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Civil Conflict in Developing Countries Over the Last Quarter of a Century: An Empirical Overview of Economic and Social Consequences

FRANCES STEWART, FRANK P. HUMPHREYS & NICK LEA

ABSTRACT *There is a growing number of wars in developing countries and they are concentrated among the least developed countries. This paper explores their economic and social consequences by examining the behaviour of countries worst affected by war from 1970 to 1990. Despite problems about methodology and data some important conclusions emerge. There were invariably large economic and social costs in addition to the direct battle deaths, although the effects varied according to the nature and duration of the conflict and the state of the economy. The costs are indicated by losses in GDP, exports and food production per capita compared with what might have been expected in the absence of conflict. In most cases, trends in infant mortality rates were significantly worse in war-affected than comparable economies. The extent of these losses varied, however, while other effects, such as on savings and investment propensities, government revenue shares and expenditure on social services, differed sharply among economies in conflict, reflecting differences in conditions, in government and donor policy and civil and private initiatives.*

1. Introduction

Violent internal conflict, or civil war, appears to be important both as a source and a consequence of underdevelopment. Of the 20 countries ranked lowest in terms of income per capita or Human Development Index, 40% have experienced major conflict during the last quarter of a century. Moreover, the incidence of large-scale violent conflict remains high; while those inspired by the Cold War have ended, new conflicts have emerged with the subsequent relaxation of the big power controls.

Conflicts not only have obvious direct ill effects on people, killing or maiming them, but also can be expected to have large indirect adverse effects as a consequence of the changes in the economy which result from conflict. These include the effects of the destruction of physical and human capital, shifts in resources from productive to war-related uses, inflation and disrupted markets.

The aim of this paper is to identify and present an empirical overview of some of the economic and social costs of civil conflict in the last 25 years. Attention is focused on *internal* conflict (inappropriately named "civil") because it has been much more

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prevalent among poor countries in recent years, and tends to have different effects on the economic and social system than international conflict, generally apparently being more disruptive.[1] In many cases, it is difficult to draw a clear dividing line between internal and international conflict, since foreign countries can take a strong role in internal conflicts (e.g. in Korea, Vietnam, Mozambique, etc.). We shall define as "internal" any conflict where there are major groups on different sides *within* a nation, even though other nations may also be active participants.

The next section of the paper identifies the incidence, regional location and severity of internal conflict, focusing on the recent past, but putting this into the context of the history of the last 200 years. The third section briefly points to expectations about the nature, direction and magnitude of the effects of civil war, at macro, meso and household levels, drawing on economic analysis of the mechanisms by which such costs occur. Section 4 reviews some empirical evidence of how major economic and social variables changed in the countries worst affected by conflict in the 1970s and 1980s. However, actual developments may not be indicative of changes *due* to conflict, since many other changes were occurring simultaneously (e.g. the debt crisis and falling commodity prices), which affected what happened. Some attempt is made to allow for the counterfactual, by comparing performance in major variables in a conflict-country with that of developments in the region as a whole. Section 5 presents some conclusions.

2. The Incidence of Violent Conflict

The first issue that has to be dealt with is that of definition. Violent conflict occurs in all societies at all times: how does one differentiate what is commonly called "crime" from "civil war"? Two criteria are used: one is that the conflict challenges the government's authority, aiming to overthrow or change the regime, whereas crime, *per se*, is not directed towards political change. This challenge to government authority is usually organized. The second criterion is one of magnitude: only conflicts involving more than 1000 deaths a year will be considered. Such deaths may be the direct outcome of the conflict (i.e. due to bullets, bombs, mines, etc.), or indirectly caused as a result of some of the economic and social consequences of conflict. For the years before 1960, we have access only to data for direct battle deaths. When we come to an assessment of economic and social consequences our investigations relate to countries which lost 0.5% or more of their 1990 population over the 20 years between 1970 and 1990. The reason is that smaller conflicts may not have visible consequences in the country-wide data which will be used. Once effects of the large conflicts have been identified, subsequent research may explore whether similar effects are to be found among countries experiencing smaller disturbances.

An investigation into international and civil conflicts from 1816 showed that there were 54 international conflicts from 1816 to 1960, with battle deaths of more than 1000 per nation per year, of which in 11 more than 0.5% of the current population of at least one of the nations involved died. Over the same period there were 71 civil conflicts with more than 1000 battle deaths per year, nine of which caused the deaths of over 0.5% of the population, a further five the deaths of between 0.25 and 0.5% of the population and eight the deaths of between 0.1 and 0.25%.[2] Regionally, the conflicts were widely distributed as shown in the data for large (with over 20 000 deaths) conflicts (Table 1). In contrast to post-1960 conflicts, no major African civil wars were recorded, although a number were excluded from the data base on the

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Table 1. Major civil conflicts, 1816–1960

Region and countries	Deaths		Dates
	More than 100 000	More than 20 000	
Africa (0)	—	—	
Asia (5)			
China	350 025		1860–68
		75 000	1929–30
	200 000		1930–35
	1 000 000		1946–50
Indonesia		30 000	1956–60
Europe (6)			
USSR	502 225		1917–20
Spain	658 300		1936–39
Greece	160 135		1944–45
Portugal		20 100	1829–34
Spain		32 650	1834–40
France		20 000	1871
North America (1)			
USA	650 000		1861–65
Latin America (4)			
Colombia	100 000		1899–1903
	300 000		1949–62
Mexico	250 000		1910–20
Venezuela		20 000	1859–63

Source: Small & Singer (1982).

Note: A number of conflicts are excluded from the Small/Singer data base either because of lack of data or because less than 1000 per annum were killed or because they are defined as a "massacre" rather than a civil conflict. These exclusions explain the absence of conflicts in Africa in this table.

grounds that the countries concerned were not recognized states. There were more conflicts in Latin America than in the post-1960 era. There were important conflicts in China and Europe, and the American Civil War, areas which do not feature in the 1960–90 count of major civil conflicts (see Table 2).

During the 19th Century there were large fluctuations in the number of ongoing civil conflicts with deaths of more than 1000, but no trend. In the 20th Century, there were increases in the total number of such wars from 1948, but not per nation, as the number of nations also rose. Battle deaths from civil conflicts peaked in the decade 1860–70, though it must be noted that the holocaust of the late 1930s and 1940s was not included by Small and Singer.

From 1950, as shown in Table 3, there has been a definite rise in the numbers of conflicts, both large and small, with the total rising from 15 to 32 in the 1960–54 to 1985–90 periods, with large conflicts (over 100 000 deaths) rising from seven to 13. The change is entirely accounted for by the rise in conflicts in Africa, from two small conflicts to seven small and 10 large. Of course, the number of independent nations has grown massively over these 40 years; during the Colonial era, potential conflicts and/or information about them were frequently suppressed. From 1960 to 1990, Africa had by far the greatest number of conflicts in which more than 1000 died per year of war, with

Region and countries

Africa(0) *Asia* (5) China

Indonesia

Europe (6) USSR Spain Greece Portugal Spain France

North America (1) USA

Latin America (4) Colombia

More than 100 000

350 025

200 000 1 000 000

502 225 658 300 160 135

650 000

100 000 300 000 250 000

More than 20 000

Dates

1860-68 1929-30 1930-35 1946-50 1956-60

1917-20 1936-39 1944-45 1829-34 1834-40 1871

1861-65

1899-1903 1949-62 1910-20 1859-63

Mexico
Venezuela 20

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data base either because

Table 2. War deaths 1960–90 by region

	Sample			Deaths (thousands)	
	Number of countries	Number of countries with wars	Percentage of countries with wars	Mean	Total
Africa	45	19	42	323	6134
Mozambique					1080
Nigeria					2006
Sudan					1006
(Other)				(128)	(2042)
Far East	12	9	75	545	4902
Cambodia					1221
Vietnam					2394
(Other)				(184)	(1287)
South Asia	6	5	83	480	2398
Afghanistan					1300
Bangladesh					1000
(Other)				(33)	(98)
Middle East	11	8	73	125	997
Latin America	24	12	50	38	453
Oceania	2	0	0	0	0
Total:	100	53	53	281	14 884

Source: Sivard (1991).

over a third of the total conflicts. Although the African incidence is less than in other regions when expressed as a proportion of the countries in each region, the number of deaths in Africa (direct and indirect) is the highest as a proportion of the population, exceeding 1%. Deaths as a proportion of the population were 0.4% in Asia and 0.1% in Latin America (Table 4). (If India and China are excluded, however, the Asian incidence is comparable to that of Africa.) In Africa, with nearly half the countries affected, and with many showing signs of heavy social and economic costs, conflict has emerged as a major obstacle to development.

Low-income countries had a higher incidence of wars (60% of the countries, compared with 52% among lower-middle-income countries and 35% among upper-middle-income). Of some 15m deaths through war in developing countries between 1960 and 1990, 12.4m occurred in low-income countries—that is 1.3% of low-income countries' total 1990 population, excluding the huge populations of India and China. A question that arises, therefore, is whether low-income countries are more vulnerable to war (i.e. whether their conflicts tend to occur more often and/or be more severe) or whether the apparent heavier incidence of conflicts among low-income countries arises because war has a severe adverse effect on income. Either proposition could explain why no developing country that has had a war between 1960 and 1990 in which 30 000 people or more died is now in the upper-middle-income group.

