

**The Severity of the Colombian Conflict:
Cross-Country Datasets versus New Micro Data^{*}**

Jorge Restrepo
Royal Holloway College
University of London
J.Restrepo@rhul.ac.uk

Michael Spagat (Corresponding Author)
Department of Economics
Royal Holloway College
University of London
Egham, Surrey, TW20 0EX, UK
CEPR
WDI
M.Spagat@rhul.ac.uk

and

Juan F. Vargas
Royal Holloway College
University of London
J.F.Vargas@rhul.ac.uk

This version: July 6, 2004

Abstract

We compare the treatment of Colombia in large cross-country conflict datasets with the information of the detailed micro dataset of Restrepo, Spagat and Vargas (2003). We find a general tendency of the big datasets to underestimate the magnitude of the Colombian conflict and to mischaracterize its dynamics. We suggest that conflict researchers should prioritize the construction of more micro datasets that will facilitate detailed studies of conflict intensity and its dynamics.

* We thank seminar participants at the 8th ECAAR conference on Economics and Security in Bristol, UK. Kristine Eck and James Fearon provided us with useful insights during the early stages of this project. The RSF fund of Royal Holloway and the Department of Economics contributed funding to our research project. Restrepo acknowledges financial support from Banco de la República in Colombia.

Introduction

The development of big cross-country conflict datasets has been vital for the advance of conflict studies, particularly for the influential literature based on empirical analysis of civil conflicts. Pioneering works in this field include the Correlates of War project (hereafter COW; Small and Singer, 1982), the Uppsala Conflict Data Project (UCDP; Wallensteen and Axell, 1993) and the Civil War Termination project (CWT; Licklider, 1995).

Restrepo, Spagat and Vargas (2003) introduced an entirely different approach to the study of civil conflict, developing a general methodology for the in-depth measurement of conflict activity in a single conflict. Restrepo et al. (2003) then applied this approach to construct a detailed, micro-level dataset for Colombia, hereafter RSV. Restrepo et al. (2003) and Restrepo and Spagat (2004) analyze the dataset so that its general contours are now clear. Therefore, the time is ripe to compare RSV with the Colombia components of the large cross-country datasets.

This paper will serve two main purposes. First, we will evaluate the killing figures for Colombia used in the cross-country datasets by comparing them with those in RSV. Based on our comparisons, the researchers who maintain these databases may wish to revise their Colombia figures in future releases of their data. We show below that there has been a general tendency to underestimate the magnitude of the Colombian conflict, particularly for the datasets that provide yearly killing rates. Therefore, some upward adjustments are probably necessary, as long as these changes are consistent with the methodology these projects are applying to other conflicts. Second, we will provide a

general quality check on the cross-country datasets. It would be rather difficult and expensive for a cross-country dataset to treat every single country at the level of detail and with the degree of care that RSV applies to Colombia. Still, by comparing the big datasets with each other and with RSV at their main point of intersection we are evaluating quality. Admittedly, it is a sample of one but it is the only possible sample at the moment, although we hope that more micro-level datasets on conflict will become available in the future to enable further investigations into the quality of cross-country conflict data.

The data

The data on Colombia

RSV is the first time-series dataset for the Colombian civil war that is detailed (close to 21,000 events), high-frequency and long. It allows analysis of the actions of all participants in the Colombian conflict over more than 16 years. The methodology it employs for measuring conflict activity is based on events as the unit of data inclusion and analysis. For each event the database records a set of characteristics: date; geographical location; whether or not there was a clash; the groups involved; whether or not there was an attack; the type of attack; the group(s) responsible; killings; and injuries.¹ In this way, the researcher can gauge not only the dynamics of the conflict across space and on time, but also the intensity of various conflict activities.

We summarize here the main characteristics of the dataset and refer the reader to Restrepo et al. (2003) for details. The dataset is built using events listed in the annexes to the periodicals *Justicia y Paz* and *Noche y Niebla* published quarterly by the Colombian

¹ Clashes require fighting between at least two groups while attacks are uncontested events.

