



A gang member holds a Glock and a 9 mm pistol in the hallway of a public housing project in Brooklyn, New York, December 2003. © Boogie/WPN

# Elusive Arsenals

## GANG AND GROUP FIREARMS

### INTRODUCTION

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The image of a guerrilla warrior with a gun has become a ubiquitous symbol of contemporary armed violence. The sight may be overly familiar, linking small arms and much of the worst post-modern conflict and instability, but it is not without its mysteries. How many non-state combatants—guerrillas, insurgents, militiamen, and gang members—are there in the world? And how many weapons do they actually have? It is well known what kinds of weapons such non-state actors use, the result of insights acquired through display or often-deadly confrontations. The actual numbers involved are much more obscure.

Uncertainty about the quantity of small arms controlled by gangs and non-state groups has aroused bitter controversy over the effectiveness of gun policy and specific programmes such as disarmament, demobilization, and reintegration (DDR) (Florquin and Berman, 2005, ch. 4).<sup>1</sup> The passionate debate in the United States and Mexico in the first few months of 2009 over illegal civilian arms sales to Mexican gangs was another manifestation of uncertainty over how many guns these groups actually have and where they come from (Ford, 2009).

This chapter, a first cut at the difficult task of estimating the small arms inventories of gangs and non-state actors, shows above all that gangs and armed groups are by far the least numerous of all major categories of firearms owners, much smaller than individuals, militaries, or law enforcement agencies. Among its findings:

- Gangs in the best-understood countries and regions own between 1.2 and 1.4 million firearms.
- Total gang arsenals worldwide appear to include at least two million and probably no more than ten million firearms.
- Other non-state armed groups—insurgents and militias, including dormant and state-related groups—have a total of about 1.4 million small arms.
- The non-state armed groups actively fighting in 2009 had roughly 350,000 small arms altogether.
- Armed groups and gangs together control roughly 0.4 to 1.3 per cent of all small arms.
- Indirect evidence suggests that gangs and armed groups are progressively obtaining more powerful small arms, feeding an arms race with other actors.

Because the kind of information available about gangs and armed groups is far from uniform, this review uses different methods to calculate the small arms of the two categories. After discussing the general issues, the chapter examines the small arms of gangs. Gangs are too numerous to evaluate individually; there are about 27,000 gangs in the United States alone (Egley and O'Donnell, 2009). Instead, gang small arms inventories have been deduced by extrapolating from total numbers of gang members worldwide. The arms of non-state armed groups, examined next, have been estimated based on the numbers of group combatants and their total arsenals.

## ESTIMATING NON-STATE GROUP SMALL ARMS

A decade ago, the Small Arms Survey started a project to clarify the global distribution of small arms (firearms). The research undertaken in 2000–01 concentrated exclusively on insurgencies. The concept of internationally relevant armed groups, then still emerging, had not fully embraced other actors ranging from paramilitaries to gangs. The maturation of this basic insight—stressing the need for better awareness of the diversity and importance of gangs and non-state armed groups—is a major force behind this revision.

The rise of non-state groups teaches modesty. Compared to the arsenals of state agencies or even civilian societies, the small arms inventories of gangs and non-state groups are much more elusive. Both the size of gangs and groups, and the scale of their armaments, are often unclear. Their totals can usually be estimated, but not determined with certainty. Standing in the way is the natural slipperiness of group identity and armament. With the number of members or combatants and their weapons normally in flux, outside observers need to adjust their expectations. Even where firm numbers are available, such as weapons turned in through DDR programmes or police seizures, it is difficult to say much about the proportion of the total that this represents.

Estimates of group small arms are less reliable than those for state actors or civilian populations, the focus of previous Small Arms Survey estimates (Small Arms Survey, 2006b, ch. 2; 2007, ch. 3). Thus, these findings must be used more cautiously. Designed to convey a sense of relative scale, these estimates show how insurgent and gang arsenals of small arms compare to those of other actors and each other. They also provide a sense of scale for group totals—revealing which are largest and smallest. Insurgent arsenals often can be estimated sufficiently to guide policy responses, be they counter-insurgency or disarmament. These figures are helpful for establishing priorities and evaluating resources needed to respond to the challenges these weapons pose.

No effort was made in previous editions of the *Small Arms Survey* to estimate gang-owned small arms. The total for other non-state armed groups—insurgencies and militias—was previously estimated at roughly one million weapons (Small Arms Survey, 2001, p. 89). This figure should be compared to the new estimate of roughly 350,000 small arms among groups actively fighting in 2009, revealing a striking decrease in both the number of active non-state fighters and their small arms inventories.

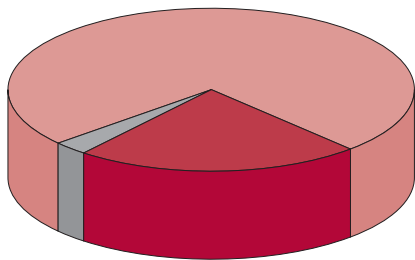
While comparisons between the figures in the *Small Arms Survey 2001* and this edition show the number of non-state combatants *at war* has declined, the total number *in existence*, including inactive factions, appears to have

**Table 4.1 Approximate global distribution of small arms, 2009**

Category	Sub-category	Firearms (millions)
Armed forces		200
Law enforcement		26
Civilian		650
	Non-state armed groups	1.4
	Gangs	2 to 10
<b>Total (rounded)</b>		<b>875</b>

Sources: armed forces and law enforcement totals: Small Arms Survey (2006b, ch. 2); civilian: Small Arms Survey (2007, ch. 2); non-state armed groups and gangs: this chapter

**Figure 4.1 Global distribution of small arms, 2009**



- Armed forces (200 million)
- Law enforcement (26 million)
- Civilian (650 million, including gangs (2-10 million) and non-state armed groups (1.4 million))

arsenals appear to make up the largest part of this category. But small arms estimates are not accurate enough to support exact comparisons between groups, to guide military or police weapons procurement, or to establish firm targets for disarmament programmes.

### From 1999 to 2009

Previous Small Arms Survey estimates of firearms ownership among state armed forces, law enforcement agencies, and civilians were based primarily on building block methods. Whenever available, official data and country estimates by qualified observers were totalled. These cases also provided samples for statistical modelling of the remaining unknown cases. The result was a series of global and country estimates showing the distribution of 875 million military, police, and civilian firearms outlined in Table 4.1.

These methods did not separate from other civilian owners some of the groups most likely to use their small arms, the very groups often of greatest concern in international and domestic policy debates, including insurgents, terrorists, youth gangs, and other organized criminal groups. An early effort to establish the number of small arms under their control, based on data from 1999, offered a useful first step (Small Arms Survey, 2001, ch. 2). But these findings were weakened by the limited data then available and by the study's exclusive focus on insurgencies and related armed groups. Drawing upon a new wave of research on non-state groups, this chapter casts a wider net (Krause, 2009; Schlichte, 2009). It reviews the state of knowledge about insurgent armaments and examines the place of criminal gangs and non-state groups in the global distribution of firearms in 2009.

Estimating the number of gang, insurgency, and other non-state group weaponry poses special problems, some unsolvable. The types of weaponry at their disposal are often well known, if from nothing else than the bloody experience of their use. But the numbers involved are highly elusive. In lieu of reliable data on the total weaponry of non-state armed groups, estimation of small arms inventories is based on numbers of armed individuals, multiplied by a weapons ratio. The method has been explained at length in previous editions of the *Small Arms Survey*.<sup>2</sup> Numbers of members in non-state armed groups are, in many respects, no more difficult to estimate than those of state armed forces, law enforcement agencies, or civilians. But such estimates for gangs and groups tend to be based on less reliable foundations. In previous estimation exercises, there have always been compelling statistics on the

grown (Small Arms Survey, 2001, p. 89). Better appreciation of the full spectrum of non-state groups, including militarily inactive or dormant groups and those with formal political power, permits a new total estimate of some 1.4 million small arms controlled by all non-state groups. This increase is partially *real*, due to the rise of armed factions, but also partially *apparent*, the result of greater research attention to previously overlooked types of groups.

Compared to the small arms of other major elements of society—private citizens, law enforcement agencies, and the armed forces—most of the gangs and groups examined here are statistically tiny. This chapter shows that the small arms of all non-state groups—including insurgencies, militias, and gangs—amount to no more than 11.4 million weapons, or 1.3 per cent of all small arms worldwide, though probably less (see Table 4.1 and Figure 4.1). Gang

number of individuals in question and enough samples of weapons inventories to facilitate straightforward extrapolation. When it comes to non-state groups, though, membership itself can be vague and evidence of weapons inventories purely anecdotal.