One reason why wars might be more severe in poorer countries is because the threat of injury or premature death is regarded as of less importance when life has little to offer (see Galbraith, 1993). According to Galbraith, "It is perhaps the prime reason, that armed conflict and death are so extensively the fate of the poorest on the planet. Not remarkably, they are the most easily persuaded that the next life will be better because for many it could not be worse" (p. 128).

Number of countries

45

12

6

11

24

Total: 100

Source: Sivard (1991).

Sample

Number of

countries with wars

19

9

5

8 12 0

53

Percentage

of countries with wars

42

75

83

73 50 0

53

Deaths (thousands)

Mean Total

323 6134 1080 2006 1006

(128) (2042) 545 4902 1221 2394

(184) (1287) 480 2398 1300 1000

(33) (98) 125 997 38 453 0 0

281 14 884

Africa Mozambique Nigeria Sudan (Other)

Far East Cambodia Vietnam (Other)

South Asia Afghanistan Bangladesh (Other)

Middle East
Latin America
Oceania 2

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Table 3. The years of war by region and severity, average number of countries at war each year 1950–90

	50–54			55–59			60–64			65–69			70–74			75–79			80–84			85–90		
Years 1950–90	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
Far East	5	2	2	2	1	—	2	1	1	3	2	2	3	2	1	3	2	1	2	1	—	2	—	—
Latin America	1	1	1	1	1	1	1	1	1	1	1	—	1	1	—	2	1	—	4	1	—	5	1	—
Africa	2	—	—	4	2	—	6	3	—	5	2	2	6	2	2	5	3	3	7	4	4	8	6	6
Middle East	—	—	—	1	—	—	1	1	—	3	1	—	1	—	—	1	1	—	1	1	1	2	1	1
South Asia	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	2	1	1	3	1	1
Oceania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	8	4	3	9	5	1	11	6	2	12	6	3	12	5	3	13	7	5	16	7	6	19	7	6

Source: Sivard (1991); World Bank (1995).
a: Wars in which 1000 or more died each year.
b: Wars in which 100 000 or more died in total.
c: Wars in which 300 000 or more died in total.

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50-54 55-59 60-64 65-69 70-74 75-79 80-84 85-90 Years1950-90 abc abc abc abc abc abc abc abc

FarEast 52221 21132232132121 2 LatinAmerica 11111111111—11—21—41—51— Africa 2———42—63—522622533744866 MiddleEast ———1——11—31—1——11—111211

Total 8 4 3 9 5 1 11 6 2 12 6 3 12 5 3 13 7 5 16 7 6 19 7 6

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Table 4. The incidence of conflict by region, 1960–90

Region	Number of countries in conflict	Number of countries in region	Percentage of countries in conflict	Deaths from wars, 1960–90, millions	Percentage of population in region who died in conflict
Africa	19	45	42	6.1	1.1
Asia	14	28	50	7.3	0.4
Middle East	8[a]	11	73	1.0	0.6
Latin America	12	24	50	0.5	0.1
Low-income	30	50	60	12.4	0.4
Lower-mid income	17	33	52	2.4	0.4
Upper-mid income	6	17	35	0.06	0.01
Total	53	98	54	14.9	0.4

Source: Sivard (1991); World Bank (1995).
[a]Includes Iran and Iraq international conflict.

To explore whether income has a causal role in the outbreak of war we correlated income per capita 1970 and infant mortality rate 1970 with outbreak of war subsequently in the 1970s and 1980s. In a sample of 78 developing countries, it was found that 1970 income rank was slightly positively correlated (with a coefficient of 0.079) with the subsequent outbreak of war, while infant mortality was negatively correlated with subsequent outbreak of war (with a coefficient of -0.185). Both results contradict the hypothesis that low income is a strong predictor of war.[3] In contrast, income per capita in 1970 was negatively and infant mortality positively correlated with the occurrence of war in the 1960s, as would be expected if war has a negative effect on income.

We now explore the second possibility—that war has an adverse effect on income which explains the higher incidence among low-income countries. In Table 5, we examine the change in per capita income ranks over time of 74 developing countries.[4] As can be seen, both war countries and low-income countries moved down the rankings from 1970 to 1990. The latter movement is unsurprising as low-income countries are categorized as such on the basis of their current income and therefore on average the group as a whole cannot have been ranked lower in the past. The drop in the rank of war countries is more significant. In 1970, the average income rank of the war countries was almost five places higher than that of non-war countries. By 1990, war countries had dropped over three ranks on average and the position had been reversed, with war countries on average being ranked below non-war countries. This change in fortunes is equally clear when we examine countries in different income groups. The ranks of countries that were low-income in 1990 and had wars between 1960 and 1990 dropped over seven places on average. The almost static ranking of middle-income war countries should also be interpreted as a relatively negative performance because countries that were middle income in 1990 would, *ceteris paribus*, be expected as a group to have been moving up the rankings from the past. Non-war middle-income countries increased their rank by nearly seven places in the 20-year period.

The negative effect of war on income, when combined with the tendency for low-income countries to move down the income ranks, results in an especially large drop in income performance among low-income countries that have had wars. None

Region

Africa
Asia MiddleTJast Latin America

Number of countries in conflict

19 14

8" 12

Percentage Number of of

countries countries in in region conflict

45 42 28 50 11 73 24 50

50 60 33 52 17 35

98 54

Deaths Percentage of from population in wars, region who

1960-90, died in millions conflict

6.1 1.1 7.3 0.4 1.0 0.6 0.5 0.1

12.4 0.4 2.4 0.4 0.06 0.01

14.9 0.4

Table 4. The incidence of conflict by region, 1960-90

Low-income 30 Lower-mid income 17 Upper-mid income 6

Total 53

Source: Sivard (1991); World Bank (1995). "Includes Iran and Iraq international conflict.

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Table 5. Ranks over time of GNP per capita, in 74 countries, $ current price

	Sample size	Mean rank of GNP per capita[a] 1970	1976	1985	1990	Change 1970–90
Total	74	37.5	37.5	37.5	37.5	0
War[b]	35	35.0	37.4	36.5	38.4	−3.3
Non-war	39	39.7	37.6	38.4	36.7	+3.0
Low-income	33	53.3	55.3	56.6	57.8	−4.5
War[b]	16	49.2	53.4	53.3	56.5	−7.3
Non-war	17	57.2	57.1	59.5	59.0	−1.8
Middle-income	41	24.8	23.2	22.1	21.1	+3.5
War[b]	19	23.1	24.0	22.2	23.1	+0.02
Non-war	22	26.2	22.5	22.0	19.6	+6.7

Source: Sivard (1993); World Bank (1995).

[a]A rank of 1 is given to the country with the highest level of GNP per capita, and 74 to the country with the lowest GNP per capita.

[b]War countries are defined as countries where 1000 people or more died a year, directly or indirectly, due to violent political conflict.

the less, the income data cannot be taken solely at face value—a drop in the official income data may be mitigated by an increase in activity in the informal sector (a predicted effect of war, discussed below).

Table 6 records the 16 worst affected countries in the 1970s and 1980s, including one international war (Iran/Iraq), with the remainder being internal, though frequently with strong interventions from outside. These 16 countries constituted the preliminary sample for the empirical analysis of this paper. However, lack of data for the three Asian countries (Afghanistan, Cambodia and Vietnam) and two of the three countries in the Middle East (Iraq and Lebanon) has forced us to focus almost exclusively on the six countries in Africa and the three in Latin America.

3. Expectations about the Economic and Social Consequences of Civil Conflict

The negative effects of conflict on economic development and human welfare seem obvious and are widely acknowledged. Moreover, there is a growing theoretical literature exploring expected effects.[5] This section does not review the literature in depth, but derives from it some broad hypotheses about the economic consequences of conflict, in order to provide a context in which to place the empirical findings of Section 4.

Clearly, the effects of conflict depend in part on the nature and duration of the conflict, and the conditions (income levels, structure, external dependency, flexibility) in the economy concerned. Consequently, it is impossible to generalize about the effects of all conflicts. For example, a conflict which involves the placing of mines in agricultural terrain on a large scale, as in Cambodia, will have significant negative effects on food and possibly export production, with highly adverse effects on the economy as a whole and the wellbeing of many people if a large proportion of economic activity and employment is agriculture based. In contrast, an economy which is highly dependent on trade, such as an oil-exporting economy which imports most of its food,

War
Non-war 17 57.2 57.1

Middle-income 41 24.8 23.2

b
War 19 23.1 24.0

Non-war 22 26.2 22.5

Source: Sivard (1993); World Bank (1995).

"A rank of 1 is given to the country with the highest level of

74 to the country with the lowest G N P per capita. b

Table 5. Ranks over time of GNP per capita, in 74 countries, $ current price

Sample
size 1970 1976

Total 74 37.5 37.5 Wai* 35 35.0 37.4 Non-war 39 39.7 37.6

Low-income 33 53.3 55.3 b

1985

Change 1990 1970-90

Mean rank of GNP per capita*

16 49.2 53.4

War countries are denned as countries where 1000 people or more died a year, directly or indirectly, due to violent political conflict.

the less, the income data cannot be taken solely at face value—a drop in the official income data may be mitigated by an increase in activity in the informal sector (a predicted effect of war, discussed below).