NGO'S CINEP and the Comisión Intercongregacional de Justicia y Paz (hereafter, CINEP). Most of the event information comes from primary sources. CINEP uses this information in its reports, focusing on the measurement of human rights violations, violations to international humanitarian law and political violence, connected or not with the conflict. RSV, on the other hand, focuses on civil war dynamics. Therefore, CINEP's database organization and statistical analysis are entirely inappropriate for its purposes. Fortunately, the raw information of CINEP is so extensive that RSV researchers are able to distil from it just its war-relevant components. Working from the detailed list of events published in the annexes to the reports, RSV researchers identify and code events following their own criteria designed to include all conflict events and only those events.

In the original dataset and in quarterly updates the RSV team follows a stringent quality control regime in cleaning the data that proceeds in four stages, covering both event inclusion and the coding of events. First, they randomly sample a large number of events and check against the CINEP source that they are properly included and coded. Second, they randomly sample events, look up these events in press archives and again verify their inclusion and coding. This is a test both of the transfer of information from the CINEP source to RSV and of the quality of the CINEP raw information itself, which turns out to be high. Third, they find all the major events in the dataset and carefully investigate each one in the press record. Finally, they compare lists of significant events from other sources, such as Human Rights Watch and Colombian government reports, with RSV, occasionally adding events after thoroughly investigating them themselves.

International cross-sectional datasets

Table I lists the main relevant datasets, summarizes their nature and relates them to Colombia. This is not an exhaustive survey like the one provided in Eck (2003). Rather, we select influential datasets that are relatively accessible, focus on intra-state rather than inter-state conflict and use quantitative fatality thresholds.²

The object of study varies across the datasets both in terminology and content. COW, CWT, and datasets by Doyle and Sambanis (2000) and Fearon and Laitin (2003) all focus on the category “civil war”. There is some variation in the definition of civil war across these datasets but at the intersection of the qualitative components of these definitions there are the following requirements: civil wars occur within the recognized boundaries of a state; the state fights against organized groups striving for political power; the rebels effectively challenge the sovereignty of the state in some regions; animosity between parties of the conflict together with the fact that peace would require living together affects the type of peace settlement that can be reached. It is quite clear that the Colombian conflict satisfies these criteria.³ All of the databases also define violence thresholds that a conflict must cross if it is to be included (Table I). RSV indicates that all these thresholds are comfortably satisfied for Colombia from 1988 to the present.⁴

² The IISS dataset is an exceptional case that does not employ quantitative violence thresholds but we list it anyway since it provides a time series for its intensity measure.

³ Rabasa and Chalk (2001) gives a good overview of the Colombian conflict.

⁴ Nevertheless, many analysts of the Colombian conflict insist that, although it is a very serious affair, the conflict should not be described as a civil war. Posada (2001), for example, stresses that the illegal armed groups in Colombia enjoy very little popular support. In his view, civil war terminology endows these violent actors with undeserved legitimacy, constantly encouraging the notion that the State should negotiate with them and address their concerns. In this view, conflicts should be classified as civil wars only when

Beyond the question of civil war, there is considerable variety among cross-country datasets, beginning with the range of terminology and definitions of the object of study (Table I). Some databases are not regularly updated since they were created for specific projects that have already been completed. Other databases are updated regularly. Some datasets include time series on killing rates while others just give aggregate numbers or even omit conflict intensity numbers entirely. Fearon and Laitin (2003) use intensity as a screen for dataset inclusion but do not include intensity information in their dataset.

insurgents enjoy substantial civilian support. Such arguments are alien to Table I so we do not pursue them further here, although perhaps the quantitative civil war literature should take account of them.