**Previously counted?** Separating insurgent, gang, and other non-state weapons from civilian or state firearms for counting is a serious and unresolved issue. For effective policy-making, their armaments should be distinguished, whether because of the dangers they pose, for planning to suppress or defeat them, or to guide efforts to remove them from society. In a more fundamental sense, however, they are often indistinguishable from existing state and civilian armaments.

Non-state small arms are weapons in-between. They may have been bought illicitly from former state surpluses, transferred deliberately by a sympathetic government, stolen individually from civilian owners, or even bought legally. The situation was characterized revealingly by a military lawyer, who described war in Iraq as a struggle not against a military enemy but ‘an enemy force made up entirely of civilian-belligerents’ (Janin, 2007). In the short run, insurgent weapons constitute a separate category from civilian or state inventories, as they are not controlled by civilians or the state. Eventually, most will return either to the control of the state that captures or receives them or to civilian status once their owners abandon warfare or crime. Separating gang weapons, like any other crime gun, may be essential legally, but can be very difficult statistically.



Confiscated weapons sit on racks in a warehouse at the headquarters of the National Defense Secretariat, Mexico City, April 2009. © Eduardo Verdugo/AP Photo

Nevertheless, for the most part, gang weapons, and those of other non-state armed groups, fit more comfortably in civilian stockpiles, as previously calculated. Very often, insurgent and gang firearms end up in civilian inventories when conflicts end or their owners leave gang life. Unless the weapons are captured by state armed forces or law enforcement agencies, or surrendered in a peace settlement, they remain in private hands. The clearest alternative is systematic disarmament. This does not always eliminate weaponry, but, when combined with destruction, it can eliminate large numbers of firearms. Since 1990, destruction programmes have eliminated more than 8 million state-owned firearms, more than 5 million civilian firearms, and, separately, at least 560,000 firearms from former insurgents. More have been collected and await destruction (Small Arms Survey, 2009, pp. 163, 185). Significant quantities continue to be apprehended, as illustrated by the Mexican Army's storage of 305,424 confiscated weapons (Castillo and Roberts, 2009). Otherwise, insurgent and gang weapons tend to stay with their immediate owners, even as these leave their gangs and reintegrate into society.

## GANG ARSENALS

### How many global gang members?

The first step in estimating global gang arsenals is delineating the approximate number of global gang members. Gathering estimates of global gang membership from the published literature is far from easy. The meaning of gang membership is highly controversial, even among experts (see Box 4.1). Membership statistics are especially elusive for places without major gang problems. Consequently, this study probably over-represents the most serious cases, exaggerating global problems. Not all membership estimates, moreover, could be used here. Only when data conforms to clear geographic boundaries is it possible to establish the proportions required for wider extrapolation.

#### Box 4.1 The vexing question: what is a gang?

Among the basic enigmas of the gang phenomenon is the definition of the word itself, a 'vexing question' greatly complicating gang research and policy (Decker and Kempf-Leonard, 1991). Specialists on gang issues routinely note the problem. One often-cited review concludes that: 'There is little, if any consensus as to what constitutes a gang and who is a gang member' (Esbensen et al., 2001, p. 106). This uncertainty often leads to efforts to be more specific by adding modifiers, such as *criminal*, *juvenile*, or *street*, to the word gang.

Rigid definitions are not the solution, since they can reinforce tendencies to exaggerate gang problems or minimize their significance. The problem is especially troublesome in multinational studies, obscuring profound differences. One aspect of this confusion is what Klein calls the 'Eurogang paradox', which leads European police to conclude they do not have a gang problem because they see few groups resembling the North American template of 'highly structured, cohesive, violent gangs. But then neither do most American gangs fit the pattern' (Klein, 2001, p. 7). In lieu of a universal definition, operational definitions are often created for specific situations based on their particular characteristics.

A consensus definition has been proposed: 'a street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose identity includes involvement in illegal activity' (Weerman et al., 2009, p. 20). This has yet to be applied consistently, however, by students of gang issues. This review, because it relies on data gleaned from numerous sources, follows the practice of most previous multinational reviews, which accept—often implicitly—the working definitions used by researchers and government agencies where gangs originate (Berkman, 2007; USAID, 2006, p. 13; UNODC, 2007).

Table 4.2 lists estimates of overall gang membership in 18 areas where this is possible: 11 countries, 5 cities, and 2 provinces. Estimates of gang membership can also vary for the same place. Those used here include low and high estimates whenever possible. Unique estimates are used when these are the only data available, such as for the United States.

Other cases in which the scale of prominent gangs is known are too incomplete to offer a basis for extrapolation. For example, the Mumbai-based Dawood Gang, one of South Asia's largest and most infamous criminal syndicates, has an estimated 4,000 to 5,000 members (Lal, 2005). Yet this tells us little about the size of the many other gangs in Mumbai, let alone those in the rest of India or elsewhere.

This study stresses regions that have been studied largely because of the seriousness of their gang problems; it may not include all of the most seriously affected regions, but those that are included are seriously affected. The 18

**Table 4.2 Estimates of gang membership, 18 examples**

Location	Number of members		Sources
	Low estimate	High estimate	
Belize	100	100	UNODC (2007)
Costa Rica	2,660	2,660	UNODC (2007)
El Salvador	10,500	39,000	USAID (2006, pp. 17, 45); UNODC (2007)
England and Wales	20,000	60,000	O'Neill (2009); Bennett and Holloway (2004a)
Guatemala	14,000	165,000	USAID (2006, pp. 17, 64)
Guayaquil, Ecuador	65,000	65,000	Berkman (2007, p. 26)
Honduras	5,000	36,000	Berkman (2007, p. 16); USAID (2006, pp. 17, 92)
Italy	25,000	84,700	FBI (n.d.); IISS (2009, p. 470)
Japan	41,000	84,200	Nakamura (2007); JNPA (2007)
Kingston, Jamaica	8,000	8,000	Berkman (2007, p. 26)
Medellín, Colombia	10,000	10,000	Berkman (2007, p. 26)
Mexico, regions	20,000	20,000	USAID (2006, p. 17)
Nicaragua	2,200	4,500	USAID (2006, p. 17); UNODC (2007)
Panama	1,385	1,385	UNODC (2007)
Rio de Janeiro, Brazil	10,000	10,000	Berkman (2007, p. 26)
Russian Federation	120,000	200,000	Wright (2006); UCJFSU (2008)
United States	788,000	788,000	Egley and O'Donnell (2009)
Western Cape, South Africa	100,000	100,000	GANG VIOLENCE (p. 142)
<b>Total (rounded)</b>	<b>1,250,000</b>	<b>1,675,000</b>	

Notes: Base years vary but are often not separately reported in the source literature. They usually appear to originate the year or year before publication of the source. Exceptions include Egley and O'Donnell (2009), which is for 2007, and UNODC (2007) and USAID (2006), which vary depending on the case. High estimates for England and Wales are based on the report that gang numbers are three times higher than previously thought (O'Neill, 2009). Estimates for Kingston have been averaged.

**Table 4.3 Estimates of gang membership, 18 examples**

Principal location	Population (2008, rounded)	Estimated active gang members	Type of estimate	Proportion of population	Equivalent global gang members	Sources
Japan	128,000,000	41,000	low	0.0003	2,100,000	Nakamura (2007)
Belize	310,000	100	unique	0.0003	2,100,000	UNODC (2007)
England and Wales	53,400,000	20,000	low	0.0004	2,400,000	Bennett and Holloway (2004a)
Nicaragua	5,700,000	2,200	low	0.0004	2,500,000	USAID (2006, p. 17)
Panama	3,400,000	1,385	unique	0.0004	2,700,000	UNODC (2007)
Italy	60,000,000	25,000	low	0.0004	2,700,000	FBI (n.d.)
Costa Rica	4,500,000	2,660	unique	0.0006	3,800,000	UNODC (2007)
Japan	128,000,000	84,200	high	0.0007	4,300,000	JNPA (2007)
Honduras	7,200,000	5,000	low	0.0007	4,500,000	Berkman (2007, p. 16)
Nicaragua	5,700,000	4,500	high	0.0008	5,100,000	UNODC (2007)
Russian Federation	142,000,000	120,000	low	0.0008	5,500,000	Wright (2006)
Guatemala	13,700,000	14,000	low	0.0010	7,000,000	USAID (2006, pp. 17, 64)
England and Wales	53,400,000	60,000	high	0.0011	7,300,000	O'Neill (2009)
Russian Federation	142,000,000	200,000	high	0.0014	9,200,000	UCJFSU (2008)
Italy	60,000,000	84,700	high	0.0014	9,200,000	IISS (2009, p. 470)
El Salvador	6,100,000	10,500	low	0.0017	11,000,000	USAID (2006, pp. 17, 45)
Rio de Janeiro, Brazil	6,100,000	10,000	unique	0.0016	11,000,000	Berkman (2007, p. 26)
Mexico, regions	9,600,000	20,000	unique	0.0021	14,000,000	USAID (2006, p. 17)
United States	304,000,000	788,000	unique	0.0026	17,000,000	Egley and O'Donnell (2009)
Medellín, Colombia	3,000,000	10,000	unique	0.0033	22,000,000	Berkman (2007, p. 26)
Honduras	7,200,000	36,000	high	0.0050	30,000,000	USAID (2006, p. 92)
El Salvador	6,100,000	39,000	high	0.0064	41,600,000	USAID (2006, p. 45)
Guatemala	13,700,000	165,000	high	0.0120	78,000,000	USAID (2006, p. 45)
Kingston, Jamaica	580,000	8,000	unique	0.0140	90,000,000	Berkman (2007, p. 26)
Western Cape, South Africa	4,500,000	100,000	unique	0.0222	140,000,000	GANG VIOLENCE (p. 142)
Guayaquil, Ecuador	2,300,000	65,000	unique	0.0283	190,000,000	Berkman (2007, p. 26)

Notes: Ranked by equivalent global gang members.