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37.5 37.5 36.5 38.4 38.4 36.7

56.6 57.8 53.3 56.5 59.5 59.0

22.1 21.1 22.2 23.1 22.0 19.6

0 -3.3 + 3.0

-4.5 -7.3 -1.8

+ 3.5 + 0.02 + 6.7

GNP per capita, and

Table 6. Sixteen major conflicts; countries where over 0.5% of the population died, 1970s and 1980s[a]

	Deaths, 1000s		As percentage 1990 population		Percentage civilian	
Country	1970s	1980s	1970s	1980s	1970s	1980s
Cambodia	1156	65	13.6	0.8	75	22
Afghanistan[b]		1300		7.8		62
Mozambique[b]		1050		6.7		95
Lebanon	100	63	3.7	2.3	75	65
Uganda	303	308	1.9	1.9	100	97
Angola		341		3.3		94
Iraq		400–600[c]		3.0[c]		10
Nicaragua	50	30[b]	1.3	0.8	50	50
Sudan		506		2.0		99
Vietnam[b]	1000 (est.)		1.5		49	
Guatemala		140		1.5		71
El Salvador		75		1.4		67
Ethiopia		609		1.2		85
Iran	88	500	0.2	0.9	80	10
Somalia		55[d]		0.7		91
Liberia		15		0.6		93

Source: Sivard (1991).
[a]Includes war-related famine.
[b]Foreign induced civil war.
[c]Estimates for Iraq uncertain.
[d]Excludes current problems.

would be badly affected by a trade embargo, which might have little effect on the first type of economy. A disturbance which is confined to one region of the country may affect that region in all sorts of ways, but have a small impact elsewhere (as shown, for example, for Sri Lanka by O'Sullivan in this volume).

Features of conflicts relevant to the economic effects include:

- the magnitude of the conflict, in terms of the proportion of the population actually fighting or being threatened—and hence potential deaths, migration and loss of trust;
- the duration of the conflict: in a short conflict, countries and households can call on various forms of reserve, but have little time to adapt. In a prolonged conflict, reserves are run down, but adaptation of various types is possible (e.g. new sources of income and employment may be created or new markets identified);
- the geographic spread of the conflict;
- the role and strength of the government and of quasi-governmental structures introduced by opposition forces. If governments collapse (and are not replaced by strong quasi-governmental structures), significant adverse effects can be expected on revenue collection and government expenditure, on security and hence on trust and transactions;
- international reactions to the conflict in terms of financial flows (which may be increased in support of government or rebels or decreased as a result of the conflict) and trade policies (embargoes, etc.).

Characteristics of economies which are relevant to the economic consequences include:

- the extent, actual and potential, of subsistence production, especially food, as a proportion of total activities; the higher subsistence the more might people (and the

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Country

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1970s

13.6

3.7 1.9

1.3

1.5

0.2

1980s

0.8 7.8 6.7 2.3 1.9 3.3 3.0 0.8 2.0

1.5 1.4 1.2 0.9 0.7 0.6

1970s

1980s

1
Afghanistan " 1300

11
Mozambique 1050

Lebanon 100 63 Uganda 303 308 Angola 341 Iraq 400-600'

c

75 22 62 95 75 65 100 97 94 10 50 50 99

49

71 67 85

80 10 91 93

Nicaragua 50 30

Sudan 506

l
Vietnam " 1000 (est.)

Guatemala 140 El Salvador 75 Ethiopia 609 Iran 88 500 Somalia 55 Liberia 15

Source: Sivard (1991). "Includes war-related famine.

b

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d
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economy) be protected against large losses, unless inhabitants are forced to migrate from subsistence areas;
- the reliance of the economy on imports; a highly dependent economy will be particularly adversely affected by loss of export earnings and/or foreign finance;
- the dependence of the economy on a few large plants (e.g. power plants), which are vulnerable to attack;
- the dependence of the economy on "social capital", including legal institutions, modern banking institutions, in which transactions are supported by a set of institutions and assumptions that lead to trust; this type of dependence is more likely in more developed economies (see Collier, 1995);
- the flexibility of the economy; flexible economies (as defined by Killick, 1995) will find it easier to adapt by substituting for imports, finding new markets, repairing or replacing damaged equipment or developing alternatives for formal sector institutions where these break down.

Characteristics of the society which are relevant to the magnitude of the human costs of conflict include:

- how near subsistence people are; when they are very near the survival limit, small changes can have devastating effects; the same changes might have only minor effects in richer economies (e.g. nutrition actually improved in wartime Britain, despite a cut in food availability, as rationing improved the distribution; in the recent war and embargoes in Iraq, rationing also prevented massive increase in mortality);
- support networks available to people, through their own families, civil society or the state; in general societies with strong family or community networks are able to protect people better when the state and other civil networks break down;
- the strength of governments, quasi-governments and NGOs;
- policies adopted by governments, quasi-governments and foreign organizations to provide support for those adversely affected.

Bearing in mind these factors which influence economic and social consequences of particular conflicts, we can suggest some general directions of change in economic variables likely to result from civil conflict. These occur at macro, meso and household levels.

3.1 Macro Effects

There are reasons to expect that all the major macro variables will be adversely affected, with negative changes in any one variable tending to lead to downward changes in others. However, the extent of the changes will be influenced by the nature of the particular situation.

(a) *GDP per capita* is likely to be adversely affected (i.e. either to fall or to rise less than it would have done in the absence of conflict), as a result both of direct and indirect effects. Direct effects include output loss due to: damage to physical assets, including destruction of plant, roads, etc. and mining of agricultural land; deaths and migration of people and diversion to military activities; damage to institutions leading to loss of trust. Unskilled men of prime working age are likely to be particularly hit by deaths and diversion; skilled labour is most likely to leave the country. How large these direct effects are will depend on the extent to which capacity was fully used prior to the conflict. Indirect effects arise from the knock-on effects of the direct effects; for example, the loss of a power plant not only

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(b) *Savings*: in absolute terms, domestic savings are likely to fall as incomes fall. It is difficult to predict, *a priori*, whether the marginal propensity to save will rise or fall: on the one hand, it might be expected to fall as people attempt to sustain their consumption levels in the face of unexpectedly falling incomes; on the other, precautionary reasons for sustaining savings will increase, and the non-availability of consumption goods may lead to forced savings (see di Addario). "Forced" foreign savings may also rise, at least in the short term, as people are unable to secure foreign exchange to pay for the goods they have bought. These forced foreign savings could also take the form of government or private sector failure to meet interest payments or repayments of old debt. Voluntary private lending from abroad is likely to fall with falling confidence; but government lending may either increase or fall, depending on political factors (for example, there was enormous US government lending to South Vietnam in the late 1960s.)

(c) *Investment*: investment is expected to fall. Private (domestic and foreign) investment will be adversely affected by lesser confidence in the future, lesser trust and greater costs of transport and communications, raising transaction costs. Local investment is likely to find increasing difficulties in getting access to finance. Foreign investors will be concerned about the safety of their personnel and are likely to perceive a greater foreign exchange risk. Government investment is likely to be negatively affected by reduced revenue, and diversion of expenditure to military uses (see below). Falling investment will affect the growth of GDP adversely.

(d) *Government revenue* is likely to fall absolutely and as a proportion of GNP as the government finds it more difficult to collect taxes and major sources of revenue (e.g. exports) fall away.

(e) *Government expenditure* may be restrained by any fall in revenue, although probably not proportionately, so that government deficits are likely to rise.

(f) *Inflation*: the normal expectation is that inflation is liable to accelerate, as governments resort to deficit financing to finance the conflict and other essential services.

3.2 Meso Effects

The adverse macro effects, with falling real aggregates of expenditure and output, form the background to the meso changes. Changes are likely to occur in public and private allocations among sectors in response to conditions of war, which put new demands on the economy, constrain some opportunities through disrupted markets and raise transaction costs.

Within the economy, we may expect transaction-intensive activities to fall relative to less transaction-intensive ones (Collier, 1995). This means that activities involving a higher proportion of sales between agents, those needing a large amount of working capital and those with significant transport requirements are likely to be discouraged. This would mean relatively more subsistence production, reduced formal and increased informal sector activity, and proportionately less manufacturing and less long distance trading domestically and internationally.

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Within government expenditure, increasing resources are likely to be devoted to military uses, causing a squeeze on economic and social expenditures.

3.3 Effects on Households

Households are, of course, critically affected by the changing (in an adverse direction) macro and meso situation; moreover, household composition may alter as a direct consequence of conflict. The net effect on wellbeing within the household depends greatly on household survival strategies, their ingenuity and adaptability.

Household composition is likely to change, with men joining the army, being killed or migrating. Women are likely to acquire greater responsibilities, often as head of household and chief provider. Opportunities may also open for women, as traditional attitudes are undermined by war.

Both market and public entitlements may decline on average, though not for all households. Market entitlements decline as a result of reduced employment and real wages, with the losses in production and rising inflation noted above. Entitlement losses can be dramatic and life-threatening in contexts when food prices escalate—as in the Bengal famine of the 1940s, attributed by Sen (1981) to war deficit financing. Public entitlements to social services may fall as absolute levels of government expenditure are curtailed and the share of the social sectors is reduced. The resulting deterioration in health conditions (with reduced immunization levels, worsening water conditions, and higher rates of infection arising both from movement and concentration of people and low levels of resistance because of poor nutrition) is a major cause of loss of life in some conflicts (de Waal, 1989). Civil entitlements[6] (i.e. those provided by the community or NGOs) may rise to offset the fall in other entitlements in contexts where civil society remains effective, but elsewhere, where society itself disintegrates, they may fall. Indicators of human wellbeing, for example, mortality rates, nutrition rates and school enrolment, would be expected to worsen.

It must be emphasized that these expectations are for the population as a whole: some groups gain resources during conflict, sometimes making spectacular fortunes (see Keen, in this issue).