Table I. Treatment of the Colombian conflict in Cross-country Datasets

Dataset	Source	Type of Event (a)	Violence threshold	Time Series	Start date (b)
Civil War Termination (CWT)	Licklider (1995)	Civil War	1,000 battle-related fatalities per year. The weaker side must impose yearly? casualties on its opponent of at least 5% of its own	No	1978
Correlates of War (COW) - Intrastate War	Sarkees (2000)	Civil War		No	1984
Doyle and Sambanis	Doyle and Sambanis (2000)	Civil war	1000 battle-related fatalities per year	No	1978
Fearon and Laitin	Fearon and Laitin (2002)	Civil War	The conflict killed or has killed as least 1000 over its course, with a yearly average of at least 100. At least 100 of the dead are on the side of the government (including civilians).	Yes	1963
International Institute for Strategic Studies (IISS)	IISS (2004)	Internal Armed Conflict	0	Yes (c)	1963
Interdisciplinary Research Programme on Causes of Human Rights Violations (PIOOM)	Jongman (2002)	Conflict	1) high-intensity conflict: more than 1000 conflict-related fatalities per year 2) low-intensity conflicts: between 100-1000 fatalities per year 3) violent political conflict: less than 100 deaths per year	No	1964
Project Ploughshares	Project Ploughshares (2004)	Armed Conflict	1000 battle-related fatalities per year	Yes (d)	1964
Stockholm International Peace Research Institute (SIPRI)	SIPRI (2004)	Major Armed Conflict	1,000 battle-related deaths in one calendar year	Yes (e)	1978
State Failure Task Force (SFTF)	Marshall et al. (2002)	Revolutionary War	An average of 100 fatalities per year	Yes	1984
Third-Party Intervention (TPI)	Regan (2002)	Ideological Civil Conflict	200 fatalities in total	No	1984
Uppsala Conflict Data Project (UCDP), Uppsala University and International Peace Research Institute, Oslo (PRIO); Uppsala/PRIO	Eriksson (2004)	Armed Conflict	1) Minor Armed Conflict: at least 25 battle-related deaths per year and fewer than 1,000 battle-related deaths during the course of the conflict 2) Intermediate Armed Conflict: At least 25 battle-related deaths per year and an accumulated total of at least 1,000 deaths, but fewer than 1,000 in any given year 3) War: At least 1,000 battle-related deaths per year	Yes	1965
Uppsala Conflict Data Program (UCDP)	UCDP (2004)	Armed Conflict		Yes	1965
World Military and social Expenditures (WMSE)	Sivard (1991)	War	1000 battle related fatalities per year	No	1986

(a) This column gives the terminology used in each dataset

(b) Starting year of the current conflict according to each dataset. They all consider the conflict as ongoing at the moment of their last update.

(c) Time series only from year 2000

(d) Time series only from year 1998

(e) Time series only from year 1997

Inspection of the treatment of Colombia in the datasets suggests significant variation in their quality. For example, COW lists the Colombia conflict as one between the State, M19 and drug lords, that is, it lists as the only active guerrilla group a rather small and

urban organization that demobilised in 1989 and became a political group after a peace agreement with the government. At the same time it ignores both what is arguably the largest active guerrilla group in the world by the estimated number combatants (the Armed Revolutionary Forces of Colombia: FARC in its Spanish acronym) and the large right-wing illegal paramilitaries. Generally the datasets do not attempt to build time series on killings and the few exceptions give quite wide ranges (Table II). When there are no underlying time series we find it difficult to place great confidence in aggregate numbers. The summary numbers that appear in most datasets are poorly documented but seem to trace back to COW with corrections, expansions and updates in accordance with the specific aims of various research projects. COW deserves great recognition for its ground-breaking nature but it has serious shortcomings.⁵ Notably, COW's defining quantitative threshold for coding conflict episodes, 1,000 battle-related fatalities per year, presumes the existence of an annual time series. Yet the dataset shows no time series on intensity for any countries and a careful inspection of the most complete methodological account of the project (Small and Singer, 1982) suggests that there probably never were time series and that the annual threshold tests were performed by averaging aggregate casualty figures taken from bibliographical sources. In fact, before the 1990s only the State Failure Task Force (SFTF; Marshal et al., 2002), Uppsala/PRIO and UCDP datasets provide annual conflict intensity time series.⁶ The former gives a discrete intensity index that varies from 0 (less than 100 fatalities per year) to 4 (more than 10,000 per year) with

⁵ See Sambanis (2001) for a detailed discussion of COW and its problems.

⁶ The UCDP of Uppsala University has been collecting data on armed conflicts since the late 1980s. It has recently begun collaboration with the International Peace Research Institute, Oslo (PRIO) and it has expanded its database to cover the post World War II period (Gleditsch et al., 2002), producing what we call the Uppsala/PRIO dataset. The UCDP further expanded their coverage by adding new variables and released a searchable web-based dataset on armed conflicts (UCDP, 2004) that we call in our tables UCDP.

very wide ranges in between. Uppsala/PRIO, similarly, provides an index that goes from 1 (at least 25 battle-related deaths per year and fewer than 1,000 over the course of the conflict) to 3 (at least 1,000 per year), and UCDP offers a narrower range of actual figures for battle-related fatalities beginning in 1989.⁷

