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# CONFLICT AND VIOLENCE

ASSESSMENT PAPER

*Benefits and Costs of the Conflict and Violence  
Targets for the Post-2015 Development Agenda*

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# Benefits and Costs of the Conflict and Violence Targets for the Post-2015 Development Agenda

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Post-2015 Consensus

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# HIGHLIGHTS

## Summary of Targets and Benefit-Cost Ratios

Target	Example interventions	Studies and context	Reported B:C Ratio	Comments
By 2030, reduce the number of countries experiencing large scale wars (1000+ deaths) to 3 or fewer and the number of countries experiencing small scale wars (>1000 deaths) to 14	UN Peace Keeping Operations	Dunne (2012)	2-7	Only available as option in limited circumstances
	Increase aid in post-conflict zones	Hoeffler (2014)	None reported	Does not prevent onset of civil war conflict
Reduce assaults	Enforcing laws on alcohol consumption	Moore et al (2012) in UK	17	Small pilot study in the UK, high BCR because existing rules were enforced (i.e. intervention required few resources)
Improve policing	India, Rajasthan: program to improve perception of and actual police performance	Banerjee et al (2012)	None reported	BCR likely to be high because the program required no additional resources
Improve policing	Bogotá, Columbia	Moncada (2009)	None reported, depending on cost of program BCR could be large	
Reduce infant homicide globally by 43%	UK policies	Time series evidence in this study	None reported	Difficult to establish why homicides of infants fell in the UK
Eliminate severe physical violence as a method of	Social services	WSIPP (2013) in US	13-14	Only measured in US - unlikely that developing countries have the capacity to rollout early

child discipline				intervention programmes
	Triple P program	Prinz et al (2009) in US	8.7	Large RCT in Georgia, US, difficult to generalize to low and middle income countries
Eliminate all forms of violence against women and girls	DASH, Domestic Abuse, Stalking and Honour Based Violence	Richards et al (2009) in UK	None reported	no evaluation so far, but BCRs potentially large because DASH requires very few new resources
	Duluth Model	Corvo et al (2008) in US	None reported	No evaluation so far
	SASA! Program against Domestic Violence in Uganda	World Bank (2014)	None reported, depending on cost of program BCR could be large	Rigorous evaluation, large significant impact
	Use of TV and Radio Programs, for example Soul City in South Africa	World Bank (2014)	None reported, depending on cost of program BCR could be large	Large significant impact
	Conditional chash transfer program to prevent early marriage in Ethiopia	World Bank (2014)	None reported, depending on cost of program BCR could be large	Large significant impact
	(Un)conditional cash transfer for female empowerment	World Bank (2014)	None reported	BCRs likely to be very low or even negative, domestic violence increased after some interventions
	FGM	Meta study by Denison et al (2009)	None reported, BCRs likely to be (very) low	Most programs are not rigorously evaluated but it appears that very few have any impact on prevalence rates

## Recommendations

Violence is part of the human condition and zero targets such as “Prevent and eliminate all forms of violence against girls and women” are aspirational. However, cross country evidence suggests large variation in the prevalence of different types of violence. Some countries are more able to “ensure stable and peaceful societies” than others. Time series evidence from high income countries also shows that the prevalence of homicides as well as other forms of violence has declined. Thus, it is potentially possible for countries with currently high levels of violence to reduce these levels by 2030.

How the reduction of violence can be achieved is less well understood. There is an ongoing debate on what brought about the reduction in violence over the past three decades in high income countries but the phenomenon cannot be reduced to the application of a few societal programs. Attitudes to violence typically change slowly over time; examples are wife beating and corporate punishment of children. Programs aimed at reducing violence are thus unlikely to produce results quickly. In addition many programs have not been set up in a manner allowing rigorous evaluation. For many of these interventions we neither know their impact nor do we know their costs, thus making it impossible to provide BCRs.

