest cities we can account for almost 40% of all known casualties in attacks with known authors. Most of these latter attacks are probably well classified as urban terrorism.[21]

The urban terrorism issue can be addressed through local community support for police institutions. The key is that people must be aware of suspicious activity, know where to report it and the authorities must be responsive to these reports. Such an approach has been implemented with some success in the United Kingdom and Spain.

Rural security is Colombia's biggest human security issue, presenting a fundamental challenge for Colombia with its vast mountains and jungles. The army simply cannot be

[20] For this formulation rural area is defined as a municipality with population density less than 9 people per square kilometre.

[21] Enders and Sandler (2002) provide a standard definition of urban terrorism as unilateral indiscriminate attacks against civilian targets causing widespread fear in the population. Some urban guerrilla bombings in Colombia are tied to extortion rackets and the settling of scores and would not fit this definition but most would.

everywhere all the time, at least not without a massive increase in military expenditure.[22] Massacres have decreased dramatically in the last two years as many paramilitaries have tried to negotiate their way out of the conflict. Even so, rural security problems have remained serious during this period. If these negotiations fail and the paramilitaries return to the field, the rural security issue will probably turn critical again.

The way forward, in our view, is the development of local security institutions in rural areas. These must be controlled strictly at the national level to prevent them from becoming abusive.[23] But personnel should be drawn from the local population of people who know and have an incentive to care about the place where they live. The recent case of the Paéz Indians from the Cauca department securing the release of the mayor of Toribío by marching on the FARC armed only with their *bastones de mando* hints at the potential of non-offensive local initiatives when communities have strong ties.[24]

The present government has made some progress in enhancing rural security without actually solving the problem. First, it has increased military expenditure and activity so that the armed forces cover more territory now than they have in the past. Second, the government has formed peasant soldier battalions (*Soldados de mi Pueblo*) from local conscripts. An advantage of this approach is that these soldiers care about local security, can exploit their knowledge of the local terrain and situation and receive the support of the local communities. But they are really trained and equipped only to defend populated areas and, therefore, contribute only indirectly to rural security. Third, the government has extended police presence to every municipality, including many that have not had police presence for

[22] In any case, big increases in military spending would probably produce poor value for the money. Military operations normally involve large human and material resources, require long support lines and, since they cannot be permanent everywhere, rely on complex logistics.
[23] Romero (2004) presents the long history of frustrations and abuses arising from self-defence structures in the contemporary history of Colombia. But Marks (2004) argues persuasively for the necessity of local self-defence and provides great detail, based on considerable scholarship and field experience, on how to contain abuses.
[24] These *bastones de mando* or "authority batons" symbolise the standing of community chiefs and the non-violent traditional origin of their jurisdictional authority, which is recognised by the Colombian constitution.

decades. (El Tiempo, 2003) However, these units only protect towns classified as municipalities and some villages and, therefore, do not reach many sizeable villages that face particularly high risks. Moreover, many of these units are not trained and equipped for rapid forays into the least secure rural areas and, in any case, jurisdictional issues would complicate any attempts to leave their home territory. Fourth, the government has expanded the rural police force (*carabineros*), who are armed at a level intermediate between regular police and proper military units. This is an expensive option since these are not conscripts and draw premium pay for working in particularly dangerous environments. Despite the compensation, they tend to serve for only two years before transferring to safer assignments and, therefore, the *carabineros* are less locally invested and informed than are the *soldados de mi pueblo*.

We believe that the government must tap local finance to underpin the development of local forces in rural areas. There are many big landowners and cattle farmers with considerable wealth in the Colombian countryside. These people often pay low taxes but have spent lavishly on personal bodyguards, security and, in many cases, even illegal paramilitaries. The government can plausibly tax these wealth pockets to support local self-defence. Willingness to pay, and hence political support for the tax, will be maximized by a visible connection between payment and local security. A second prong of this strategy must be a clear crackdown on illegal paramilitaries that do not disarm so that wealthy rural dwellers are convinced that illegal paramilitarism is not a viable option for them. In this way we hope that the Colombian government will be able to extend a good measure of security to the country's most vulnerable people.