To summarize: the differing conditions in war-affected countries, in terms of the nature of conflict and of the economies in which they occur, make it difficult to generalize about the consequences. However, broadly, the following seem likely to occur compared with what might have been expected in the absence of conflict: at a macro level reduced GDP per capita, reduced export earnings and probably reduced imports, a lower investment ratio and probably savings ratio, reduced government revenue and expenditure, higher budget deficits and higher inflation. At a meso level, a switch to government expenditure on the military from economic and social needs would be expected; and within economic activity, a switch from tradables to non-tradables, from production which is exchanged to subsistence production, and from formal to informal sectors. At a micro level, average levels of entitlements of all kinds are likely to decline, sometimes with catastrophic consequences for human survival. Indicators of wellbeing of all sorts are likely to worsen.

We should emphasize that in predicting the consequences of conflict, as with natural disasters, there are two types of effect: the immediate consequences of the conflict, and the reactions to these direct effects. Humans are very ingenious, and while it is fairly straightforward to predict the immediate consequences, the reactions can be large, unexpected and often have positive effects, as has been shown in the realm of natural disasters (see Albala-Bertram, 1993).

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4. The Consequences of Conflict: An Empirical Survey

This section attempts to see how far such predicted changes in fact occurred in the 16 countries identified in Section 1 as being worst affected by conflict, Table 6. As noted, lack of data for the Asian and Middle Eastern countries means that most of the analysis focuses on Africa and Latin America. Within these regions, the sample varies according to the availability of data. For this reason, this section does not attempt to pinpoint particular consequences in individual countries, but to explore whether the very partial data points firmly in a particular direction.

There are two main reasons which make it extremely difficult to identify the consequences of civil conflict empirically. The first is that there is generally a lack of reliable data during conflict, itself partly a reflection of a weakening in government machinery for collecting and processing data, as bureaucracies are undermined by the conflict and their focus is diverted to conflict-related issues. In addition, the tendency for the official economy to decline relative to the informal and subsistence economy means that those indicators which are available, normally mainly concerned with the formal economy, fail to capture a large and growing segment of activity.

The second reason is that even when the facts are established, this does not mean that what happened can be attributed solely to conflict, since other developments, such as changing international terms of trade, are usually taking place simultaneously. This consideration makes it very difficult to aggregate what data is available. War years cannot be compared with pre-war years without reference to the timing of the war and hence the appropriate counterfactual for which the experience of non-war affected countries over the same period may provide a guide. It is necessary to try to establish a "counterfactual" for each country individually. Moreover, it is even more difficult than normal to make sound estimates of the counterfactual for three reasons: first, pre-conflict relationships that might be used to model the economy may break down during conflict (see diAddario, this issue); secondly, the data deficiencies during conflict make modelling the economy almost impossible; and thirdly, comparisons with developments in similar but not war-affected countries may not be legitimate because differences in initial economic conditions may have given rise to the conflict.

Three approaches to this difficult issue are adopted. The first is to explore the direction of change in the major variables that were identified above as likely to be affected by conflict. This simply records what happened and does not deal with the counterfactual. The second approach is to compare behaviour of the variables during the conflict with previous performance; if everything else is unchanged, the change provides an indicator of the effects of conflict. The third approach is to compare each conflict country's ranking on various indicators within its region before and during the conflict.[7] This approach takes the counterfactual position to be the behaviour of the rest of the region. It is more informative than comparisons with the regional average because a region may be composed of very different economies. Hence for a given indicator it is possible for a country to do less well than the regional average but still move up the rankings from a low initial position. However, we also estimate the average change in the region and compare this with the observed changes in conflict countries to permit a rough estimate of the magnitude of the observed effects.

Taking the results of all three approaches together provides, we believe, a good indication of the direction of the effects, but none of the methods, of course, can get round the problem of deficiencies in data.

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Taking the results of all three approaches together provides, we believe, a good indication of the direction of the effects, but none of the methods, of course, can get round the problem of deficiencies in data.

Table 7. The macro effects of conflict: GDP per capita, exports and imports

Variable	Number of countries + ve during conflict	Number of countries − ve during conflict	Change in regional average	Number improving compared with pre-conflict	Number worse compared with pre-conflict	Ranking change number improve	Ranking change number worse
GDP per capita growth percentage per annum							
Latin America	1	2	+ 70s; − ve 80s	0	2	0	3
Sub-Saharan Africa	0	6	+ 70s; − ve 80s	0	2	0	2
Food production per capita percentage change							
Asia	0	3	+	0	2	na	na
Middle East	2	1	+	2	1	na	na
Latin America	0	3	+	0	3	0	3
Sub-Saharan Africa	0	6	+ 70s − ve 80s	0	7	1	3
Export growth percentage per annum							
Latin America	1	2	− ve 65–80; + ve 80s	0	2	0	2
Sub-Saharan Africa	0	4	+	0	4	0	5
Import growth percentage per annum							
Latin America	1	2	+ ve 70s; − ve 80s	0	2	0	2
Sub-Saharan Africa	3	1	+ ve 70s − ve 80s	3	2	3	2

Source: World Bank, *World Tables*, 1994; *World Development Reports* (various).
na, not available.

Variable

Number of countries + ve during conflict

Number of countries

— ve during conflict

Change in regional average

+70s; -ve80s +70s; -ve80s

Number improving compared with pre-conflict

0

0

Number worse compared with pre-conflict

Ranking change number improve

Ranking change number worse

Table 7. The macro effects of conflict: GDP per capita, exports and imports

GDP per capita growth percentage per annum Latin America 1 2

Sub-Saharan Africa 0 6

Food production per capita percentage change

«e
Asia 030

Middle East 2 Latin America 0 Sub-Saharan Africa 0

Export growth percentage per annum Latin America 1 Sub-Saharan Africa 0

na 03 13

Import growth percentage per annum
Latin America 1 2 Sub-Saharan Africa 3 1

+ve70s;-ve80s 0 + ve70s 3 -ve80s

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Source: World Bank, *World Tables,* 1994; *World Development Reports* (various), na, not available.

+

1 +2 3 +0 6 +70s 0 -ve80s

2 -ve65-80;+ve80s 0 4 +0

na na

na

Table 8. Macro effects of conflict: savings, investment and inflation

Variable	Number higher compared with pre-conflict	Number lower compared with pre-conflict	Regional average increase (+); decrease (−) 65–90	Ranking change number improving	Ranking change number worse
Gross domestic savings as percentage GDP					
LA	1	2	nc	0	2
SSA	0	6	+	1	2
Gross domestic investment as percentage GDP					
LA	0	2	−	0	2
SSA	2	4	+	3	0
Government revenue as percentage GDP					
LA	1; nc (1)	0	+	1	1
SSA	1; nc (2)	1	na	na	na
Government expenditure as percentage GDP					
LA	2	0	+	1	1
SSA	2; nc (1)	1	na	na	na
Budget surplus as percentage GDP					
LA	0	2	na	na	na
SSA	0	4	na	na	na
Inflation: consumer prices change percentage per annum	number reducing		number increasing		
LA	0	3	na	1	2
SSA	1	4	na	1 nc	3

Source: World Bank, *World Tables* (1994); *World Development Report* (various).
na, not available; nc, no change; LA, Latin America; SSA, sub-Saharan Africa.

4.1 Macro Changes

The findings with respect to macro variables are summarized in Tables 7 and 8. These tables first show whether there was positive or negative performance during the conflict. Secondly, they indicate whether change in the region as a whole was positive or negative, for comparison. Thirdly, they show whether countries performance improved or worsened in the conflict, compared with the pre-conflict situation. Fourthly, they show how the country ranking within the region altered.

Each of the indicators suggests that the GDP growth rate was negatively affected by the conflict in almost every country. Eight countries had falling GDP per capita over the conflict and only one positive. The largest decline was in Nicaragua, which experienced an annual drop of 4.4% per annum. Guatemala was the one country whose GDP per capita grew during the conflict, with a GDP growth of 0.6% per capita per annum, 1966–90. Iran also had negative growth, and indirect evidence for Afghanistan, Cambodia and Angola (countries for which there is no "official" data) suggests that GDP also fell severely. All the countries for which there is data showed a worsening compared with the pre-conflict situation.

The 1980s, in which conflict occurred in some countries, was in general a bad decade for economic growth in Africa and Latin America; but in the five cases where we can rank countries within their region before and during conflict, the ranks worsened in every case. In Latin America the three countries at war dropped from an

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Gross domestic savings as percentage GDP					
LA}	1	2			
SSA	0	6	+ 1	2	
Gross domestic investment as percentage GDP					
LA	<0	2	0	2	
SSA	2	4	+ 3	0	

Oxford Development Studies, Vol. 25, No. 1, 1997 11

Civil Conflict in Developing Countries Over the Last Quarter of a Century: An Empirical Overview of Economic and Social Consequences

FRANCES STEWART, FRANK P. HUMPHREYS & NICK LEA

ABSTRACT *There is a growing number of wars in developing countries and they are concentrated among the least developed countries. This paper explores their economic and social consequences by examining the behaviour of countries worst affected by war from 1970 to 1990. Despite problems about methodology and data some important conclusions emerge. There were invariably large economic and social costs in addition to the direct battle deaths, although the effects varied according to the nature and duration of the conflict and the state of the economy. The costs are indicated by losses in GDP, exports and food production per capita compared with what might have been expected in the absence of conflict. In most cases, trends in infant mortality rates were significantly worse in war-affected than comparable economies. The extent of these losses varied, however, while other effects, such as on savings and investment propensities, government revenue shares and expenditure on social services, differed sharply among economies in conflict, reflecting differences in conditions, in government and donor policy and civil and private initiatives.*

1. Introduction

Violent internal conflict, or civil war, appears to be important both as a source and a consequence of underdevelopment. Of the 20 countries ranked lowest in terms of income per capita or Human Development Index, 40% have experienced major conflict during the last quarter of a century. Moreover, the incidence of large-scale violent conflict remains high; while those inspired by the Cold War have ended, new conflicts have emerged with the subsequent relaxation of the big power controls.