A number of well designed, longer term interventions have been evaluated in high income countries but it is unclear whether these results could be replicated in low and middle income countries (external validity). Given that there is little knowledge and data on the impact of interventions such as policing reforms, programs against domestic violence and parenting programs outside high income countries, research on the impact of such interventions in middle and low income countries has potentially large returns.

Despite the uncertainty of what feasible targets for violence reduction are and how they can be achieved we advocate the inclusion of such targets in the post-2015 agenda. Our estimates suggest that the costs of violence are high; the welfare cost of collective, interpersonal violence, harsh child discipline, intimate partner violence and sexual abuse are equivalent to around 11 per cent of global GDP. The cost of homicides are much larger than the cost of civil conflict. However, violence perpetrated in the home appears to be the most prevalent form of violence. Domestic abuse of women and children should no longer be regarded as a private matter but a public health concern.

Ambitious targets and programs for public health problems, such as the eradication of small pox, Rinderpest, Guinea worm, polio and measles have been very successful over the past six decades. As advances in medical science have resulted in a decline in deaths from communicable diseases, social causes of death, such as violence, have become relatively more important. Setting violence reduction targets would acknowledge that the global agenda is evolving and would promote research in finding ways to reduce violence in low and middle income countries. We argue for moving beyond a near-exclusive focus on civil war violence – concern with which has increased in the development community and is admirable and important – to recognizing that the costs of interpersonal violence are

probably much larger but are almost wholly neglected in current development programming.

## Summary of Cost Estimates

Type of Violence	Cost in USD, billions	Cost in % of World GDP
<b>Collective Violence</b>	167.19	0.19
<b>Interpersonal Violence</b>	1,245.27	1.44
<b>Homicides - Total</b>	700.5	0.82
<b>Men</b>	557.5	0.65
<b>Women</b>	105.3	0.123
<b>Female Homicides, IP</b>	40.1	0.047
<b>Children</b>	37.7	0.044
<b>Child Abuse</b>	3,594	4.21
<b>Reported Child Sexual Violence</b>	36.8	0.043
<b>Intimate Partner Violence</b>	4,423	5.18
<b>Reported Sexual Violence against Women</b>	66.7	0.078
<b>Total</b>	<b>9,533</b>	<b>11.16</b>

Note: Collective violence includes deaths from external and internal conflicts and terrorism. Interpersonal violence includes homicides and violent crime (serious physical attacks but excludes sexual assault). We break down homicides by victim (men, women and children) and provide an estimate for women killed by their intimate partner (IP)

## **Abstract**

In this paper we estimate the cost of collective and interpersonal violence to low and middle income countries. This includes civil war, homicides and (non)-fatal violence against children and women. The cost of homicides and assault are almost four times higher than the cost due to civil war and violence. Our estimates of non-fatal violence against children and women focus on domestic violence only and we suggest that these costs are much higher than the costs of homicide and civil war. The main reason is that the prevalence of these types of violence is very high: possibly as many as 16 per cent of all children are punished using violent methods and about 30 per cent of all partnered women experience intimate partner violence during their lifetime. While we offer cost estimates for different forms of violence, we only provide some BCRs. Although there is evidence that violence is declining, it is often not clear why this is the case. Much of the evidence from violence reducing interventions comes from high income countries and it is unclear whether these programs would be similarly effective in low and middle income countries. Currently almost no aid is intended to improve police competence and integrity, and very little is spent on programs explicitly focused on reducing crime and attendant problems. While further research is needed to examine the effectiveness of violence reducing interventions, it appears likely that some interventions would constitute a very effective use of development aid.