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Annex 1

Civilians Killed in Attacks, distribution by group and year

Guerrilla	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	16	66	50	53	13	27	47	94	55	16	46	139	70	89	53	66	900
Bombing	6	6	9	9	8	3	16	0	6	15	22	14	23	26	106	56	325
Unknown attack	26	18	13	9	5	7	20	5	4	15	32	23	55	24	13	11	280
Incursion	3	7	7	2	1	3	1	6	4	1	39	44	18	28	36	8	208
Check point and/or road blockage	0	0	0	2	3	1	7	4	1	18	10	20	28	38	50	19	201
Infrastructure attack	3	0	0	1	12	1	0	0	0	0	66	1	1	8	3	1	97
Ambush	7	2	21	4	11	4	5	5	3	8	2	0	5	0	1	5	83
Mine explosion	4		0	0	2	1	2	1	8	2	9	0	3	1	11	15	59
Taking of town or village	34	3	0	0		0		0	1	13	1						52
Armed robbery	15	2	0	1	7	0	0	4			0						29
Attack on means of transport	0	0	0	6	1	0	0	2	1	2	0	2	0	0	0	3	17
Anti-kidnapping operation										7							7
Harassment to a fixed position	0	0	0	0	3	0	0	0	0	0	2	0	0	0	1	1	7
Local police station attack	0	0	0	0	0	0	1	2	2	0	0	1	1		0	0	7
Mass kidnapping	0		0							0	0	6	0	0	0	0	6
Electoral interference	0		0	0	0	0	0			0	0				2		2
Propaganda explosion	0					0	0	0	0								0
Grand Total	114	104	100	87	66	47	99	123	85	97	229	250	204	214	276	185	2,280

Paramilitaries	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	316	93	112	248	220	131	66	157	311	265	398	570	638	825	402	205	4,957
Incursion			6							16	233	220	259	113	77	30	954
Unknown attack	18		26	6	5	8		4	6	7	11	29	118	109	38	5	390
Check point and/or road blockage				6			3		2	10	23	26	46	23	18	16	173
Mass kidnapping		0	0						0		33	9	0	7	0	0	49
Bombing									0	3		0	0	8	4	0	15
Attack on means of transport							0		1	2	0	0	0	0	2		5
Aerial bombardment															0		0
Ambush		0									0						0
Infrastructure attack												0					0
Mine explosion									0			0		0	0	0	0
Taking of town or village		0															0
Grand Total	334	93	144	260	225	139	69	161	320	303	698	854	1,061	1,085	541	256	6,543

Government	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Aerial bombardment	101	12	4	1	6	0	0	0	0	0	0	2	1	0	9	1	137
Anti-kidnapping operation	5	8	0	24	2	5	0	0					0	0	0		44
Other government offensive operations	4	0	3	0	0	2	0	1	0	0	9	7	5		10	1	42
Massacre					8						7	3	3			4	25
Unknown attack		0	0		0	3	0	0				3	14		2		22
Check point and/or road blockage						1		0	1		16	1	0	0	2	0	21
Mine explosion						0	3	2			0	3	0	3			11
Ambush			0		9	0											9
Raid	0	6	1	0	0	0	0		0						0		7
Bombing										3		2	1	0			6
Artillery attack											5					0	5
Incursion							0			0	4			0	0		4
Harassment to a fixed position							0										0
Infrastructure attack			0			0											0
Grand Total	110	26	8	25	25	11	3	3	1	3	41	21	24	3	23	6	333

Other	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	226	186	213	75	107	128	96	85	38	29	20	39	26	77	35	5	1,385
Bombing	1	20	67	24	20	3	9	7	10	0	6	7	20	20	45	38	297
Unknown attack	20	1	24	7	5	18	5	1	0	2	3	18	23	11	58	5	201
Mine explosion	4			0	0	10	2	3	0		0		4	7	1		31
Incursion				0		0					16	0	3	0	3		22
Ambush	0	2	11	0	2	1	0	0								0	16
Check point and/or road blockage		0		0	0		0	1			4	0	0	0	0		5
Local police station attack	1	0	0	0	0		0	0	0				0		0	2	3
Harassment to a fixed position				0	0		0	0							2		2
Attack on means of transport	0	1	0	0	0	0	0	0	0					0		0	1
Aerial bombardment													0				0
Armed robbery		0															0
Electoral interference							0					0					0
Infrastructure attack	0	0	0	0	0	0	0	0			0	0	0	0			0
Mass kidnapping													0	0	0	0	0
Other government offensive operations											0						0
Grand Total	252	210	315	106	134	160	112	97	48	31	49	64	76	115	144	50	1,963