Conflicts not only have obvious direct ill effects on people, killing or maiming them, but also can be expected to have large indirect adverse effects as a consequence of the changes in the economy which result from conflict. These include the effects of the destruction of physical and human capital, shifts in resources from productive to war-related uses, inflation and disrupted markets.

The aim of this paper is to identify and present an empirical overview of some of the economic and social costs of civil conflict in the last 25 years. Attention is focused on *internal* conflict (inappropriately named "civil") because it has been much more

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prevalent among poor countries in recent years, and tends to have different effects on the economic and social system than international conflict, generally apparently being more disruptive.[1] In many cases, it is difficult to draw a clear dividing line between internal and international conflict, since foreign countries can take a strong role in internal conflicts (e.g. in Korea, Vietnam, Mozambique, etc.). We shall define as "internal" any conflict where there are major groups on different sides *within* a nation, even though other nations may also be active participants.

The next section of the paper identifies the incidence, regional location and severity of internal conflict, focusing on the recent past, but putting this into the context of the history of the last 200 years. The third section briefly points to expectations about the nature, direction and magnitude of the effects of civil war, at macro, meso and household levels, drawing on economic analysis of the mechanisms by which such costs occur. Section 4 reviews some empirical evidence of how major economic and social variables changed in the countries worst affected by conflict in the 1970s and 1980s. However, actual developments may not be indicative of changes *due* to conflict, since many other changes were occurring simultaneously (e.g. the debt crisis and falling commodity prices), which affected what happened. Some attempt is made to allow for the counterfactual, by comparing performance in major variables in a conflict-country with that of developments in the region as a whole. Section 5 presents some conclusions.

2. The Incidence of Violent Conflict

The first issue that has to be dealt with is that of definition. Violent conflict occurs in all societies at all times: how does one differentiate what is commonly called "crime" from "civil war"? Two criteria are used: one is that the conflict challenges the government's authority, aiming to overthrow or change the regime, whereas crime, *per se*, is not directed towards political change. This challenge to government authority is usually organized. The second criterion is one of magnitude: only conflicts involving more than 1000 deaths a year will be considered. Such deaths may be the direct outcome of the conflict (i.e. due to bullets, bombs, mines, etc.), or indirectly caused as a result of some of the economic and social consequences of conflict. For the years before 1960, we have access only to data for direct battle deaths. When we come to an assessment of economic and social consequences our investigations relate to countries which lost 0.5% or more of their 1990 population over the 20 years between 1970 and 1990. The reason is that smaller conflicts may not have visible consequences in the country-wide data which will be used. Once effects of the large conflicts have been identified, subsequent research may explore whether similar effects are to be found among countries experiencing smaller disturbances.

An investigation into international and civil conflicts from 1816 showed that there were 54 international conflicts from 1816 to 1960, with battle deaths of more than 1000 per nation per year, of which in 11 more than 0.5% of the current population of at least one of the nations involved died. Over the same period there were 71 civil conflicts with more than 1000 battle deaths per year, nine of which caused the deaths of over 0.5% of the population, a further five the deaths of between 0.25 and 0.5% of the population and eight the deaths of between 0.1 and 0.25%.[2] Regionally, the conflicts were widely distributed as shown in the data for large (with over 20 000 deaths) conflicts (Table 1). In contrast to post-1960 conflicts, no major African civil wars were recorded, although a number were excluded from the data base on the

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Table 1. Major civil conflicts, 1816–1960

Region and countries	Deaths		Dates
	More than 100 000	More than 20 000	
Africa (0)	—	—	
Asia (5)			
China	350 025		1860–68
		75 000	1929–30
	200 000		1930–35
	1 000 000		1946–50
Indonesia		30 000	1956–60
Europe (6)			
USSR	502 225		1917–20
Spain	658 300		1936–39
Greece	160 135		1944–45
Portugal		20 100	1829–34
Spain		32 650	1834–40
France		20 000	1871
North America (1)			
USA	650 000		1861–65
Latin America (4)			
Colombia	100 000		1899–1903
	300 000		1949–62
Mexico	250 000		1910–20
Venezuela		20 000	1859–63

Source: Small & Singer (1982).

Note: A number of conflicts are excluded from the Small/Singer data base either because of lack of data or because less than 1000 per annum were killed or because they are defined as a "massacre" rather than a civil conflict. These exclusions explain the absence of conflicts in Africa in this table.

grounds that the countries concerned were not recognized states. There were more conflicts in Latin America than in the post-1960 era. There were important conflicts in China and Europe, and the American Civil War, areas which do not feature in the 1960–90 count of major civil conflicts (see Table 2).

During the 19th Century there were large fluctuations in the number of ongoing civil conflicts with deaths of more than 1000, but no trend. In the 20th Century, there were increases in the total number of such wars from 1948, but not per nation, as the number of nations also rose. Battle deaths from civil conflicts peaked in the decade 1860–70, though it must be noted that the holocaust of the late 1930s and 1940s was not included by Small and Singer.

From 1950, as shown in Table 3, there has been a definite rise in the numbers of conflicts, both large and small, with the total rising from 15 to 32 in the 1960–54 to 1985–90 periods, with large conflicts (over 100 000 deaths) rising from seven to 13. The change is entirely accounted for by the rise in conflicts in Africa, from two small conflicts to seven small and 10 large. Of course, the number of independent nations has grown massively over these 40 years; during the Colonial era, potential conflicts and/or information about them were frequently suppressed. From 1960 to 1990, Africa had by far the greatest number of conflicts in which more than 1000 died per year of war, with

Region and countries

Africa(0) *Asia* (5) China

Indonesia

Europe (6) USSR Spain Greece Portugal Spain France

North America (1) USA

Latin America (4) Colombia

More than 100 000

350 025

200 000 1 000 000

502 225 658 300 160 135

650 000

100 000 300 000 250 000

More than 20 000

Dates

1860-68 1929-30 1930-35 1946-50 1956-60

1917-20 1936-39 1944-45 1829-34 1834-40 1871

1861-65

1899-1903 1949-62 1910-20 1859-63

Mexico
Venezuela 20

Table 1. Major civil conflicts, 1816-1960

Deaths

Source: Small & Singer (1982).
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data base either because

Table 2. War deaths 1960–90 by region

	Sample			Deaths (thousands)	
	Number of countries	Number of countries with wars	Percentage of countries with wars	Mean	Total
Africa	45	19	42	323	6134
Mozambique					1080
Nigeria					2006
Sudan					1006
(Other)				(128)	(2042)
Far East	12	9	75	545	4902
Cambodia					1221
Vietnam					2394
(Other)				(184)	(1287)
South Asia	6	5	83	480	2398
Afghanistan					1300
Bangladesh					1000
(Other)				(33)	(98)
Middle East	11	8	73	125	997
Latin America	24	12	50	38	453
Oceania	2	0	0	0	0
Total:	100	53	53	281	14 884

Source: Sivard (1991).

over a third of the total conflicts. Although the African incidence is less than in other regions when expressed as a proportion of the countries in each region, the number of deaths in Africa (direct and indirect) is the highest as a proportion of the population, exceeding 1%. Deaths as a proportion of the population were 0.4% in Asia and 0.1% in Latin America (Table 4). (If India and China are excluded, however, the Asian incidence is comparable to that of Africa.) In Africa, with nearly half the countries affected, and with many showing signs of heavy social and economic costs, conflict has emerged as a major obstacle to development.

Low-income countries had a higher incidence of wars (60% of the countries, compared with 52% among lower-middle-income countries and 35% among upper-middle-income). Of some 15m deaths through war in developing countries between 1960 and 1990, 12.4m occurred in low-income countries—that is 1.3% of low-income countries' total 1990 population, excluding the huge populations of India and China. A question that arises, therefore, is whether low-income countries are more vulnerable to war (i.e. whether their conflicts tend to occur more often and/or be more severe) or whether the apparent heavier incidence of conflicts among low-income countries arises because war has a severe adverse effect on income. Either proposition could explain why no developing country that has had a war between 1960 and 1990 in which 30 000 people or more died is now in the upper-middle-income group.

One reason why wars might be more severe in poorer countries is because the threat of injury or premature death is regarded as of less importance when life has little to offer (see Galbraith, 1993). According to Galbraith, "It is perhaps the prime reason, that armed conflict and death are so extensively the fate of the poorest on the planet. Not remarkably, they are the most easily persuaded that the next life will be better because for many it could not be worse" (p. 128).

Number of countries

45

12

6

11

24

Total: 100

Source: Sivard (1991).