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## Introduction

The U.N. High Level Panel's (HLP) report "A New Global Partnership" put as one of its five "big, transformative shifts" for the post-2015 development agenda "Build peace and effective, open, accountable institutions for all". Among their more specific 12 goals for 2030, they include "(#11) Ensure Stable and Peaceful Societies," with sub-goals of reducing violent deaths and eliminating all forms of violence against children, ensuring broad and equal access to capable justice institutions, stemming "external stressors that lead to conflict," and enhancing "the capacity, professionalism and accountability of the security forces, police and judiciary." Under specific goal number 2, "Empower Girls and Women to Achieve Gender Equity," they also list the sub-goal "Prevent and eliminate all forms of violence against girls and women."

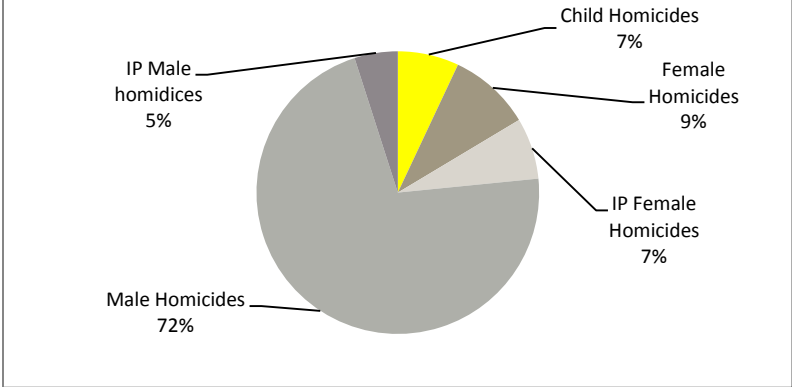
In this paper we argue that the UN HLP has identified several areas where the benefit/cost ratio for foreign aid spending and domestic policy efforts may be very high, and that have been relatively neglected by the development community to date. At a minimum, the Panel has identified areas where the economic and social costs of continuing at current levels of violence are plausibly quite large, and where the amount of aid programming and policy attention is very small in comparison to amounts spent in other areas, such as health, education, and governance reform. Unfortunately, in part because the global development agenda has paid so little attention to "enhancing the capacity, professionalism and accountability of the security forces, police and judiciary," it is impossible to provide anything more than extremely speculative estimates of the benefit-cost ratio for reducing levels of (for example) homicide by 10 per cent globally. Nonetheless, we argue that there is a strong case for making societal violence reduction a priority in the next round of the Millennium Development Goals.

To date, when the foreign aid and development community has thought about the costs of violence and what can be done about them, it has focused mainly on civil war and large-scale collective violence (e.g., World Bank 2011). It is completely clear that major civil wars often cause major development disasters – see for example the experience of Somalia and Afghanistan. However the main impacts of civil war are concentrated in a small number of countries, and policy instruments for reducing the major negative effects are distinctly limited. The recent experience of Syria is a horrific case in point; international cooperation to end the worst humanitarian catastrophe since the Rwandan genocide has been almost complete absent.

By contrast, for each battlefield death in civil war, about nine times as many people are killed in interpersonal disputes, including many killings related to drug-trafficking, intimate partner violence (of all homicides, 7 per cent female and 5 per cent male), and killing of children (7 per cent). About 43 per cent of all female homicide victims were killed by a current or former intimate partner. Beyond the 418,000 homicides, reported crime figures suggest that there are about 300,000 cases of sexual violence, of which almost one third are committed against children. There are also more than 2 million cases of assault. In addition to these reported crime figures, survey estimates suggest that about 275 million