Comparing numbers

Table II compares RSV with the data from the cross-country datasets that provide time series on conflict-related killing. Some of the datasets give ranges of figures so that these comparisons are sometimes ambiguous. Nevertheless, half the estimates in the table are unambiguous underestimates compared to RSV. The degree of underestimation varies widely and is often very high. For example, the mean of the range for UCDP never exceeds 2/3 of the RSV figures, is less than half of RSV's figure in most years and is less than 1/3 of RSV's figure in 2002. The SFTF dataset in 1999 accounts for the only clear overestimate in Table II. The numbers in this dataset jump around erratically between 1996 and 2001 while the conflict was intensifying continuously, raising the possibility that the number for 1999 is simply an error. Even when the figures in Table II are compatible with RSV's the ranges are very wide. The general conclusion we draw from Table II is that the big datasets are underestimating the magnitude of the Colombian conflict. We are very confident in this finding because in assembling and maintaining the dataset on Colombia, the RSV team focuses on clear conflict-related activities, excluding, for example, political assassinations. These crimes might be related to the conflict, but are often perpetrated by common criminals and associated with corruption and personal

⁷ Despite their similar approaches SFTF and Uppsala/PRIO-UCDP treat Colombia very differently. SFTF's dataset inclusion criterion is less strict but, nevertheless, codes no conflict between 1960 and 1984 while Uppsala/PRIO and UCDP date the start of the current conflict as 1965.

vendettas. Thus, it is unlikely that RSV overestimates the intensity of the Colombian conflict so the big datasets must be underestimating it.

Table II. Total annual deaths when time series are available

year	RSV	IISS	Ploughshares	SIPRI	SFTF	Uppsala/PRIO	UCDP
1988	1859				1000 - 5000	25 - 1000	
1989	1236				1000 - 5000	1000 +	152 - 732
1990	1820				1000 - 5000	1000 +	395 - 1229
1991	1860				1000 - 5000	25 - 1000	578 - 1364
1992	2036				1000 - 5000	1000 +	541 - 1478
1993	1560				1000 - 5000	1000 +	187 - 1331
1994	1375				1000 - 5000	25 - 1000	333 - 1243
1995	1330				1000 - 5000	25 - 1000	324 - 1105
1996	1582				100 - 1000	25 - 1000	817 - 1300
1997	1741				500 - 1000	1000 - 5000	25 - 1000
1998	2417		2000 - 4000		1000 - 1500	1000 - 5000	467 - 1703
1999	2710		2000 - 3000		1000 +	10000 +	939 - 1138
2000	3101	3000 -	1200		1000 +	1000 +	827 - 1837
2001	3245	3000 -	2500 +	2000 - 3000	1000 - 5000	1000 +	938 - 1153
2002	4038	3000 -	3500		1500 +	1000 +	883 - 1362
						1000 +	972 - 1309

figure underestimated
figure overestimated

SFTF, Uppsala/PRIO and UCDP classify conflicts into several intensity categories (Tables I & II). SFTF usually chooses the correct band, given RSV's figures, but their bands are very wide. Uppsala/PRIO has very wide bands and often chooses a lower intensity category than RSV's numbers suggest would be correct. UCDP provides two separate annual intensity measures. The first is a classification into the same categories as in Uppsala/PRIO.⁸ The second are tighter estimates of annual killings which are systematically below RSV's figures.

Figures 1, 2 and 3 graph RSV's numbers against those of SFTF, Uppsala/PRIO and UCDP. The shaded part of figures 1 and 2 represent the ranges on SFTF and Uppsala/PRIO respectively and the dotted lines of figure 3 that of UCDP. One of the

⁸ We do not include these classifications in Table II because they are identical to those of Uppsala/PRIO except for 1989. Since the Uppsala team participated in both of these datasets we think that the 1989 figure might have been an error.

main points of Restrepo et al. (2003) was that there was a major upsurge in the conflict between 1996 and 2002. None of the other datasets capture this important fact. SFTF would suggest a huge decline in conflict intensity. The Uppsala/PRIO numbers do suggest an upsurge for 1994-2002 but its classifications between 1988 and 1994 fluctuate so much that one cannot, on their basis, develop much confidence that the conflict really was intensifying during 1994-2002. The UCDP range is essentially flat during the upsurge. Moreover, the distance between UCDP's upper and lower ranges narrows during the upsurge period, suggesting increasing confidence in this flat pattern.