Sources: country populations from World Bank (2009); others: England and Wales (UK, n.d.); Guayaquil (Brinkhoff, n.d.a); Kingston (Brinkhoff, n.d.b); Medellín region (MedellinInfo.com, n.d.), Mexico regions (USAID, 2006, p. 17); Western Cape (DSSPA, n.d., p. 2)





A Jamaican gang member wields an automatic assault rifle in a public housing hallway, December 2008. © Scott Nelson

countries, cities, and provinces surveyed have roughly 1.2 to 1.7 million gang members, based on adding known high and low estimates. The range of estimates would be wider, except for the numerical dominance of the single figure for gangs in the United States, a well-regarded estimate (Egley and O'Donnell, 2009).

Global totals must be higher. But they might not be much higher, not if the 18 known countries and regions are home to the world's largest (not merely best-understood) gangs. In lieu of comprehensive studies covering the rest of the world, the chapter uses the known rates of gang membership listed in Table 4.2 to extrapolate global gang membership in Table 4.3. The rate of gang membership (gang members as a proportion of the population) in each country, city, and province is extrapolated, for each case, to the planet as a whole.

The examples here individually support an enormous spectrum of projections but lack the statistical consistency required for rigorous correlation. Instead, they support only a general impression of the scale of global gang membership. The clustering of examples in Table 4.3 is especially suggestive. The table shows many examples sticking around a lower threshold equal to roughly two million global gang members. Global gang membership is unlikely to be much lower. If gangs are as prevalent globally as they are in the high estimates for places such as Italy, Rio de Janeiro, or the Russian Federation, this would support a high estimate of almost ten million gangs members worldwide. There is no evidence to suggest that global gang membership is higher than this. Some places have much higher local membership, such as Kingston, Jamaica, Guayaquil in Ecuador, or the Western Cape of South Africa, but these seem to be exceptional. A range of two to ten million global gang members is not strictly scientific, but it corresponds to a reasonable application of known cases.

## How many gang guns?

After gang membership, the second question for global projection of gang small arms is their level of gun ownership. How many guns do gangs have per member? This question has been extensively researched through studies of crime statistics, interviews, and surveys with gang members and convicts. As happens so often with gang issues, however, research on US gangs is much more extensive than cross-country comparisons. Because research has revealed so much more about gangs in the United States, it is tempting to use their example widely. The profound differences in national gun culture and crime leave no doubt, though, about the need for caution in applying findings from the United States (Esbensen and Weerman, 2005). With some 788,000 members, gangs in the United States stand out in absolute numbers, far surpassing gangs in other countries. Differences aside, US gang precedents matter a lot, largely because many US gang tropes—such as dress, behaviour, and sometimes armament—are so influential elsewhere.

Gun ownership among gang members is a central question for scholars of delinquency. Interview and survey research is especially revealing. The findings may be more suggestive than definitive, but they leave no doubt that gang members are much more likely to be armed than most young people. The classic study of gun ownership among US youths and gangsters, a survey of 987 gang members and non-member youths, found that 30.9 per cent of juvenile gang members reported carrying guns for protection, compared to 14.2 per cent of non-gang youths. The same study found that, among surveyed gang members, gun ownership is reported by 77.8 per cent (Bjerregaard and Lizotte, 1995, pp. 48, 57).

The rate of gun ownership appears to increase with the age of gang members. According to the widely cited finding of Decker and Van Winkle, out of 99 gang members interviewed, 80 reported they had at least one gun; each member had an average of 4.5 firearms (Decker and Van Winkle, 1996, p. 176). The larger sample used by Bjerregaard and Lizotte led them to conclude that gun ownership among gang members is roughly double that of non-gang members, at 30.9 per cent vs. 14.2 per cent (Bjerregaard and Lizotte, 1995, p. 48). More generally, repeated surveys show some 40 per cent of prison inmates in the United States report having owned a gun at some point in their lives (Bennett and Holloway, 2004b, pp. 239–40).

None of this is surprising in light of the exceptional levels of US civilian gun ownership. Surveys consistently find that some 40 per cent of US households have at least one gun (Smith, 2007, p. 11). With roughly 270 million civilian firearms in 2007, the United States' private arsenal was equal to about 89 guns for every 100 residents (Small Arms Survey, 2007, ch. 2, annexe 3). Only Yemen approaches such levels of ownership, with roughly 55 firearms for every 100 residents (Small Arms Survey, 2007, ch. 2). The global rate of firearm ownership, by comparison, averages approximately 11 civilian firearms for every 100 people (Small Arms Survey, 2006b, p. 39).

Considerably less is known about the gun habits of gang members elsewhere. Even the most incisive multinational comparisons treat gun issues gingerly (Esbensen and Weerman, 2005; Klein et al., 2006, pp. 427, 429). Although it cannot be said with scientific certainty, it appears that gang gun ownership tends to be a multiple of normal civilian ownership. But caution is in order.

The most systematic surveys to examine gang gun use outside the United States focus on England and Wales. Among gang members arrested there, one study found that between 50 and 59 per cent reported having had a gun at some point during their years as members (Bennett and Holloway, 2004a, pp. 316–19). Another report found that as many as 60 per cent of British gang convicts reported using handguns (Bennett and Holloway, 2004b, p. 243). To be sure, such findings do not mean all British gang members are likely to carry guns. Convicts probably were more

**There are two million to ten million gang firearms in the world.**

likely to carry guns than their counterparts who stayed out of jail. But this impression of widespread gang gun ownership, reinforced by the hugely disproportionate role of gangs in British gun violence, is compelling. All these findings suggest far higher gang gun ownership in England and Wales than for the civilian population as a whole. These are low- to mid-level gun-owning societies, where there are approximately six civilian firearms for every 100 people, including legally registered rifles and shotguns, as well as illegal handguns.

Rates of gun ownership vary greatly between societies and individual gangs. The best general guide appears to be how rare or common guns are in civilian society. A British review cautions that 'the actual availability of firearms appears to be overestimated', noting a London survey that found that six per cent of all students surveyed report having carried a gun in the previous year (Marshall et al., 2005, p. 13). Intriguingly, this statistic is remarkably close to the level of English and Welsh public gun ownership, 6.2 firearms for every 100 people, suggesting a connection between general public ownership and gun carrying (Small Arms

Survey, 2007, ch. 2, annexe 3). Another English and Welsh survey found gang membership increased the likelihood of firearm ownership by a factor of five among 17–24-year-olds (Marshall et al., 2005). Greater ownership of firearms among gang members has also been observed in the Netherlands (Decker and Weerman, 2005, p. 165; Klein, 2001, p. 312). These studies provide only a weak foundation for generalization and none for direct comparison. Rather, they speak to a connection between armament of civilians as a whole and of gangs.

The shortage of cross-national comparisons severely weakens confidence in any global estimate of gang gun ownership. In lieu of a stronger foundation, this review builds on the studies noted above, which document much higher gun ownership rates among gang members than normal civilians, especially youth. The US and British surveys cited above, the most detailed on this point, show that gang ownership can be four times that of normal civilian rates. To convey a sense of the highest rates of gang gun ownership, this review presumes a rate of *four times the*



Two teenage gang members holding their guns, London, 2006.  
© Simon Wheatley/Magnum Photos



*rate of overall civilian ownership* in each society.<sup>3</sup> Researchers have recorded claims of higher levels of ownership, as noted above, but these are controversial. Applying these rules worldwide, with ownership averaging 11 firearms per 100 people (0.11 per person), supports an expectation of 0.44 firearms per gang member globally, or almost one gun for every two gang members worldwide.