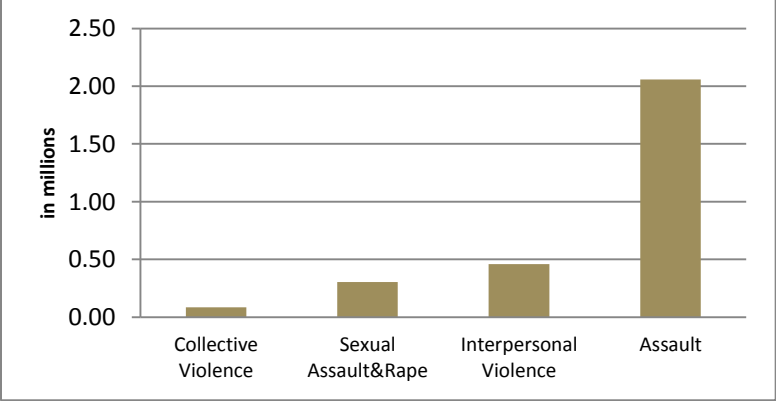
children are subjected to violent physical discipline in their homes, that 100 million girls and women live with female genital mutilation and that about 30 per cent of all partnered women have been subjected to intimate partner violence during their lifetime. This corresponds to about 769 million women. Thus, physical violence in societies is a much larger and more pervasive phenomenon than just civil war violence. As we discuss below, a number of studies suggest that the strictly economic consequences are very large, and of course will be much larger if we try to factor in social damage and individual suffering.

*Figure 1: Homicides in Low and Middle Income Countries*



Sources: WHO (GHE 2013) for the age and sex of victims and Stöckl et al (2013) for intimate partner violence.

*Figure 2: Violence in Low and Middle Income Countries*



Sources: WHO (GHE 2013) for collective and interpersonal violence and UNODC (2013) for sexual assault, rape and assault.

If one looks at spending by the major multilateral and bilateral aid donors, however, one finds that at best a tiny fraction of their programming is targeted at reducing societal violence or improving judicial systems that deal with crime. Virtually zero aid flows to programs intended to improve police competence and integrity, and precious little flows to community development programs explicitly focused on reducing crime and attendant problems. At present it is impossible to estimate an average rate of return for increased aid in this area, due to lack of experience and lack of an extensive evaluation literature. It is plausible, however, that returns (or the benefit-cost ratio for a given percentage reduction in violence) are substantially higher than in the area of aid to improve “governance” in

developing countries (which usually means improving performance and accountability of local institutions that make decisions about local public goods).

The UN HLP advocates as goals “eliminating all forms of violence against children” and all violence against girls and women by the year 2030. Though excellent as aspirations, these are clearly not feasible “zero targets” for the next 15 years (or perhaps ever, if taken literally). Nonetheless, substantial reductions in homicide, and probably other forms of societal violence, do appear to be possible when governments and societies make an effort. In the high-income countries (using the World Bank category and excluding three Caribbean countries), homicide rates fell from 2.3 per 100,000 in 1995 to 1.3 per 100,000 in 2011, or 57 per cent. Over the same period, Columbia saw its homicide rate fall from 70 per 100,000 in 1995 – the second highest in the world in that year – to 33 per 100,000 in 2011, a reduction of more than 50 per cent. Colombia made concerted efforts in this period to reduce societal violence, which suggests that better policies and programs may be able to have a significant impact in this area.

Half the annual rate of these impressive reductions is about 1.5 per cent per year. If maintained globally for 16 years (from 2015 to 2030), the global homicide rate would fall by about 21 per cent. Arguably this would be an ambitious target – it is greater, for example, than the WHO projection of a 13.5 per cent decline in “interpersonal violence” globally from 2015 to 2030. But targets should be somewhat ambitious, and though we have little go on in terms of evidence as to the responsiveness of homicide rates to social programs and policy reforms, the experience of Colombia and the U.S. suggests 21 per cent over 16 years is feasible.

There are very little internationally comparable data on violence against children and women, but survey evidence suggests that most of the violence happens in the home. About 16 per cent of children are disciplined by using severe physical force, such as hitting them on the face, head and ears and being hit repeatedly with an implement like a cane, stick or belt. Sixty per cent of caregivers also report having shaken, slapped or hit a child. The use of severe physical force should end and the use of less extreme physical parental discipline should be halved. In household surveys about 30 per cent of women report some psychological, physical or sexual abuse from an intimate partner during their lifetime. A reduction of intimate partner violence by half would dramatically improve the welfare for millions of women worldwide and help to break cycles of violence. Children who grew up in abusive homes are very often abused by their intimate partner or become abusers themselves.