Annex 2

Civilians Injured in Attacks, distribution by group and year

Guerrilla	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Bombing	22	0	19	3	52	20	28	14	25	85	59	90	157	145	601	348	1,668
Unknown attack	14	36	30	6	11	15	14	9	21	25	23	48	45	22	26	30	375
Check point and/or road blockage	0	0	0	6	12	4	11	8	34	17	10	10	27	19	11	14	183
Mine explosion	4		0	0	15	3	14	1	6	7	13	1	14	15	30	55	178
Infrastructure attack	17	0	0	25	8	1	5	1	0	0	65	0	1	14	0	0	137
Ambush	14	4	8	9	9	11	16	4	9	16	7	7	7	0	1	2	124
Incursion	1	5	1	3	0	0	1	3	2	2	31	13	14	9	8	2	95
Attack on means of transport	0	0	5	8	1	2	8	0	2	3	8	8	2	0	6	0	53
Taking of town or village	32	0	0	0		0		0	13	5	2						52
Massacre	0	0	0	1	0	0	0	8	0	0	9	0	10	4	1	3	36
Harassment to a fixed position	0	0	0	0	6	2	0	1	5	4	8	0	0	0	1	2	29
Armed robbery	11	6	0	1	8	0	0	0			1						27
Local police station attack	2	0	0	0	2	0	1	9	2	0	1	3	1		0	2	23
Propaganda explosion	1					0	0	0	0								1
Anti-kidnapping operation										0							0
Electoral interference	0		0	0	0	0	0			0	0				0		0
Mass kidnapping	0		0							0	0	0	0	0	0	0	0
Grand Total	118	51	63	62	124	58	98	58	119	164	237	180	278	228	685	458	2,981

Paramilitaries	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Unknown attack	15		20	7	4	6		6	11	36	0	27	59	29	16	9	245
Incursion			0							0	17	15	18	4	16	18	88
Massacre	0	0	3	22	3	2	2	0	8	10	3	5	4	16	4	4	86
Bombing									0	13		0	6	5	5	12	41
Check point and/or road blockage				0			0		0	6	0	2	1	1	2	2	14
Mine explosion									0			0		1	1	2	4
Ambush		0									0						0
Infrastructure attack												0					0
Aerial bombardment															0		0
Attack on means of transport							0		0	0	0	0	0	0	0		0
Taking of town or village		0															0
Mass kidnapping		0	0						0		0	0	0	0	0	0	0
Grand Total	15	0	23	29	7	8	2	6	19	65	20	49	88	56	44	47	478

Government	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Aerial bombardment	6	0	0	62	4	0	0	0	0	0	7	10	12	1	10	1	113
Other government offensive operations	0	0	0	0	1	0	0	29	0	0	0	10	5		0	0	45
Check point and/or road blockage						0		0	0		8	0	12	0	0	0	20
Unknown attack		0	0		0	1	1	0				0	8		6		16
Mine explosion						0	0	0			0	0	3	13			16
Ambush			0		14	0											14
Bombing										0		0	3	1			4
Artillery attack											3					0	3
Massacre					0						0	0	0			2	2
Raid	0	2	0	0	0	0	0		0						0		2
Incursion							0			0	0			0	0		0
Infrastructure attack			0			0											0
Harassment to a fixed position							0										0
Anti-kidnapping operation	0	0	0	0	0	0	0	0					0	0	0		0
Grand Total	6	2	0	62	19	1	1	29	0	0	18	20	43	15	16	3	235