The actual rate of average gang gun ownership will vary significantly, depending on gun availability in each society (from the low gun-owning Netherlands to the high-ownership United States) and other factors, such as the ease of smuggling (for example, in Japan). If gang ownership is four times the normal civilian ownership rate in each society in the 18 countries, cities, and provinces listed in Table 4.4, there are a combined total of between 1.1 and 1.4 million guns among gang members in those places. The lower ownership estimate reflects low estimates of gang size, while the upper level is based on higher membership estimates. As highlighted above, this particular sample is dominated by a single estimate for the United States.

Projecting from these best-understood cases, and overlooking the most extreme, this supports the conclusion that there probably are at least two million and probably no more than ten million gang firearms in the world (see Table 4.5). In other words, global gang firearms could be roughly equal to global gang members, although there is wide divergence among societies and gangs. In low gun ownership societies, gang ownership of guns tends to be higher than for normal civilians, but still far below a one-to-one ratio. In a society with high levels of gun ownership, such as the United States, gang ownership has already been documented to surpass a one-to-one ratio.

These global estimates set the dimensions of global gang membership in broader perspective. While an estimate of at least two million and probably no more than ten million is not narrow, it clearly establishes the magnitude of gang gun ownership: the global problem is somewhere in the single millions. It may be said with confidence that gang gun ownership is neither hundreds of thousands, nor tens of millions.

**Table 4.4 Estimated gang firearms in 18 cases (rounded)**

Principal location	Membership estimate		National population	Civilian gun ownership	Gang gun estimate	
	Low	High			Low	High
Belize	100	100	310,000	0.100	40	40
Nicaragua	2,200	4,500	5,700,000	0.077	680	1,400
Costa Rica	2,660	2,660	4,500,000	0.099	1,000	1,000
Panama	1,385	1,385	3,400,000	0.220	1,200	1,200
Honduras	5,000	36,000	7,200,000	0.062	1,200	9,000
Medellín, Colombia	10,000	10,000	3,000,000	0.059	2,400	2,400
El Salvador	10,500	39,000	6,100,000	0.058	2,400	9,000
Kingston, Jamaica	8,000	8,000	580,000	0.081	2,600	2,600
Rio de Janeiro, Brazil	10,000	10,000	6,100,000	0.080	3,200	3,200
Guayaquil, Ecuador	65,000	65,000	2,300,000	0.013	3,400	3,400
England and Wales	20,000	60,000	53,400,000	0.062	5,000	15,000
Guatemala	14,000	165,000	13,700,000	0.130	7,300	86,000
Mexico, regions	20,000	20,000	9,600,000	0.150	12,000	12,000
Italy	25,000	84,700	60,000,000	0.170	17,000	58,000
Russian Federation	120,000	200,000	142,000,000	0.090	43,000	72,000
Japan	41,000	84,200	128,000,000	0.006	50,000	100,000
Western Cape, South Africa	100,000	100,000	4,500,000	0.127	51,000	51,000
United States	788,000	788,000	304,000,000	0.890	950,000	950,000
<b>Totals</b>	<b>1,200,000</b>	<b>1,700,000</b>		<b>0.140</b>	<b>1,200,000</b>	<b>1,400,000</b>

Notes: Ranked by low firearms estimates. For Japan, specific gang ownership estimates are available and used here instead of the member/ownership calculation. Public firearms in the cities and regions of Guayaquil, Kingston, Medellín, Mexican regions, Rio de Janeiro, and Western Cape are computed at the average national rate of ownership. An exception is made for the United States, where there is near equality in the total number of guns and people, allowing a maximum of 1.2 firearms for each gang member in this estimate.

Sources: Table 4.2; public gun ownership from Small Arms Survey (2007, ch. 2, annexes 4, 5)

This range also establishes roughly how many guns gang members have, as opposed to the weapons of law enforcement agencies, armed forces, and other civilians. Gang weaponry appears to greatly outnumber that of other non-state armed groups, such as terrorists and insurgents, but the quantity is much less than that belonging to state forces or individual civilians. Similarly, the power of their weapons appears to be increasing as well (see Box 4.2). This perspective is useful for establishing general gun policy priorities, putting overall problems in broader perspective, and potentially guiding allocation of attention and resources. But such numbers are not reliable enough for multinational comparisons or specifying priorities for research and policy. There is no basis here for meaningful, direct comparison of gang gun ownership between most societies, such as France vs. the Philippines or Nigeria vs. Venezuela.

Table 4.5 Global projection of gang members and firearms, 2008

Location	Type of estimate	Estimated active gang members	Active member/population ratio	Public gun ownership rate	Equivalent global gang members	Estimated global gang guns
Japan	low	41,000	0.0003	0.006	2,100,000	50,000
Japan	high	84,200	0.0007	0.006	4,300,000	100,000
England and Wales	low	20,000	0.0004	0.062	2,400,000	600,000
Nicaragua	low	2,200	0.0004	0.077	2,500,000	800,000
Belize	unique	100	0.0003	0.100	2,100,000	800,000
Honduras	low	5,000	0.0007	0.062	4,500,000	1,000,000
Costa Rica	unique	2,660	0.0006	0.099	3,800,000	1,500,000
Nicaragua	high	4,500	0.0008	0.077	5,100,000	1,600,000
England and Wales	high	60,000	0.0010	0.062	7,300,000	1,800,000
Italy	low	25,000	0.0004	0.170	2,700,000	1,800,000
Russian Federation	low	120,000	0.0008	0.090	5,500,000	2,000,000
Panama	unique	1,385	0.0004	0.220	2,700,000	2,300,000
El Salvador	low	10,500	0.0017	0.058	11,000,000	2,600,000
Russian Federation	high	200,000	0.0014	0.090	9,200,000	3,300,000
Rio de Janeiro, Brazil	unique	10,000	0.0016	0.080	11,000,000	3,400,000
Guatemala	low	14,000	0.0010	0.130	7,000,000	3,500,000
Medellín, Colombia	unique	10,000	0.0033	0.059	22,000,000	5,000,000
Italy	high	84,700	0.0014	0.170	9,200,000	6,000,000
Honduras	high	36,000	0.0050	0.062	30,000,000	8,000,000
Mexico, regions	unique	20,000	0.0021	0.150	14,000,000	8,000,000
Guayaquil, Ecuador	unique	65,000	0.0283	0.013	190,000,000	9,600,000
El Salvador	high	39,000	0.0064	0.058	41,600,000	9,600,000
Kingston, Jamaica	unique	8,000	0.0140	0.081	90,000,000	30,000,000
Guatemala	high	165,000	0.0120	0.130	78,000,000	40,000,000
United States*	unique	788,000	0.0026	0.890	17,000,000	60,000,000
Western Cape, South Africa	unique	100,000	0.0222	0.127	140,000,000	75,000,000

\* Up to 1.2 per member.

Note: Ranked by estimated global gang firearms. Estimated global gang members rounded to two significant digits. Estimated global gang guns rounded to one or two significant digits.

Sources: Table 4.2 and this section

### Box 4.2 Evolving criminal arsenals: direct and indirect evidence

Gangs in the United States have long favoured guns in their attacks, but their rate of gun use rose appreciably during the 1980s. One study finds that use of firearms in gang homicides in Los Angeles County increased from 71 per cent in 1979 to 95 per cent in 1994. The sophistication of their weapons also increased, as gang homicides with semi-automatic pistols rose from 5 per cent in 1986 to 44 per cent in 1994 (Klein and Maxson, 2006, p. 81). Among the most visible effects is counter-arming by law enforcement agencies.

Although semi-automatic assault rifles and fully automatic weapons were not commonly used by gangs in the United States in the 1980s and 1990s, the existing few could be overwhelming (Klein and Maxson, 2006, p. 80). This was illustrated by the infamous FBI Miami firefight, among the most influential incidents for gun purchasing policy ever. On 11 April 1986, eight FBI agents armed with revolvers, pistols, and shotguns were attacked by two bank robbers. Two FBI agents were killed—as were the bank robbers—and five agents were seriously injured, mostly by fire from a single Ruger Mini-14, a version of the military M14 automatic rifle, introduced in 1974 (FBI, 1986). The inability to subdue the bank robbers quickly was attributed to standard-issue weapons and ammunition (Anderson, 2006). Afterwards, all FBI agents were re-armed with larger-calibre pistols. Law enforcement agencies throughout the United States quickly followed, trading revolvers for pistols (Hankins, 2004).