The paper is organised in the following way. We first present cost estimates for civil war, homicide and other violent crime (Section 2), violence against children (Section 3) and violence against women (Section 4). We then turn to a discussion of how much aid is spent on violence reduction (Section 5). We present some ideas on which social programs for violence reduction could be financed through aid (Section 6) and present a discussion of possible targets for violence reduction in Section 7. We offer some conclusions in the last section.

## Interpersonal and Collective Violence

Using the UNODC's most recent data, in 2008 there were just over 418,000 homicides in the 186 countries with data. In that same year, about 49,000 people are estimated to have died in "battle deaths" in civil wars, slightly more than the average annual battle death estimate of 43,410 for the period 1998-2008. So by these measures total homicides run at about eight and a half times the rate of civil war battle deaths.<sup>1</sup>

The negative externalities of civil wars – which often come with wholesale destruction of infrastructure and displacement of communities – might be substantially greater than the externalities of interpersonal violence. However, whereas civil wars are fairly concentrated in space, interpersonal violence is a far more prevalent problem. In recent years 20 to 25 countries have suffered from civil war each year (at the level of a conflict that kills at least 1,000 people over the whole course of the war), and in the large majority of these cases the conflict directly affects only a small part of the country. By contrast, almost no countries have zero homicides each year, and about one in three countries had (in 2008) a homicide rate greater than 10 per 100,000, which the WHO considers to be an epidemic level.

Further, the true extent of the social costs of homicide may be very large. Due to data availability the most developed literature on the costs of crime is for the United States, where researchers have used a variety of methods to try to quantify the economic "unit costs" of different types of crime. An estimate by a well-regarded recent study is about \$9.1 million on average per homicide (in 2012 dollars), including both "tangible" costs of lost earnings and the crime justice system, and "intangible costs" related to a victim's value for his or her life. Ninety-four per cent of this comes from the latter, which are based on the "value of a statistical life" approach (McCollister et al. 2010). These estimates do not fully take into account pain and suffering of family members and friends, or long run effects on children.<sup>2</sup> They usually do not take into account what people would be willing to pay for a reduction in fear that would come from lowering homicide or assault rates. Nor do they take into account dynamic economic effects of violent crime – for example, would lower homicide rates in a community increase economic activity, investment, educational performance, or improve mental and physical health due to less stress or greater freedom to live a normal life? Moreover, none of these studies attempt to estimate the costs of crime

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<sup>1</sup> We use 2008 because this is the year with the most complete set of homicide estimates and it is also the last year for which the best source for estimates of civil war battle deaths exists (Lacina and Gleditsch, 2005). The reliability of the data for both battle deaths and homicides, at least the global level, is doubtful. The battle deaths data deliberately tries to count only intentional killing in war fighting, and so leaves out what appears to be a great deal of mortality that is the indirect result of civil war. For homicide data, these appear to be fairly accurate for developed countries, but may be highly inaccurate (and understated) for many developing countries.

<sup>2</sup> Value of a statistical life (VSL) estimates are derived from models relating wage differentials to risks of death across occupations in different industries. So pain and suffering of family members will be reflected only to the extent that individuals take this into account when considering their compensation for running risks of death at work. The McCollister et al. study's estimate of about \$9.1 million per homicide is exactly at the mean of estimates for 31 high quality studies using the VSL method that are reviewed in Chalfin (2013). He notes that the VSL approach tends to produce somewhat higher estimates than other methods – about \$3.4 million for studies using decision making over risky products, \$5.7 million from studies doing direct and indirect cost accounting, \$5.3 million for studies by U.S. Federal agencies. The estimates that follow (in the next para) can be scaled down in proportion if any of these other methods are preferred.

for businesses, either due to direct costs of vandalism and theft, or indirect costs through lower sales and revenues.