Other	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Bombing	13	48	19	86	18	19	34	46	33	0	48	45	101	338	368	148	1,364
Unknown attack	16	7	19	7	4	23	5	1	0	5	0	14	31	30	49	10	221
Ambush	3	1	67	0	1	0	2	4								0	78
Mine explosion	0			0	1	11	8	7	0		2		13	33	1		76
Massacre	1	0	10	3	4	2	6	0	0	1	4	2	0	2	0	0	35
Infrastructure attack	0	0	0	0	3	0	1	0			0	0	5	2			11
Incursion				0		0					3	0	0	0	5		8
Harassment to a fixed position				3	0		2	0							1		6
Attack on means of transport	0	0	0	0	0	1	0	1	0					0		1	3
Local police station attack	0	0	0	0	0		0	1	0				0		0	1	2
Check point and/or road blockage		0		1	0		0	0			0	0	0	0	0		1
Aerial bombardment													0				0
Other government offensive operations											0						0
Armed robbery		0															0
Electoral interference							0					0					0
Mass kidnapping													0	0	0	0	0
Grand Total	33	56	115	100	31	56	58	60	33	6	57	61	150	405	424	160	1,805

Annex 3

Ratio of civilians killed in selected types of attacks, by group and year

Guerrilla	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	5.33	4.71	5.00	4.42	4.33	4.50	11.75	7.23	6.11	3.20	4.18	4.48	4.12	4.94	3.79	5.50	4.95
Bombing	0.29	0.55	0.69	0.24	0.07	0.07	0.24	0.00	0.13	0.35	0.37	0.24	0.25	0.34	1.10	1.02	0.37
Check point and/or road blockage	0.00	0.00	0.00	0.03	0.05	0.05	0.16	0.21	0.01	0.13	0.08	0.11	0.08	0.14	0.17	0.18	0.11
Grand Total	0.40	0.43	0.34	0.12	0.10	0.13	0.16	0.34	0.17	0.20	0.29	0.39	0.22	0.30	0.30	0.39	0.25

Paramilitaries	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	10.19	4.89	6.59	6.20	5.79	5.24	5.50	5.61	5.46	5.20	6.86	5.59	5.55	5.32	5.03	4.46	5.67
Incursion	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67	3.58	6.11	7.19	8.07	2.96	3.00	4.92
Grand Total	10.12	4.04	5.54	6.19	5.77	4.96	4.93	5.55	4.64	3.70	4.85	4.85	5.10	4.89	3.42	3.24	4.77

Government	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Aerial bombardment	16.83	3.00	0.44	0.14	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.10	0.00	0.43	0.04	1.18
Grand Total	8.46	1.63	0.22	1.25	1.32	0.52	0.33	0.25	0.25	0.75	1.37	1.17	0.77	0.21	0.66	0.19	1.06

Annex 4

Ratio of civilians injured in selected types of attacks, by group and year

Guerrilla	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	5.33	4.71	5.00	4.42	4.33	4.50	11.75	7.23	6.11	3.20	4.18	4.48	4.12	4.94	3.79	5.50	4.95
Bombing	0.29	0.55	0.69	0.24	0.07	0.07	0.24	0.00	0.13	0.35	0.37	0.24	0.25	0.34	1.10	1.02	0.37
Check point and/or road blockage	0.00	0.00	0.00	0.03	0.05	0.05	0.16	0.21	0.01	0.13	0.08	0.11	0.08	0.14	0.17	0.18	0.11
Grand Total	0.40	0.43	0.34	0.12	0.10	0.13	0.16	0.34	0.17	0.20	0.29	0.39	0.22	0.30	0.30	0.39	0.25

Paramilitaries	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Massacre	10.19	4.89	6.59	6.20	5.79	5.24	5.50	5.61	5.46	5.20	6.86	5.59	5.55	5.32	5.03	4.46	5.67
Incursion	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67	3.58	6.11	7.19	8.07	2.96	3.00	4.92
Grand Total	10.12	4.04	5.54	6.19	5.77	4.96	4.93	5.55	4.64	3.70	4.85	4.85	5.10	4.89	3.42	3.24	4.77

Government	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Aerial bombardment	16.83	3.00	0.44	0.14	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.10	0.00	0.43	0.04	1.18
Grand Total	8.46	1.63	0.22	1.25	1.32	0.52	0.33	0.25	0.25	0.75	1.37	1.17	0.77	0.21	0.66	0.19	1.06