Figure 1. RSV vs. SFTF

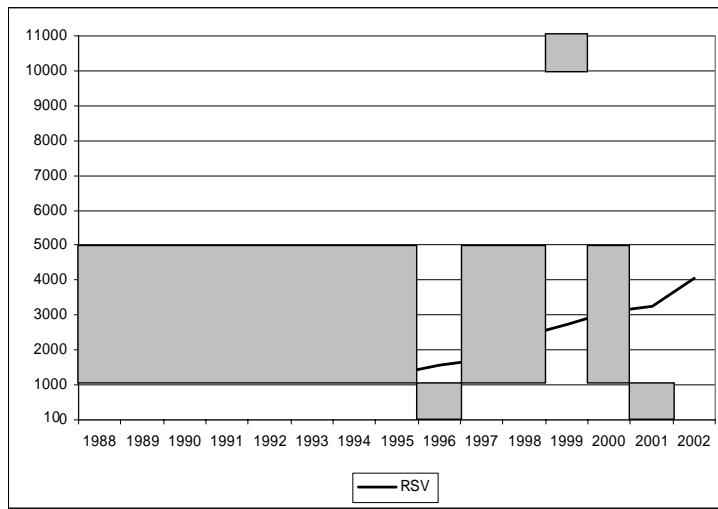


Figure 2. RSV vs. Uppsala/PRI

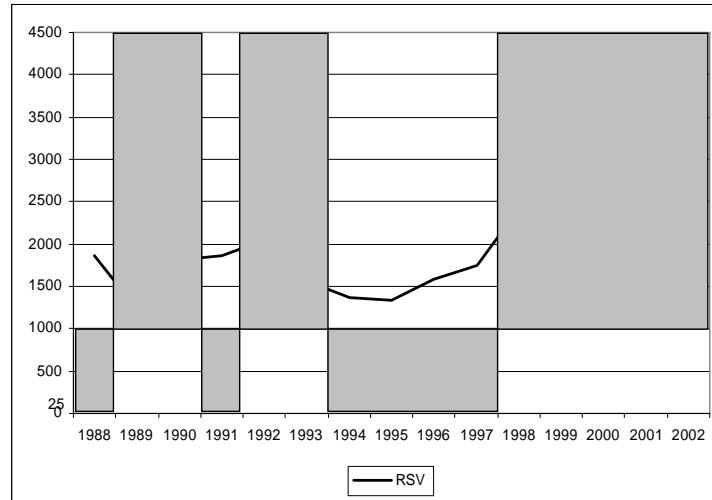
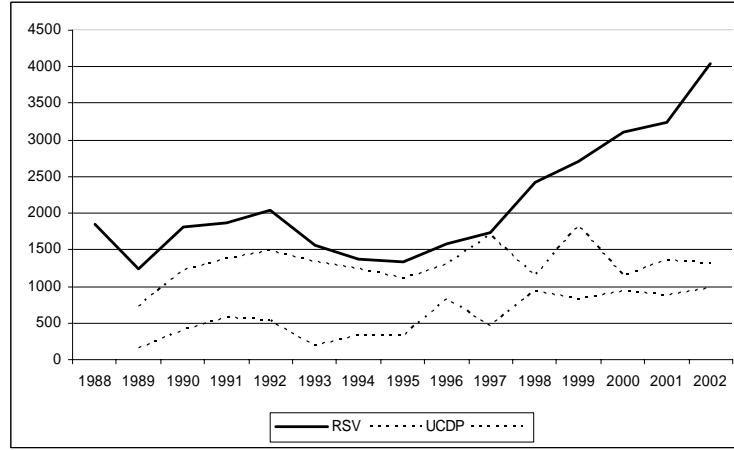


Figure 3. RSV vs. UCDP



In Table III we compare RSV's numbers with those in all the cross-country datasets presented in Table I. Since the different datasets cover different years in the conflict we compute annual average killing rates in each case. Eight of the thirteen datasets with numbers underestimate the killing rate while three datasets give overestimates and the

remaining two offer ranges that include RSV's number. COW and COW2 are very close to RSV's figure.⁹