Sample

Number of

countries with wars

19

9

5

8 12 0

53

Percentage

of countries with wars

42

75

83

73 50 0

53

Deaths (thousands)

Mean Total

323 6134 1080 2006 1006

(128) (2042) 545 4902 1221 2394

(184) (1287) 480 2398 1300 1000

(33) (98) 125 997 38 453 0 0

281 14 884

Africa Mozambique Nigeria Sudan (Other)

Far East Cambodia Vietnam (Other)

South Asia Afghanistan Bangladesh (Other)

Middle East
Latin America
Oceania 2

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Table 3. The years of war by region and severity, average number of countries at war each year 1950–90

	50–54			55–59			60–64			65–69			70–74			75–79			80–84			85–90		
Years 1950–90	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
Far East	5	2	2	2	1	—	2	1	1	3	2	2	3	2	1	3	2	1	2	1	—	2	—	—
Latin America	1	1	1	1	1	1	1	1	1	1	1	—	1	1	—	2	1	—	4	1	—	5	1	—
Africa	2	—	—	4	2	—	6	3	—	5	2	2	6	2	2	5	3	3	7	4	4	8	6	6
Middle East	—	—	—	1	—	—	1	1	—	3	1	—	1	—	—	1	1	—	1	1	1	2	1	1
South Asia	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	2	1	1	3	1	1
Oceania	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	8	4	3	9	5	1	11	6	2	12	6	3	12	5	3	13	7	5	16	7	6	19	7	6

Source: Sivard (1991); World Bank (1995).
a: Wars in which 1000 or more died each year.
b: Wars in which 100 000 or more died in total.
c: Wars in which 300 000 or more died in total.

Table 3. The years of war by region and severity, average number of countries at war each year 1950-90

50-54 55-59 60-64 65-69 70-74 75-79 80-84 85-90 Years1950-90 abc abc abc abc abc abc abc abc

FarEast 52221 21132232132121 2 LatinAmerica 11111111111—11—21—41—51— Africa 2———42—63—522622533744866 MiddleEast ———1——11—31—1——11—111211

Total 8 4 3 9 5 1 11 6 2 12 6 3 12 5 3 13 7 5 16 7 6 19 7 6

Source: Sivard (1991); World Bank (1995).
a: Wars i n which 1000 o r more died each year. b:Warsinwhich 100000ormorediedintotal. c: Wars in which 300 000 or more died in total.

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Table 4. The incidence of conflict by region, 1960–90

Region	Number of countries in conflict	Number of countries in region	Percentage of countries in conflict	Deaths from wars, 1960–90, millions	Percentage of population in region who died in conflict
Africa	19	45	42	6.1	1.1
Asia	14	28	50	7.3	0.4
Middle East	8[a]	11	73	1.0	0.6
Latin America	12	24	50	0.5	0.1
Low-income	30	50	60	12.4	0.4
Lower-mid income	17	33	52	2.4	0.4
Upper-mid income	6	17	35	0.06	0.01
Total	53	98	54	14.9	0.4

Source: Sivard (1991); World Bank (1995).
[a]Includes Iran and Iraq international conflict.

To explore whether income has a causal role in the outbreak of war we correlated income per capita 1970 and infant mortality rate 1970 with outbreak of war subsequently in the 1970s and 1980s. In a sample of 78 developing countries, it was found that 1970 income rank was slightly positively correlated (with a coefficient of 0.079) with the subsequent outbreak of war, while infant mortality was negatively correlated with subsequent outbreak of war (with a coefficient of -0.185). Both results contradict the hypothesis that low income is a strong predictor of war.[3] In contrast, income per capita in 1970 was negatively and infant mortality positively correlated with the occurrence of war in the 1960s, as would be expected if war has a negative effect on income.

We now explore the second possibility—that war has an adverse effect on income which explains the higher incidence among low-income countries. In Table 5, we examine the change in per capita income ranks over time of 74 developing countries.[4] As can be seen, both war countries and low-income countries moved down the rankings from 1970 to 1990. The latter movement is unsurprising as low-income countries are categorized as such on the basis of their current income and therefore on average the group as a whole cannot have been ranked lower in the past. The drop in the rank of war countries is more significant. In 1970, the average income rank of the war countries was almost five places higher than that of non-war countries. By 1990, war countries had dropped over three ranks on average and the position had been reversed, with war countries on average being ranked below non-war countries. This change in fortunes is equally clear when we examine countries in different income groups. The ranks of countries that were low-income in 1990 and had wars between 1960 and 1990 dropped over seven places on average. The almost static ranking of middle-income war countries should also be interpreted as a relatively negative performance because countries that were middle income in 1990 would, *ceteris paribus*, be expected as a group to have been moving up the rankings from the past. Non-war middle-income countries increased their rank by nearly seven places in the 20-year period.

The negative effect of war on income, when combined with the tendency for low-income countries to move down the income ranks, results in an especially large drop in income performance among low-income countries that have had wars. None

Region

Africa
Asia MiddleTJast Latin America

Number of countries in conflict

19 14

8" 12

Percentage Number of of

countries countries in in region conflict

45 42 28 50 11 73 24 50

50 60 33 52 17 35

98 54

Deaths Percentage of from population in wars, region who

1960-90, died in millions conflict

6.1 1.1 7.3 0.4 1.0 0.6 0.5 0.1

12.4 0.4 2.4 0.4 0.06 0.01

14.9 0.4

Table 4. The incidence of conflict by region, 1960-90

Low-income 30 Lower-mid income 17 Upper-mid income 6

Total 53

Source: Sivard (1991); World Bank (1995). "Includes Iran and Iraq international conflict.

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Table 5. Ranks over time of GNP per capita, in 74 countries, $ current price

	Sample size	Mean rank of GNP per capita[a] 1970	1976	1985	1990	Change 1970–90
Total	74	37.5	37.5	37.5	37.5	0
War[b]	35	35.0	37.4	36.5	38.4	−3.3
Non-war	39	39.7	37.6	38.4	36.7	+3.0
Low-income	33	53.3	55.3	56.6	57.8	−4.5
War[b]	16	49.2	53.4	53.3	56.5	−7.3
Non-war	17	57.2	57.1	59.5	59.0	−1.8
Middle-income	41	24.8	23.2	22.1	21.1	+3.5
War[b]	19	23.1	24.0	22.2	23.1	+0.02
Non-war	22	26.2	22.5	22.0	19.6	+6.7

Source: Sivard (1993); World Bank (1995).

[a]A rank of 1 is given to the country with the highest level of GNP per capita, and 74 to the country with the lowest GNP per capita.

[b]War countries are defined as countries where 1000 people or more died a year, directly or indirectly, due to violent political conflict.

the less, the income data cannot be taken solely at face value—a drop in the official income data may be mitigated by an increase in activity in the informal sector (a predicted effect of war, discussed below).

Table 6 records the 16 worst affected countries in the 1970s and 1980s, including one international war (Iran/Iraq), with the remainder being internal, though frequently with strong interventions from outside. These 16 countries constituted the preliminary sample for the empirical analysis of this paper. However, lack of data for the three Asian countries (Afghanistan, Cambodia and Vietnam) and two of the three countries in the Middle East (Iraq and Lebanon) has forced us to focus almost exclusively on the six countries in Africa and the three in Latin America.

3. Expectations about the Economic and Social Consequences of Civil Conflict

The negative effects of conflict on economic development and human welfare seem obvious and are widely acknowledged. Moreover, there is a growing theoretical literature exploring expected effects.[5] This section does not review the literature in depth, but derives from it some broad hypotheses about the economic consequences of conflict, in order to provide a context in which to place the empirical findings of Section 4.

Clearly, the effects of conflict depend in part on the nature and duration of the conflict, and the conditions (income levels, structure, external dependency, flexibility) in the economy concerned. Consequently, it is impossible to generalize about the effects of all conflicts. For example, a conflict which involves the placing of mines in agricultural terrain on a large scale, as in Cambodia, will have significant negative effects on food and possibly export production, with highly adverse effects on the economy as a whole and the wellbeing of many people if a large proportion of economic activity and employment is agriculture based. In contrast, an economy which is highly dependent on trade, such as an oil-exporting economy which imports most of its food,

War
Non-war 17 57.2 57.1

Middle-income 41 24.8 23.2

b
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1985

Change 1990 1970-90

Mean rank of GNP per capita*

16 49.2 53.4

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37.5 37.5 36.5 38.4 38.4 36.7

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22.1 21.1 22.2 23.1 22.0 19.6

0 -3.3 + 3.0

-4.5 -7.3 -1.8

+ 3.5 + 0.02 + 6.7

GNP per capita, and

Table 6. Sixteen major conflicts; countries where over 0.5% of the population died, 1970s and 1980s[a]

	Deaths, 1000s		As percentage 1990 population		Percentage civilian	
Country	1970s	1980s	1970s	1980s	1970s	1980s
Cambodia	1156	65	13.6	0.8	75	22
Afghanistan[b]		1300		7.8		62
Mozambique[b]		1050		6.7		95
Lebanon	100	63	3.7	2.3	75	65
Uganda	303	308	1.9	1.9	100	97
Angola		341		3.3		94
Iraq		400–600[c]		3.0[c]		10
Nicaragua	50	30[b]	1.3	0.8	50	50
Sudan		506		2.0		99
Vietnam[b]	1000 (est.)		1.5		49	
Guatemala		140		1.5		71
El Salvador		75		1.4		67
Ethiopia		609		1.2		85
Iran	88	500	0.2	0.9	80	10
Somalia		55[d]		0.7		91
Liberia		15		0.6		93

Source: Sivard (1991).
[a]Includes war-related famine.
[b]Foreign induced civil war.
[c]Estimates for Iraq uncertain.
[d]Excludes current problems.

would be badly affected by a trade embargo, which might have little effect on the first type of economy. A disturbance which is confined to one region of the country may affect that region in all sorts of ways, but have a small impact elsewhere (as shown, for example, for Sri Lanka by O'Sullivan in this volume).