Police arming is indirect evidence that gangs and other violent criminals are arming, too. Relatively unusual framing incidents, seen as warnings rather than exceptions, have dramatic effects. After four police officers in Oakland, California, were killed in March 2009 by a man with an assault rifle and three Pittsburgh officers were killed with a Kalashnikov the following month, law enforcement agencies across the United States rushed to expand their automatic weapons inventories. They appear to have responded to a climate of ever more deadly civilian weaponry. These incidents were specifically cited in the decisions by many police forces to acquire assault rifles (Kaempffer, 2009). In Massachusetts, for example, local police forces equipped selected personnel with automatic rifles (Slack, 2009a; 2009b). A typical order came from Detroit, where police bought 5,000 Smith & Wesson pistols and 350 automatic rifles (McLaughlin, 2009).

In many places, civilian and police arming increasingly resembles a spiraling arms race. In the United States, civilian purchases of revolvers are plummeting, while the pistol market is growing dramatically, and semi-automatic assault rifles sales took off following the end of the ban on new sales in 2004. Market analysis by Smith & Wesson concluded that, for 2009, the civilian wholesale market for revolvers in the United States was worth USD 175 million vs. USD 791 million for pistols, USD 313 million for shotguns, and USD 277 million for assault or tactical rifles (Smith & Wesson, 2009).

Similar but slower trends can be seen elsewhere. In France, the National Police and Gendarmerie replaced older pistols in 2003 with 250,000 German-made pistols (Weidacher, 2005). The appearance of a Kalashnikov in a non-fatal attack outside Paris attracted the attention of Interior Minister Michèle Alliot-Marie and seemed likely to result in further official counter-arming (Girard, 2009). In India, it was the Mumbai terrorist attacks of November 2008 that provoked re-arming of the city's 40,914 police with pistols and automatic weapons (oneIndia, 2007; Swami, 2009).

While the trend towards heavier police armament seems clear, the scale is hard to establish, especially with so many countries involved. Perceptions are also affected by a reporting quirk that probably overemphasizes police acquisition of new weapons. Law enforcement agencies and arms manufacturers have an interest in publicizing weapons acquisitions. They also have reasons to conceal reductions. Although this review has not uncovered any law enforcement agency reducing armament, this certainly is not inconceivable.

### Pathological synergies

Where are armed gang members most common? Some insights come from Japan, with its well-deserved reputation as one of the least armed of all societies. Licensed firearms in civilian hands number 320,000 (Katsumata, 2008). Including estimated unlicensed firearms, the country has a combined total of about 670,000 firearms, or 0.5 for every 100 residents. Even allowing for unregistered firearms, Japan ranks near the bottom of global ownership rates, 167<sup>th</sup> among 180 countries ranked (Small Arms Survey, 2007, ch. 2, annexes 4, 5).

The most striking exceptions to the scarcity of civilian guns in Japan are the country's criminal syndicates. Although routinely described as gangs, the Yakuza differ by integrating adults as well as youths. They may not be youth gangs in the strictest sense, but they provide insight into the ways criminal groups can differ from the society around them. According to police, there are 84,200 Yakuza (JNPA, 2007). They reportedly own roughly 1.2 firearms per gangster (Nakamura, 2007). The latter is hardly exceptional internationally, but it means the Yakuza control a remarkable proportion of all civilian firearms in Japan, between 7 and 14 per cent. The Yakuza, in other words, are armed about 200 times more heavily than Japanese society generally. Among the examples explored here, Japan has the highest concentration of firearms among its gangsters. Japanese gangs are heavily armed by any standard, but, in comparison with the rest of Japanese society, they are extraordinary.

Armed gang members appear to be most common in societies afflicted by both high membership and gun ownership. South Africa's Western Cape province probably has the most serious gang guns problem anywhere, ranking at the top of both scales. In Western Cape, gangs appear to have roughly 51,000 out of the suspected total of 570,000 firearms in civilian hands in the region, or close to 10 per cent. These figures are similar to levels of gang gun ownership in Japan, but South African gangs are much more violent (GANG VIOLENCE). Other extreme cases included here are the Jamaican capital of Kingston and the United States. Guatemala is a serious, but more complicated, case because of uncertainty over both the number of gang members and the availability of firearms. In Guatemala, gangs appear to possess as much as 10 per cent of the estimated 1.65 million civilian small arms (Small Arms Survey, 2007, ch. 2, annexe 3). That level is reached, however, only if the highest estimates of Guatemalan gang membership are accepted (USAID, 2006, pp. 17, 45).

Armed gang members are most common in societies with high gang membership and gun ownership.

### Gangs and gun ownership

Are gang firearms the personal possessions of individual members or the collective property of the gang? Related to this question is the problem of whether to count gang guns as civilian. If guns are personal property, they remain essentially part of the larger civilian inventory, detouring into gang use during the time their owner is a gang member but otherwise owned much as any other civilian weapon.

Anecdotal reports suggest that collective gun ownership is a feature of at least some US gangs.<sup>4</sup> If guns are collectively owned by the gang, stored together, allocated by a higher authority within the gang, or handed down from member to member, they are not personal property. Treated as the property of the group, their ownership and control would resemble not civilian possession but that of non-state armed groups such as insurgents or terrorist cells.

The question of ownership requires dedicated research. In interviews with scholars, gang members consistently describe their firearms as personal property (Decker and Van Winkle, 1996). But this may have more to do with semantics than property rights; interpreting the words of gang members describing their guns is anything but easy. In this review, gang weapons are treated as described by members, as individual property like civilian firearms. Although evidence is hardly conclusive, gang guns appear to originate as ordinary civilian guns. Gang members often have a history of owning guns prior to joining a gang (Bjerregaard and Lizotte, 1995, p. 48). They may also be borrowed from a member's home, purchased legally or through an intermediary, or shared or stolen outright, but they appear to originate from the same stores as most other civilian weapons (Sheley and Wright, 1995).

The glaring exceptions to any civilian connection are gang weapons acquired through political or military patronage. Some gangs in Guatemala, for example, are suspected of official support (Arana, 2005). When officials in leadership positions or the armed forces conspire with gangs—whether through corruption or political opportunism—the gang



becomes something other than a traditional gang. Indeed, the provenance of their small arms is a useful test of whether a group is a gang, a militia or paramilitary organization, or something else. Patronage makes them similar to organizations such as many Afghan militias or the Colombian paramilitaries—semi-autonomous groups with connections to crime and the state (Manwaring, 2009, pp. 13–24; PRO-GOVERNMENT).

## INSURGENT SMALL ARMS

Outlining the dimensions of non-state armed groups—insurgents and militias—is much easier than doing the same for gangs, if only because the groups are fewer, the largest groups are well known, and their approximate size is somewhat better understood. As with gang guns, estimates of insurgent weapons rely on two key variables: the number of active combatants and the typical ratio of small arms per combatant. As with gangs, the size of an insurgent group’s membership generally appears to correspond fairly closely to its total arsenal. Definitional problems remain (see Box 4.3), but the largest groups can usually be identified with much greater reliability. In this analysis, 386 groups are evaluated, including some composites, such as combined Bangladeshi Islamist groups. Combatant and firearms estimates are available for 176 of these groups (see Annexes 1–3).

### The fluidity problem

Among the most important aspects to be addressed when evaluating the number of combatants in any insurgency or militia are problems of group fluidity and fluidity of membership. Unlike states, whose sovereignty grants them a firm identity, non-state groups are characterized by their essential ambiguity. Groups can come and go rapidly, as can their members. Categorizing groups whose roles and identity shift opportunistically is a challenge in any effort to grapple with their numbers and armament. Three problems are especially relevant here.

*Active or dormant?* Armed groups need not be static organizations. Their goals and methods may remain unchanged for decades (as with the Colombia-based FARC or the Kurdish PKK). Others evolve through cycles from peaceful politics to increasing violence, sometimes followed by a return to peaceful politics (Hazen, 2009). DDR efforts, for

#### Box 4.3 What is a non-state armed group?

Non-state armed groups are organizations that use violence for political purposes, challenging the legal authority of a state or government. They might demand regional power, autonomy, or independence, outright control of the state, or simply protection from other groups. As noted previously, not all these groups oppose the state; they may be pro-government but contest its monopoly on legitimate violence (PRO-GOVERNMENT). Non-state armed groups include rebel movements, insurgents, guerrillas, and terrorists as well as militias and private armies outside state control. It usually does not mean organized crime, which lacks a political agenda, or private security firms, which are usually legally responsible. This chapter uses the synonyms insurgents and guerrillas, treating them as distinct from gangs.

example, are widely used to facilitate transitions to peaceful politics, often transform conflicts, but sometimes fail as groups relapse into warfare (Muggah, 2009).