Table III. Annual averages for killing rates

Dataset	(1)	(2)	(3)
RSV	1988 - 2002	31,910	2,127
CWT	1978 - 1991	15,849	1,132
COW	1984 - 1992	22,000	2,444
COW2	1984 - 1997	31,000	2,214
Doyle and Sambanis	1978 - 1992	22,000	1,467
IISS	1963 - 2002	56,000	1,400
PIOOM	1964 - 2001	50,000 - 300,000	1,316 - 7,895
Ploughshares	1964 - 2002	50,000	1,282
SIPRI	1964 - 2002	41,000	1,051
SFTF	1984 - 2001	22,500 - 65,000	1,250 - 3,611
TPI	1984 - 1999	11,000	688
Uppsala/PRIO	1965 - 2002	9,725 - 23,375	256 - 615
UCDP	1989 - 2002	8,353 - 18,284	597 - 1,306
WMSE	1986 - 1990	22,000	4,400

(1) Years of the Colombian conflict covered in each dataset.
(2) Total number of deaths during the period reported in (1)
(3) Annual average number of deaths during the period reported in (1)

underestimated	Colours compare the annual average of each dataset with the figure for RSV
overestimated	

Conflict intensity varies from year to year and the years of coverage of the various datasets vary as well. Therefore, the comparisons of Table III are potentially misleading. We address this issue by presenting in Table IV average death tolls for each dataset for the years of overlap with the RSV data and compare those figures with the RSV average death toll for these overlap years.¹⁰ The results turn out to be identical with those of table III. We can, therefore, be confident about the relationship between the figures in each dataset and the RSV dataset.

⁹ COW2 is the 1997 update of the original COW dataset (Sarkees, 2000).

¹⁰ Note that the figures for column 3 in Table III often coincide with those of column 3 in Table IV. This happens either when a dataset does not provide a time series or when years covered by a time series are contained in the years covered in RSV.

Table IV. Annual averages for killing rates in overlap years

Dataset	(1)	(2)	(3)
RSV	1988 - 2002	2,127	2,127
CWT	1988 - 1991	1,694	1,132
COW	1988 - 1992	1,762	2,444
COW2	1988 - 1997	1,640	2,214
Doyle and Sambanis	1988 - 1992	1,762	1,467
IISS	1988 - 2002	2,127	1,400
PIOOM	1988 - 2001	1,991	1,316 - 7,895
Ploughshares	1988 - 2002	2,127	1,282
SIPRI	1988 - 2002	2,127	1,051
State Failure	1988 - 2001	1,991	1,178 - 3,167
TPI	1988 - 1999	1,694	688
Uppsala/PRIO	1988 - 2002	2,127	246 - 605
UCDP	1989 - 2002	2,147	597 - 1,306
WMSE	1988 - 1990	1,638	4,400

(1) Overlap years between RSV and the other datasets
(2) Annual average for RSV during overlap years.
(3) Annual average for each dataset

underestimated	Colours compare the figure with the annual average of RSV during overlap years
overestimated	

Conclusion

We have produced a snapshot of the world of cross-country conflict datasets. Our analysis suggests that these datasets systematically underestimate the magnitude of the Colombian conflict and miss the significant upsurge in activity between 1996 and 2002.

Cross-country datasets have been instrumental in expanding our understanding of civil wars.¹¹ Econometric and statistical analyses of these datasets have generated much stimulating insight and debate (Collier and Hoeffler, 2004; Fearon and Laitin, 2003; Elbadawi and Sambanis, 2002). Generally these econometric studies of civil wars do not fall afoul of our critique, as they have avoided analyzing both conflict intensities and their dynamics. Instead, they have simply used information on whether or not countries are at war at particular points in time. In fact, this focus is sensible given the limitations of the cross-country datasets highlighted in our paper.

¹¹ These insights are summarised in World Bank (2003) and Fitzgerald and Stewart (2000).

We believe that significant further progress in civil war research will require improvements and extensions of existing datasets and the development of new ones so that investigators can open up the black box of conflict intensity and its dynamics. The key to this research programme is the construction of more micro datasets similar to RSV. This will be our main priority in the future and we hope that other conflict researchers will join us in this endeavour.