Features of conflicts relevant to the economic effects include:

- the magnitude of the conflict, in terms of the proportion of the population actually fighting or being threatened—and hence potential deaths, migration and loss of trust;
- the duration of the conflict: in a short conflict, countries and households can call on various forms of reserve, but have little time to adapt. In a prolonged conflict, reserves are run down, but adaptation of various types is possible (e.g. new sources of income and employment may be created or new markets identified);
- the geographic spread of the conflict;
- the role and strength of the government and of quasi-governmental structures introduced by opposition forces. If governments collapse (and are not replaced by strong quasi-governmental structures), significant adverse effects can be expected on revenue collection and government expenditure, on security and hence on trust and transactions;
- international reactions to the conflict in terms of financial flows (which may be increased in support of government or rebels or decreased as a result of the conflict) and trade policies (embargoes, etc.).

Characteristics of economies which are relevant to the economic consequences include:

- the extent, actual and potential, of subsistence production, especially food, as a proportion of total activities; the higher subsistence the more might people (and the

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Country

Cambodia

1970s

13.6

3.7 1.9

1.3

1.5

0.2

1980s

0.8 7.8 6.7 2.3 1.9 3.3 3.0 0.8 2.0

1.5 1.4 1.2 0.9 0.7 0.6

1970s

1980s

1
Afghanistan " 1300

11
Mozambique 1050

Lebanon 100 63 Uganda 303 308 Angola 341 Iraq 400-600'

c

75 22 62 95 75 65 100 97 94 10 50 50 99

49

71 67 85

80 10 91 93

Nicaragua 50 30

Sudan 506

l
Vietnam " 1000 (est.)

Guatemala 140 El Salvador 75 Ethiopia 609 Iran 88 500 Somalia 55 Liberia 15

Source: Sivard (1991). "Includes war-related famine.

b

'Estimates for Iraq uncertain.

d
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Deaths, 1000s

1970s 1980s

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As percentage 1990 population

Percentage civilian

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d

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economy) be protected against large losses, unless inhabitants are forced to migrate from subsistence areas;
- the reliance of the economy on imports; a highly dependent economy will be particularly adversely affected by loss of export earnings and/or foreign finance;
- the dependence of the economy on a few large plants (e.g. power plants), which are vulnerable to attack;
- the dependence of the economy on "social capital", including legal institutions, modern banking institutions, in which transactions are supported by a set of institutions and assumptions that lead to trust; this type of dependence is more likely in more developed economies (see Collier, 1995);
- the flexibility of the economy; flexible economies (as defined by Killick, 1995) will find it easier to adapt by substituting for imports, finding new markets, repairing or replacing damaged equipment or developing alternatives for formal sector institutions where these break down.

Characteristics of the society which are relevant to the magnitude of the human costs of conflict include:

- how near subsistence people are; when they are very near the survival limit, small changes can have devastating effects; the same changes might have only minor effects in richer economies (e.g. nutrition actually improved in wartime Britain, despite a cut in food availability, as rationing improved the distribution; in the recent war and embargoes in Iraq, rationing also prevented massive increase in mortality);
- support networks available to people, through their own families, civil society or the state; in general societies with strong family or community networks are able to protect people better when the state and other civil networks break down;
- the strength of governments, quasi-governments and NGOs;
- policies adopted by governments, quasi-governments and foreign organizations to provide support for those adversely affected.

Bearing in mind these factors which influence economic and social consequences of particular conflicts, we can suggest some general directions of change in economic variables likely to result from civil conflict. These occur at macro, meso and household levels.

3.1 Macro Effects

There are reasons to expect that all the major macro variables will be adversely affected, with negative changes in any one variable tending to lead to downward changes in others. However, the extent of the changes will be influenced by the nature of the particular situation.

(a) *GDP per capita* is likely to be adversely affected (i.e. either to fall or to rise less than it would have done in the absence of conflict), as a result both of direct and indirect effects. Direct effects include output loss due to: damage to physical assets, including destruction of plant, roads, etc. and mining of agricultural land; deaths and migration of people and diversion to military activities; damage to institutions leading to loss of trust. Unskilled men of prime working age are likely to be particularly hit by deaths and diversion; skilled labour is most likely to leave the country. How large these direct effects are will depend on the extent to which capacity was fully used prior to the conflict. Indirect effects arise from the knock-on effects of the direct effects; for example, the loss of a power plant not only

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constitutes a loss in output in itself, but leads other production facilities to close down or operate at lower levels. Reduced finance for (or access to) imports, arising from loss of export earnings, reduced external finance, etc. may have a multiplier effect on domestic production (see di Addario, this issue).

(b) *Savings*: in absolute terms, domestic savings are likely to fall as incomes fall. It is difficult to predict, *a priori*, whether the marginal propensity to save will rise or fall: on the one hand, it might be expected to fall as people attempt to sustain their consumption levels in the face of unexpectedly falling incomes; on the other, precautionary reasons for sustaining savings will increase, and the non-availability of consumption goods may lead to forced savings (see di Addario). "Forced" foreign savings may also rise, at least in the short term, as people are unable to secure foreign exchange to pay for the goods they have bought. These forced foreign savings could also take the form of government or private sector failure to meet interest payments or repayments of old debt. Voluntary private lending from abroad is likely to fall with falling confidence; but government lending may either increase or fall, depending on political factors (for example, there was enormous US government lending to South Vietnam in the late 1960s.)

(c) *Investment*: investment is expected to fall. Private (domestic and foreign) investment will be adversely affected by lesser confidence in the future, lesser trust and greater costs of transport and communications, raising transaction costs. Local investment is likely to find increasing difficulties in getting access to finance. Foreign investors will be concerned about the safety of their personnel and are likely to perceive a greater foreign exchange risk. Government investment is likely to be negatively affected by reduced revenue, and diversion of expenditure to military uses (see below). Falling investment will affect the growth of GDP adversely.

(d) *Government revenue* is likely to fall absolutely and as a proportion of GNP as the government finds it more difficult to collect taxes and major sources of revenue (e.g. exports) fall away.

(e) *Government expenditure* may be restrained by any fall in revenue, although probably not proportionately, so that government deficits are likely to rise.

(f) *Inflation*: the normal expectation is that inflation is liable to accelerate, as governments resort to deficit financing to finance the conflict and other essential services.

3.2 Meso Effects

The adverse macro effects, with falling real aggregates of expenditure and output, form the background to the meso changes. Changes are likely to occur in public and private allocations among sectors in response to conditions of war, which put new demands on the economy, constrain some opportunities through disrupted markets and raise transaction costs.

Within the economy, we may expect transaction-intensive activities to fall relative to less transaction-intensive ones (Collier, 1995). This means that activities involving a higher proportion of sales between agents, those needing a large amount of working capital and those with significant transport requirements are likely to be discouraged. This would mean relatively more subsistence production, reduced formal and increased informal sector activity, and proportionately less manufacturing and less long distance trading domestically and internationally.

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Within government expenditure, increasing resources are likely to be devoted to military uses, causing a squeeze on economic and social expenditures.

3.3 Effects on Households

Households are, of course, critically affected by the changing (in an adverse direction) macro and meso situation; moreover, household composition may alter as a direct consequence of conflict. The net effect on wellbeing within the household depends greatly on household survival strategies, their ingenuity and adaptability.

Household composition is likely to change, with men joining the army, being killed or migrating. Women are likely to acquire greater responsibilities, often as head of household and chief provider. Opportunities may also open for women, as traditional attitudes are undermined by war.

Both market and public entitlements may decline on average, though not for all households. Market entitlements decline as a result of reduced employment and real wages, with the losses in production and rising inflation noted above. Entitlement losses can be dramatic and life-threatening in contexts when food prices escalate—as in the Bengal famine of the 1940s, attributed by Sen (1981) to war deficit financing. Public entitlements to social services may fall as absolute levels of government expenditure are curtailed and the share of the social sectors is reduced. The resulting deterioration in health conditions (with reduced immunization levels, worsening water conditions, and higher rates of infection arising both from movement and concentration of people and low levels of resistance because of poor nutrition) is a major cause of loss of life in some conflicts (de Waal, 1989). Civil entitlements[6] (i.e. those provided by the community or NGOs) may rise to offset the fall in other entitlements in contexts where civil society remains effective, but elsewhere, where society itself disintegrates, they may fall. Indicators of human wellbeing, for example, mortality rates, nutrition rates and school enrolment, would be expected to worsen.

It must be emphasized that these expectations are for the population as a whole: some groups gain resources during conflict, sometimes making spectacular fortunes (see Keen, in this issue).

To summarize: the differing conditions in war-affected countries, in terms of the nature of conflict and of the economies in which they occur, make it difficult to generalize about the consequences. However, broadly, the following seem likely to occur compared with what might have been expected in the absence of conflict: at a macro level reduced GDP per capita, reduced export earnings and probably reduced imports, a lower investment ratio and probably savings ratio, reduced government revenue and expenditure, higher budget deficits and higher inflation. At a meso level, a switch to government expenditure on the military from economic and social needs would be expected; and within economic activity, a switch from tradables to non-tradables, from production which is exchanged to subsistence production, and from formal to informal sectors. At a micro level, average levels of entitlements of all kinds are likely to decline, sometimes with catastrophic consequences for human survival. Indicators of wellbeing of all sorts are likely to worsen.