Because goals and methods can change, the spectrum of non-state groups considered here must be appreciated as a static simplification, a snapshot of an ever-changing tableau. In this review, militarily *dormant* groups, not engaged in systematic combat operations for the past year, are distinguished from *active* groups. These dormant groups have ceased active fighting but appear to remain ready for organized vio-

lence. They represent a form of potential energy, a capability that may turn violent or dissipate peacefully. More detailed insights require multi-year tracking, stressing trends as members and weapons fluctuate.

*Non-state, pro-state, or part of the state?* One of the biggest problems of classification is assessing whether a group is independent of the state. In contrast to gangs, which hope that public authorities will refrain from meddling in their affairs, non-state armed groups are typically understood to challenge the legitimacy and authority of governments. But many insurgents also cooperate with governments or benefit from the patronage of public officials (PRO-GOVERNMENT).

This problem is not entirely new; state sponsorship of armed groups was commonplace among all sides in the cold war (Laqueur, 1999). But the permutations are more numerous and shift faster as groups became more adaptable. The Afghan Taliban, for example, first appeared in 1994 as a state-sponsored insurgency, then ruled Afghanistan from 1996 to 2001 as the de facto state. After November 2001, they became non-governmental insurgents again. Since 2006, however, they have begun to re-establish governing authority in parts of the country (Giustozzi, 2009).

More typically, states sponsor groups against the interests of another state. Rashid points to the importance of state sponsorship when he describes how:

*[the Pakistan] army carefully calibrated the kinds of weapons and level of funds it provided the Kashmiri militants, and at times reined in the ISI [Pakistan military intelligence] so as not to provoke Indian military retaliation against Pakistan. [In 2002–05, the] ISI underwent a difficult balancing act with the Kashmiri extremist groups, secretly disarming and rehabilitating several thousand militants while still keeping a few in reserve in case the peace process floundered (Rashid, 2009, p. 112, 291).*

Thus, Pakistan reportedly controlled militant armament.

State-sponsored groups and militias can be very large. In Peru, for example, the army distributed 15,179 shotguns among village Self-Defence Committees for security against Shining Path rebels (Obando, 2007, p. 14). The practice of arming local militias has continued in the Afghan wars to this day (Morarjee, 2006a; 2006b). Calling such groups non-state probably conceals more than it reveals, but it is hard to exclude them.

The greatest challenge to a simple insurgent or state taxonomy comes from groups that belong to political parties with acknowledged legitimacy and a role in government, usually through parliamentary representation, and groups that have become de facto ruling authorities themselves. As outlined below, this category includes most of the largest rebel movements. Some serve in government, such as the Moro National Liberation Front in the Philippines, or Hezbollah in Lebanon. A few are acknowledged under internationally brokered agreements, such as the South Sudanese Sudan People's Liberation Army. Others have near-sovereign authority over large or politically important territories, such as Hamas in Gaza or the administrations of Puntland and Somaliland. For these reasons, these groups are not counted here as non-state armed groups.

How to classify state-sponsored groups is a point of confusion that defies easy solution. It may always have to be resolved case-by-case. This particular problem of affiliation with or opposition to the state is resolved here by separating groups with unambiguous connection to legitimate government and labelling them *ruling non-state actors*. Many are being integrated into the national army or are represented in the government (such as Nepal's Maoists). Others, often called militias, have widely accepted territorial authority (such as the Iraqi Kurdish parties). These are incomplete distinctions that do not grapple with the more complicated realities described above (PRO-GOVERNMENT).

How to classify state-sponsored groups is a point of confusion that defies easy solution.

Even in this simplified form, the ruling/non-ruling distinction has important implications for weapons estimation; with assured safe territory and easier access to funding, most *ruling non-state actors* should be assumed to be much better armed.

*Rapid identity change:* While some of the groups examined here have survived for generations, others yield rapidly to new names and organizations. Such rapid transformation breeds confusion and exaggeration of combatant numbers, as moribund groups are combined with current ones. This problem is especially troublesome when assessing non-state groups in Central and West Africa. The effects are probably most readily seen in Somalia, where the groups dominant in the early 1990s have mostly disappeared or melded into contemporary factions and the Transitional Federal Government. Although still listed in prominent reference works, these groups either do not exist or no longer can be considered fundamentally non-state.<sup>5</sup> Careful attention is vital when tabulating non-state actors to avoid counting extinct groups or double-counting groups whose names have changed.

### The fog of membership

Although relatively solid data on non-state group membership is available, it is far from reliable. Groups routinely appear to have only a hazy appreciation of their own following. They also may have motives for exaggerating their numbers. Journalists and state security agencies, even international organizations, may be affected by similar bias as well. The haze obscuring membership is probably worst for the smallest and least active groups, but it affects all to some degree. The confusion arises from three particular problems that make up the fog of membership, or chronic uncertainty about the number of armed combatants.<sup>6</sup>

The fog of membership creates chronic uncertainty about the number of armed combatants.

One aspect is simply *poor information*. An extremely large, but otherwise typical, example are the innumerable Afghan militias. Leaving aside the Taliban, the number of militiamen in Afghanistan is often expressed as a broad range. The Afghan DDR programmes of 2004–06 were planned for anywhere from 50,000 to 250,000 militia members; 63,000 men were actually processed (Bhatia, 2009). Other estimates arrive at similar totals (Sarwari and Crews, 2008, p. 325). The problem is compounded by the inability to break down very broad categories, such as *Afghan militia* or *Bangladeshi militant Islamists*, which may conceal multiple groups armed in different ways. When diverging estimates of group strength cannot be resolved in favour of a consensus or preferred figure, a split-the-difference approach is used, based on averaging.

The second problem is distinguishing *different types of members*. Many, often most, members are not combatants but unarmed sympathizers. Separating the two is crucial for estimating weapons inventories or designing counter-insurgency strategies, but very hard in practice. The most extreme case encountered here concerns the Pakistani group Lashkar-e-Taiba ('Army of the Righteous'), widely held responsible for the November 2008 Mumbai terrorist attacks that killed more than 170 people. A prominent study in 2004 concluded that the group had 'several hundred' active combatants (Kurth Cronin et al., 2004, p. 60). A more recent statement by an anonymous official of Pakistan's Inter-Services Intelligence, though, put Lashkar-e-Taiba membership at about 150,000 (Polgreen and Mekhennet, 2009). The latter number might refer to something, but almost certainly not armed fighters.

A third source of uncertainty about group numbers is *outright exaggeration*. For the Iraq-based Kurdish *peshmerga*, the standing army of the Kurdish National Assembly, figures of 270,000 to 375,000 soldiers appear in the public domain (Wikipedia, 2009). Either total would rank them among the largest armies in the world—stretching credibility; by comparison, Britain's Royal Army has 95,780 active personnel (IISS, 2009, p. 158). More credible estimates

maintain there are 72,000 *pesbmerga* in two major forces (Cordesman, 2008, p. 82). Similar problems appear to affect membership totals for groups in Côte d'Ivoire, Myanmar, and the Philippines. The fog of membership compels observers to be cautious, even sceptical.

The fog surrounding membership numbers is endemic in investigations of insurgencies. Careful attention can reduce these problems, such as by testing correspondences or gaps between alleged membership and actual violence. Groups that appear to be numerous, but not especially active, warrant special scrutiny. More research undoubtedly will refine our understanding of some armed groups, but even the best research runs into the inherent nebulosity of many or most non-state groups. Solving such problems is beyond this review. Instead, it relies on the best available figures, preferring the most detailed and recent accounts, preferably informed by local field research, averaging multiple sources where possible.

### The armament of insurgencies

Much more information is available on the kinds of weapons used by insurgents than on their quantities. This problem arises from the nature of guerrilla warfare; authorities typically learn about insurgent capabilities by receiving their lethal attacks and examining the detritus of warfare, such as spent casings and captured examples. Reports on weapon types are not numerous but suggestive of types and proportions in use.<sup>7</sup> Even the most complete reports of group weapons that have been identified or recovered offer no way to judge reliably the quantities *not* recovered.