References

- Collier, Paul & Anke Hoeffler, 2004. ‘Greed and Grievance in Civil Wars’, *Oxford Economic Papers*, forthcoming
- Eck, Kristine, 2003. ‘Conflict Dataset Catalogue’, manuscript, Department of Peace and Conflict Research, Uppsala University
(www.pcr.uu.se/research/UCDP/conflict_dataset_catalog/confliktdatasetcatalog.pdf)
- Elbadawi, Ibrahim & Nicholas Sambanis, 2002. ‘How Much War Will We See? Explaining the Prevalence of Civil War’, *Journal of Conflict Resolution* 46(3): 307-334.
- Eriksson, Mikael, ed, 2004. *States in Armed Conflict 2002*. Uppsala: Uppsala University Press.
- Doyle, Michael & Nicholas Sambanis, 2000. ‘International Peacebuilding: A Theoretical and Quantitative Analysis’, *American Political Science Review* 94 (4): 779-801.
- Fearon, James & David Laitin, 2003. ‘Ethnicity, Insurgency, and Civil War’ *American Political Science Review* 97 (1): 75-90.
- Fitzgerald, Valpy & Francis Stewart, 2000. *War and Underdevelopment, Volume 1. The Economic and Social Consequences of Conflict*. Oxford: Oxford University Press.
- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg & Håvard Strand, 2002. ‘Armed Conflict 1946–2001: A New Dataset’ *Journal of Peace Research* vol. 39 (5): 615-637.
- IISS, 2004. *Armed Conflict Database*. Web-based dataset, The International Institute for Strategic studies (<http://www.iiss.org/showpage.php?pageID=25>).

- Jongman, Albert, 2002. *World Conflict and Human Rights Map 2001/2002*. Conflict Map, Leiden: Department of Political Science, Leiden University.
- Licklider, Roy, 1995. ‘The Consequences of Negotiated Settlements in Civil Wars, 1945-1993’ *American Political Science Review* 89 (September): 681-690.
- Marshall, Monty G., Ted Robert Gurr & Barbara Harff, 2002. ‘State Failure Task Force Problem Set Codebook: Internal Wars and Failures of Governance, 1955-2001’, manuscript (<http://www.cidcm.umd.edu/inscr/stfail/sfcodebk.htm>).
- Posada, Eduardo, 2001. ‘Civil War? The Language of Conflict in Colombia’, manuscript, Fundación Ideas para la Paz, Bogotá. Colombia.
- Project Ploughshares, 2004. *Armed Conflicts Report 2003*. Waterloo, Canada: Project Ploughshares, Institute of Peace and Conflict Studies.
- Rabasa, Angel & Peter Chalk, 2001. ‘Colombian Labyrinth’, Santa Monica, CA: RAND.
- Regan, Patrick, 2002. ‘Third Party Interventions and the Duration of Civil Wars’, *Journal of Conflict Resolution* 46 (1): 55-73.
- Restrepo, Jorge, Michael Spagat & Juan F. Vargas, 2003. ‘The Dynamics of the Colombian Civil Conflict: A New Dataset’, forthcoming in *Homo Oeconomicus*.
- Restrepo, Jorge & Michael Spagat, 2004. ‘The Colombian Conflict: Uribe’s First 17 Months’, manuscript, Royal Holloway College, University of London.
- Sambanis, Nicholas, 2001. ‘A Note on the Death Threshold in Coding Civil War Events’, *Conflict Processes Newsletter*, June (<http://mailer.fsu.edu/~whmoore/cps/newsletter/june2001/>).
- Sarkees, Meredith R., 2000. ‘The Correlates of War Data on War: An Update to 1997’, *Conflict Management and Peace Science* 18 (1): 123-144.
- SIPRI (2004). *Major Armed Conflicts*. Web-based dataset, Stockholm: Stockholm International Peace Research Institute (<http://first.sipri.org/>).
- Sivard, Ruth, 1991. *World Military and Social Expenditures*. Washington: World Resources Institute.
- Small, Melvin & J. David Singer, 1982. *Resort to Arms: International and Civil Wars, 1816-1980*. Beverly Hills, CA: SAGE.

UCDP (2004). *The Uppsala Conflict Database*. Web-based dataset, Uppsala: The Uppsala Conflict Data Project, Department of Peace and Conflict Research, Uppsala University (<http://www.pcr.uu.se/database/index.php>).

Wallensteen, Peter & Karin Axell, 1993. ‘Armed Conflict at the End of the Cold War, 1989-1992’, *Journal of Peace Research* 30 (3): 331-346.

World Bank, 2003. *Breaking the Conflict Trap: Civil War and Development Policy*. Washington: World Bank Policy Report.