We should emphasize that in predicting the consequences of conflict, as with natural disasters, there are two types of effect: the immediate consequences of the conflict, and the reactions to these direct effects. Humans are very ingenious, and while it is fairly straightforward to predict the immediate consequences, the reactions can be large, unexpected and often have positive effects, as has been shown in the realm of natural disasters (see Albala-Bertram, 1993).

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NGOs) may rise to offset the fall in other entitlements in contexts where civil society remains effective, but elsewhere, where society itself disintegrates, they may fall. Indicators of human wellbeing, for example, mortality rates, nutrition rates and school enrolment, would be expected to worsen.

It must be emphasized that these expectations are for the population as a whole: some groups gain resources during conflict, sometimes making spectacular fortunes (see Keen, in this issue).

To summarize: the differing conditions in war-affected countries, in terms of the nature of conflict and of the economies in which they occur, make it difficult to generalize about the consequences. However, broadly, the following seem likely to occur compared with what might have been expected in the absence of conflict: at a macro level reduced GDP per capita, reduced export earnings and probably reduced imports, a lower investment ratio and probably savings ratio, reduced government revenue and expenditure, higher budget deficits and higher inflation. At a meso level, a switch to government expenditure on the military from economic and social needs would be expected; and within economic activity, a switch from tradables to non- tradables, from production which is exchanged to subsistence production, and from formal to informal sectors. At a micro level, average levels of entitlements of all kinds are likely to decline, sometimes with catastrophic consequences for human survival. Indicators of wellbeing of all sorts are likely to worsen.

We should emphasize that in predicting the consequences of conflict, as with natural disasters, there are two types of effect: the immediate consequences of the conflict, and the reactions to these direct effects. Humans are very ingenious, and while it is fairly straightforward to predict the immediate consequences, the reactions can be large, unexpected and often have positive effects, as has been shown in the realm of natural disasters (see Albala-Bertram, 1993).

4. The Consequences of Conflict: An Empirical Survey

This section attempts to see how far such predicted changes in fact occurred in the 16 countries identified in Section 1 as being worst affected by conflict, Table 6. As noted, lack of data for the Asian and Middle Eastern countries means that most of the analysis focuses on Africa and Latin America. Within these regions, the sample varies according to the availability of data. For this reason, this section does not attempt to pinpoint particular consequences in individual countries, but to explore whether the very partial data points firmly in a particular direction.

There are two main reasons which make it extremely difficult to identify the consequences of civil conflict empirically. The first is that there is generally a lack of reliable data during conflict, itself partly a reflection of a weakening in government machinery for collecting and processing data, as bureaucracies are undermined by the conflict and their focus is diverted to conflict-related issues. In addition, the tendency for the official economy to decline relative to the informal and subsistence economy means that those indicators which are available, normally mainly concerned with the formal economy, fail to capture a large and growing segment of activity.

The second reason is that even when the facts are established, this does not mean that what happened can be attributed solely to conflict, since other developments, such as changing international terms of trade, are usually taking place simultaneously. This consideration makes it very difficult to aggregate what data is available. War years cannot be compared with pre-war years without reference to the timing of the war and hence the appropriate counterfactual for which the experience of non-war affected countries over the same period may provide a guide. It is necessary to try to establish a "counterfactual" for each country individually. Moreover, it is even more difficult than normal to make sound estimates of the counterfactual for three reasons: first, pre-conflict relationships that might be used to model the economy may break down during conflict (see diAddario, this issue); secondly, the data deficiencies during conflict make modelling the economy almost impossible; and thirdly, comparisons with developments in similar but not war-affected countries may not be legitimate because differences in initial economic conditions may have given rise to the conflict.

Three approaches to this difficult issue are adopted. The first is to explore the direction of change in the major variables that were identified above as likely to be affected by conflict. This simply records what happened and does not deal with the counterfactual. The second approach is to compare behaviour of the variables during the conflict with previous performance; if everything else is unchanged, the change provides an indicator of the effects of conflict. The third approach is to compare each conflict country's ranking on various indicators within its region before and during the conflict.[7] This approach takes the counterfactual position to be the behaviour of the rest of the region. It is more informative than comparisons with the regional average because a region may be composed of very different economies. Hence for a given indicator it is possible for a country to do less well than the regional average but still move up the rankings from a low initial position. However, we also estimate the average change in the region and compare this with the observed changes in conflict countries to permit a rough estimate of the magnitude of the observed effects.

Taking the results of all three approaches together provides, we believe, a good indication of the direction of the effects, but none of the methods, of course, can get round the problem of deficiencies in data.

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Taking the results of all three approaches together provides, we believe, a good indication of the direction of the effects, but none of the methods, of course, can get round the problem of deficiencies in data.

Table 7. The macro effects of conflict: GDP per capita, exports and imports

Variable	Number of countries + ve during conflict	Number of countries − ve during conflict	Change in regional average	Number improving compared with pre-conflict	Number worse compared with pre-conflict	Ranking change number improve	Ranking change number worse
GDP per capita growth percentage per annum							
Latin America	1	2	+ 70s; − ve 80s	0	2	0	3
Sub-Saharan Africa	0	6	+ 70s; − ve 80s	0	2	0	2
Food production per capita percentage change							
Asia	0	3	+	0	2	na	na
Middle East	2	1	+	2	1	na	na
Latin America	0	3	+	0	3	0	3
Sub-Saharan Africa	0	6	+ 70s − ve 80s	0	7	1	3
Export growth percentage per annum							
Latin America	1	2	− ve 65–80; + ve 80s	0	2	0	2
Sub-Saharan Africa	0	4	+	0	4	0	5
Import growth percentage per annum							
Latin America	1	2	+ ve 70s; − ve 80s	0	2	0	2
Sub-Saharan Africa	3	1	+ ve 70s − ve 80s	3	2	3	2

Source: World Bank, *World Tables*, 1994; *World Development Reports* (various).
na, not available.

Variable

Number of countries + ve during conflict

Number of countries

— ve during conflict

Change in regional average

+70s; -ve80s +70s; -ve80s

Number improving compared with pre-conflict

0

0

Number worse compared with pre-conflict

Ranking change number improve

Ranking change number worse

Table 7. The macro effects of conflict: GDP per capita, exports and imports

GDP per capita growth percentage per annum Latin America 1 2

Sub-Saharan Africa 0 6

Food production per capita percentage change

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Asia 030

Middle East 2 Latin America 0 Sub-Saharan Africa 0

Export growth percentage per annum Latin America 1 Sub-Saharan Africa 0

na 03 13

Import growth percentage per annum
Latin America 1 2 Sub-Saharan Africa 3 1

+ve70s;-ve80s 0 + ve70s 3 -ve80s

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Source: World Bank, *World Tables,* 1994; *World Development Reports* (various), na, not available.

+

1 +2 3 +0 6 +70s 0 -ve80s

2 -ve65-80;+ve80s 0 4 +0

na na

na

Table 8. Macro effects of conflict: savings, investment and inflation

Variable	Number higher compared with pre-conflict	Number lower compared with pre-conflict	Regional average increase (+); decrease (−) 65–90	Ranking change number improving	Ranking change number worse
Gross domestic savings as percentage GDP					
LA	1	2	nc	0	2
SSA	0	6	+	1	2
Gross domestic investment as percentage GDP					
LA	0	2	−	0	2
SSA	2	4	+	3	0
Government revenue as percentage GDP					
LA	1; nc (1)	0	+	1	1
SSA	1; nc (2)	1	na	na	na
Government expenditure as percentage GDP					
LA	2	0	+	1	1
SSA	2; nc (1)	1	na	na	na
Budget surplus as percentage GDP					
LA	0	2	na	na	na
SSA	0	4	na	na	na
Inflation: consumer prices change percentage per annum	number reducing		number increasing		
LA	0	3	na	1	2
SSA	1	4	na	1 nc	3

Source: World Bank, *World Tables* (1994); *World Development Report* (various).
na, not available; nc, no change; LA, Latin America; SSA, sub-Saharan Africa.

4.1 Macro Changes

The findings with respect to macro variables are summarized in Tables 7 and 8. These tables first show whether there was positive or negative performance during the conflict. Secondly, they indicate whether change in the region as a whole was positive or negative, for comparison. Thirdly, they show whether countries performance improved or worsened in the conflict, compared with the pre-conflict situation. Fourthly, they show how the country ranking within the region altered.

Each of the indicators suggests that the GDP growth rate was negatively affected by the conflict in almost every country. Eight countries had falling GDP per capita over the conflict and only one positive. The largest decline was in Nicaragua, which experienced an annual drop of 4.4% per annum. Guatemala was the one country whose GDP per capita grew during the conflict, with a GDP growth of 0.6% per capita per annum, 1966–90. Iran also had negative growth, and indirect evidence for Afghanistan, Cambodia and Angola (countries for which there is no "official" data) suggests that GDP also fell severely. All the countries for which there is data showed a worsening compared with the pre-conflict situation.

The 1980s, in which conflict occurred in some countries, was in general a bad decade for economic growth in Africa and Latin America; but in the five cases where we can rank countries within their region before and during conflict, the ranks worsened in every case. In Latin America the three countries at war dropped from an

Table 8. Macro effects of conflict: savings, investment and inflation

Variable	Number higher compared with pre-conflict	Number lower compared with pre-conflict	Regional average increase (+); decrease (-) 65-90	Ranking change number improving	Ranking change number worse
Gross domestic savings as percentage GDP					
LA}	1	2			
SSA	0	6	+ 1	2	
Gross domestic investment as percentage GDP					
LA	<0	2	0	2	
SSA	2	4	+ 3	0	