Sri Lankan Army soldiers guard weapons captured during an offensive against the Liberation Tigers of Tamil Eelam, 24 April 2009. © Pedro Ugarte/AFP

Insurgent armament can range from the numbing sameness of endless Kalashnikovs to bizarre displays of crude eclecticism. Some groups are extremely well armed. After the defeat of the LTTE, the Sri Lankan Army reported finding almost 100,000 rifles for a force that probably never numbered more than about 11,000 (Bell, 2009; IISS, 2009, p. 474). If accurate, this would make a nearly unprecedented weapons-to-soldier ratio of nine to one. Other sources indicate that some insurgents are greatly hindered by their lack of weapons. The problem is a serious impediment for Naxalite insurgencies in India (Joseph and Srivastava, 2008, p. 125). Many African groups also appear to lack enough arms for all their combatants.<sup>8</sup>

The best-documented insights into total insurgent firearms inventories often come from DDR programmes, in which former combatants turn in their weapons as a sign of commitment to peace. Not all programmes have a formal disarmament element. Among those that do, official monitors can tabulate only weapons received, not all held (or withheld). Suspicion about weapons withheld dogs every DDR project. One review of 45 DDR programmes found 19 cases in which the total number of weapons received was known. The number of small arms received in these known cases ranged from 2.6 per combatant in the Solomon Islands to only 0.1 in several cases. From the 2,517,000 combatants demobilized this way, a total of 560,000 weapons were reported turned in, for an average of 0.2 small arms or light weapons recovered from each combatant overall (Small Arms Survey, 2009, pp. 184–85). The results of DDR, then, are inconclusive, revealing only that some groups have and submit a lot of weapons, and others turn in proportionately less.

In this review, ruling non-state armed groups are usually assumed to be armed at a rate approaching the same level of poorer or less armed state forces, which they closely resemble, with armament ratios as high as 1.6 per combatant (Small Arms Survey, 2006b, pp. 50–51). This appears to accurately describe many insurgencies, apparently armed with an average of roughly 1.6 small arms per combatant, a level that has emerged as the conventional wisdom for insurgent arsenal estimation (Small Arms Survey, 2001, p. 79). In arms-rich environments, such as Europe, South America, the Middle East, and South-east Asia, reports of insurgents with both a rifle and a handgun or grenade launcher are commonplace. There are few reliable reports of non-state groups exceeding such levels. The exceptions appear to be dominated by groups that also control territory (*ruling non-state armed groups*, as described above). Independent observers in the field report that such levels of armament are rarely attained, except in such regions as Central and West Africa and South Asia, where insurgent armament often appears to be lower, sometimes much lower, on the order of 1.2 or even 0.5 firearms per combatant (see Annexe 2). Where evidence suggests lower levels of weapons accumulation, this has been reflected in the calculations.

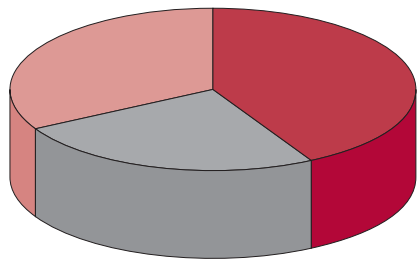
**Table 4.6 Estimated personnel and small arms of known non-state armed groups, 2009**

Category	Combatants	Small arms
Active insurgencies	285,000	350,000
Ruling groups	345,000	460,000
Dormant groups	390,000	590,000
<b>Total</b>	<b>1,000,000</b>	<b>1,400,000</b>

Note: Totals may not agree due to rounding.

Sources: Annexes 1-3

**Figure 4.2 Small arms inventories of non-state armed groups, 2009**



■ Active insurgencies (350,000)  
 ■ Ruling groups (460,000)  
 ■ Dormant groups (590,000)

Sources: Annexes 1-3

**Getting worse or getting better?** Whether the total number of non-state combatants in the world is rising or falling is hard to say with great accuracy. Estimates of insurgency size and armament generally do not come annually, but in intermittent dribs and drabs. Tracking the dynamics of specific groups from year to year is often impossible.

Certainly, group numbers appear to be rising. In 1999, some 480,000 full-time non-state combatants could be identified, in control of some 910,000 small arms (Small Arms Survey, 2001, p. 79). Ten years later, in 2009, their numbers had increased to roughly one million fighters with some 1.4 million small arms, plus an unknown number of light weapons. Their ranks were divided roughly in thirds between currently violent or active insurgencies, dormant ones, and those now in power. Most immediately dangerous are currently

active insurgents, estimated here at 285,000 combatants with roughly 350,000 small arms in 2009. But even dormant and ruling groups pose major challenges to peaceful conflict resolution as well as domestic and international stability (see Table 4.6 and Figure 4.2).

Much of the apparent increase is the result of more sensitive research methods and insight from related disciplines. This permits more complete appreciation of previously overlooked non-state factions, and corresponding adjustment of non-state group numbers. The numerically most important methodological change involves more inclusive counting procedures. Whereas previous reviews by the Small Arms Survey only counted insurgencies, this review also counts dormant and ruling non-state groups. The largest of all groups, for example, would not have been counted previously. The Sudan People's Liberation Army and allied forces, with a combined total of 141,000 personnel, is by far the biggest non-state armed group, more than double the Mahdi Army of Iraq (see Annexes 2 and 3). But it has not been engaged in major combat operations since 2005 (SUDAN).

The number of actively fighting combatants appears to be down markedly since 1999, except for the unintended consequences of the wars in Afghanistan and Iraq. In Afghanistan, intervention by the United States in October 2001 removed the Taliban from power. Illustrating the fluidity of ruling and insurgent groups, almost immediately, some 60,000 Taliban fighters ceased to be soldiers of the republic and were set to re-emerge as the largest active insurgent group in the world today (Rashid, 2009, p. 81).

Much the same happened in Iraq. The basis for the insurgency was laid before the war, when Saddam Hussein and his son Uday created the Fedayeen Saddam, a Baathist-Sunni militia to strengthen the regime and lead guerrilla resistance against its enemies (Otterman, 2003). Further impetus came from the infamous Coalition Provisional Authority Order No. 2, issued by the US administrator in Iraq, Paul Bremer, on 23 May 2003 (Bremer and McConnell, 2006). This directive disbanded the Iraqi Army of 400,000 soldiers, pushing many more into the uprising (Murphy, 2004). Other Iraqis quickly organized to form rival factions, above all the Shi'ite Mahdi Army.

The wars in Afghanistan and Iraq created rebel movements with several hundred thousand combatants. The non-state armed groups in these two wars—active insurgents and dormant militias—constitute approximately 377,000, or more than 50 per cent, of the 735,000 active and dormant non-state soldiers identified here worldwide (see Annexes 1-3). Because they tend to be quite well armed, these groups have an even higher proportion of total insurgent and

Table 4.7 Largest non-state armed groups, 2009

Group	Principal country/ territory	Status	Personnel	Estimated firearms ratio	Estimated total firearms
Afghanistan militias*	Afghanistan	dormant	165,000	1.6	264,000
Sudan People's Liberation Army (SPLA)	Sudan	ruling	125,000	1.4	175,000
Awakening Councils	Iraq	dormant	80,000	1.6	128,000
Taliban*	Afghanistan/Pakistan	active	60,000	1.6	96,000
Mahdi Army/Jaish al-Mahdi (JEM)	Iraq	dormant	60,000	1.6	96,000
Kurdistan Democratic Party (KDP, <i>peshmerga</i> )	Iraq	ruling	41,000	1.6	65,600
Patriotic Union of Kurdistan (PUK, <i>peshmerga</i> )	Iraq	ruling	31,000	1.6	49,600
Communist Party of Nepal (Maoist)	Nepal	ruling	30,852	0.5	15,426
All DRC active armed groups	DRC	active	23,000	1.2	27,600
Joint Integrated Units (with SPLA)	Sudan	ruling	16,000	1.1	17,600
United Wa State Army (UWSA)	Myanmar	dormant	15,000	1.6	24,000
Hamas	Gaza	ruling	15,000	1.6	24,000
Combined Bangladeshi Islamist groups*	Bangladesh	active	12,000	1.6	19,200
Moro National Liberation Front (MNLF)	Philippines	ruling	12,000	1.2	14,400
Forces Nouvelles (New Forces)	Côte d'Ivoire	active	11,500	0.5	5,750
Srpska Garda (Serbian Guard)	Serbia	dormant	11,000	1.2	13,200
Somaliland Armed Forces	Somaliland	ruling	11,000	1.6	17,600
United Self-Defense Forces of Colombia (AUC)	Colombia	active	10,000	1.6	16,000
Badr Organization/Badr Corps	Iraq	active	10,000	1.6	16,000
Tigers	Serbia	dormant	10,000	1.2	12,000
Congolese Rally for Democracy-Goma (RCD-Goma)	DRC	ruling	10,000	0.5	5,000
Hezbollah and associated groups	Lebanon	ruling	10,000	1.6	16,000
United Somali Congress Ali Mahdi Faction	Somalia	ruling	10,000	1.6	16,000

Note: \* Entries for active entities in Afghanistan, Bangladesh, and the Democratic Republic of the Congo (DRC) are composites including many individual groups.

Sources: Annexes 1-3

militia armaments. If not for these two wars, the number for all non-state combatants in 2009 would be below the level of 1999. This is consistent with the finding of other studies showing a decline in armed conflict since the mid-1990s (Mack, 2005). The decisive defeat of the LTTE by the Sri Lankan army in May 2009 further suppresses insurgent numbers for the year (IISS, 2009, p. 357).

Table 4.7 reveals just how highly concentrated are the small arms of non-state groups. Listed here are all insurgencies and militias with 10,000 or more active or fully participating members in 2009. Listing just 24 of the 386 groups featured in the appendices to this chapter, Table 4.7 accounts for about 80 per cent of all insurgent weapons identified in this review. It also clarifies the dominance of ruling and dormant groups. Only two of the ten largest groups are militarily active.

### **The disproportionate impact of small numbers**

Compared to arsenals of other gun-owning groups, those of insurgents, militias, and terrorist movements can be quite small. Of some 875 million firearms worldwide, roughly 1.4 million are controlled by non-state groups (other than gangs), few compared to the impact of guerrilla warfare and terrorism on international stability (Small Arms Survey, 2007, ch. 2). By comparison, law enforcement agencies have about 20 times more firearms, armed forces about 150 times more, and the individuals of the world more than 450 times as many. Even these comparisons tend to exaggerate insurgent numbers, inflated by groups currently dormant or militarily inactive and those that have become de facto or legitimate rulers.

### **Box 4.4 The decline of small arms?**

This chapter stresses small arms partially because of their prominence as tools of non-state warfare but also for convenience; they are easier to count than other weapons. Their importance in outright killing, however, appears to be declining. Small arms may be the basic symbol of war, especially guerrilla war, and they may cause much of the dislocation and indirect suffering in war, but they appear to account for a declining share of direct deaths and injury. Instead, improvised explosive devices (IEDs), suicide bombing, and rockets have gained progressively more importance in the last 20 years.

The shift is not entirely by choice. In both Afghanistan and Iraq, for example, insurgents began fighting almost exclusively with small arms. Only as the tactics and equipment of NATO and Coalition troops evolved, making small arms attacks increasingly dangerous and less successful, did insurgent tactics adjust as well. In the al-Aqsa Intifada that began in the Palestinian Territories in 2000, a similar adjustment took place, as insurgents reacted to improved Israeli defences by relying less on shooting and turned instead to suicide bombing, IEDs, and rockets (Karp, 2009). Similar processes have been identified elsewhere, as suicide bombing gained popularity in the 1990s (Atran, 2003; Reuter, 2004). Publicized in continuous reports from Iraq and Afghanistan, IEDs are catching on in other countries as well, such as India (Joseph and Srivastava, 2008, pp. 125, 141).

Research by Bird and Fairweather documents both the rising toll of death and injury from IEDs in Afghanistan and Iraq and their increasing preponderance as agents of insurgent destruction. By mid-2006, three years into the Iraq war, IEDs caused three out of five Coalition combat fatalities (Bird and Fairweather, 2007). In Afghanistan, the switch took longer, but, by 2007, it had reached comparable proportions (Bird and Fairweather, 2009). Through 2009, these rates continued to rise, with IEDs causing 80 per cent of deaths among foreign troops in July 2009 (AP, 2009).

The situation is similar for the Taliban in Afghanistan. The Taliban face a variety of NATO weapons, but rarely, if ever, IEDs. Rather, they are most likely to be attacked in small arms ambushes, by artillery and from the air, especially by guided missiles and bombs. Although documentation is weak on this point, the latter two—a standard response to any Taliban concentration—are probably the most deadly. No statistics are available on Afghan civilian or Taliban casualties, a lacuna of considerable consequence.

To be sure, even where they are not the most deadly weapons, small arms remain extraordinarily important. Their routine visibility and explicit threat of death dominates any environment. As a measure of insurgent capability, moreover, small arms statistics remain the simplest and most accessible variable for analysis, even if they are becoming less salient to the actual business of killing.



To be sure, small arms are not the whole story of insurgent armament (see Box 4.4). Small numbers, however, are not always inconsequential either. Some of the most dangerous groups number no more than a few thousand; some number just a few hundred. The Democratic Republic of the Congo (DRC) might be expected to harbour an enormous number of guerrillas, considering the scale of carnage and destruction involving millions of dead and displaced. About 20 armed factions in the DRC have been recognized by the Kinshasa government or international agencies. The authors of some of the worst Congolese destruction numbered roughly 23,000 combatants, hardly a vast horde (Bavier, 2008; Thakur, 2008).

The extraordinary disparity between the scale of rebel movements and their humanitarian and political damage is the source of their greatest significance. The attack of 11 September 2001 illustrates the potential of small groups of rebels or terrorists. Another aspect is their remarkable tenacity, fighting wars that typically take at least nine years to conclude, often much longer (Hammes, 2004). Put another way, small insurgent forces can tie down vastly larger state forces, a fact central to the strategic insights of T. E. Lawrence and Mao Zedong. Conventional wisdom holds that defeat of an insurgency requires ten-to-one military superiority of state forces (Galula, 1964, p. 7). The historical accuracy of this statement was challenged almost as soon as it was offered (Heilbrunn, 1965). Although Galula's classic formula must be tailored to specific circumstances, its metaphorical insight is almost universally accepted (Nagl, 2005). The small number of insurgents, instead of offering reassurance, represents an enduring challenge.

## CONCLUSION

It is no accident that the best-understood small arms and light weapons, those of states and civilians, are often most amenable to quantification, analysis, and policy-making. Nor is it any surprise that the hazier arsenals of youth gangs, criminal organizations, guerrilla fighters, and terrorist cells have often been much more difficult to deal with.

The estimates in this chapter, tentative as they are, help put the number of small arms held by non-state groups in broader perspective. Gangs control at least two million and probably no more than ten million firearms in all. Non-state groups have a total of about 1.4 million small arms. Amounting to somewhere between 0.4 and 1.3 per cent of all small arms, the arsenals of gangs and groups are much smaller than might be guessed from their ubiquity in the news and entertainment, or from their humanitarian effects or political importance.

Above all, this review testifies to the importance of further research on non-state small arms and the need for better supporting data. Two priorities stand out. First is the need to see through the fog of membership. If research generally responds to the worst problems, we probably know already where the largest and most serious gang problems are. But even in those instances, estimates often diverge considerably. Elsewhere, moreover, the scale of gang and group membership remains hazy, at best. Second is the need for better appreciation of group small arms acquisition and ownership. As shown by previously cited research carried out in the United States and England and Wales, careful research yields powerful insight into firearms ownership and use, even among criminal groups. As shown by the references here, diligent field research has been especially revealing about the weaponry of both gangs and groups. Policy in both fields will undoubtedly benefit from more intensive study.

If there is truth in the words of management guru Peter Drucker—who said, 'What gets measured gets managed'—then systematic efforts to deal with the small arms of gangs and non-state groups are just beginning. The estimates here demonstrate the kinds of insights that can be generated about an aspect of small arms policy often assumed to be impossibly obscure. As this chapter shows, the arsenals of gangs and insurgents, like any area of social life, will yield to careful investigation. ■

## LIST OF ABBREVIATIONS

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DDR	Disarmament, demobilization, and reintegration
DRC	Democratic Republic of Congo
IED	Improvised explosive device

## ANNEXES

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### **Annexe 1. Active insurgencies and non-state militias, with combatants where known and estimated firearms**

### **Annexe 2. Non-state armed forces with legitimate political roles or near-sovereign territorial authority, with combatants where known and estimated firearms**

### **Annexe 3. Dormant non-state armed groups, with combatants where known and estimated firearms**

## ENDNOTES

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- 1 Although gangs are non-state, in this chapter a *gang* refers to criminal groups, usually dominated by young members. The *non-state actors* examined here usually seek political power. More complete definitions are presented in Boxes 4.1 and 4.3. Some overlap seems unavoidable; distinctions often must be made case-by case.
- 2 For detailed explanations of the estimation method, see Small Arms Survey (2001, pp. 59–93).
- 3 An exception is made for the United States, where there is near equality of the total numbers of guns and people (roughly 270 firearms for 304 million people in 2008), allowing a maximum of 1.2 firearms for each gang member in this estimate.
- 4 Interview by Eric G. Berman, Small Arms Survey, with Boston police, 2009.
- 5 The confusion becomes apparent when comparing the Somali factions still listed in the IISS Armed Conflict Database: Non-State Armed Groups (IISS, n.d.) with a recent United Nations Security Council report on Somalia (UNSC, 2008).
- 6 With apologies to Carl von Clausewitz (1976, p. 140).
- 7 See, for example, Small Arms Survey (2006a, p. 23).
- 8 Author interviews with researchers James Bevan and Nicolas Florquin, 2009.

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