Even so, \$9.1 million is a big number, approximately 170 times per capita income in the U.S. Following the approach taken by the Institute for Economics and Peace (IEP) in their 2014 report, *The Economic Cost of Violence Containment*, we can produce rough estimates of homicide costs at the country level by scaling this “unit cost” estimate by the ratio of country GDP to U.S. GDP, and multiplying by the best estimate for the number of homicides in the country. For the latter purpose we use estimates provided by IEP, are based on 2013 estimates by the UNODC. Results are shown in Table 1 below. The Table uses World Bank categories for low- and middle-income countries, showing the estimate for the “High Income Countries” as a point of comparison. For the average country in a region, the estimates range from .33% in the high-income countries to 4.10% for Latin America and the Caribbean. These are large costs – especially for Africa and Latin America and the Caribbean – given that this is a single category of violent crime and that the method here probably does not come close to counting the full social and economic cost of homicides.<sup>3</sup>

*Table 1: Homicide costs as a share of GDP, by World Bank region*

Region	As % of regional	As % of country GDP
Latin America and SubSaharan Africa	3.68	4.10
Europe and Central Asia	1.11	0.67
Middle East and North South Asia	0.71	0.66
High Income Countries	0.42	0.33
East Asia and Pacific	0.26	1.03
World	0.82	1.71

Notes: Based on IEP (2013) estimates. First column is total costs in region as % of total GDP of countries in region. Second column is average of country costs (as % of country GDP) in region. World Bank regions are for low- and middle-income countries; High-Income Countries can be anywhere.

It is worth stressing that for this and many of the estimates given below, when we express a cost as a fraction of GDP, we are not saying that annual GDP is being reduced by this amount. GDP is a measure of economic activity, not the “total welfare” of people in a society. Saying that the costs of homicide in the average Latin American country are on the order of 4.1 per cent of GDP is saying that the welfare improvement from reducing the homicide rate to zero would be similar to the welfare improvement from increasing GDP per capita by 4.1 per cent. That is, such estimates are a way of scaling the value of the annual benefits that might be expected from reducing violence.

<sup>3</sup> In fact, in order to follow IEP as closely as possible (we use more of their data later in the paper), the estimates for this Table used only the “intangible costs” of homicide as estimated by McCollister *et al.*, thus a unit cost of 1.08\*\$8,442,000 = \$9,117,360, where the 1.08 is a CPI adjustment to express the 2008 McCollister *et al.* estimate in 2013 dollars. IEP count the “tangible costs” of homicide under a category for the criminal justice system; see note X below.

Homicide is just one form of violent crime. Credible estimates of the total costs of violent crime for a large number of countries are hard to come by and hard to produce, due to absent or poor data. A whole literature exists on the costs of crime in the U.S., and there are detailed studies for a handful of other developed countries with good data (for an excellent review see Chalfin 2013). There have also been efforts to provide estimates for some Central and Latin American countries due to relatively high violence levels. These form a necessary starting point for considering what the magnitude of total global costs of violent crime might be like.

Chalfin's (2013) review of studies of static crime costs in the U.S. comes up with an estimate of 2 per cent of GDP in 2012, based on estimates for seven "index" crimes. Murder (not that common but very high cost) and assault (53 times more frequent but about 60 times less costly per incident) dominate.<sup>4</sup> The British Home Office (2000, 2005) issued two very detailed studies of crime costs in England and Wales; the second of these estimated a total cost of 36.2 billion GBP in 2003, which works out to approximately 6.1 per cent of GDP of the region in that year. The higher estimate is interesting and surprising given that violent crime rates are notably higher in the U.S. than in the U.K. The difference appears to derive from several sources, including more weight put on pain and suffering, costs of anticipation of crime and lost output, and a fuller accounting of crimes, especially in the use of multipliers to estimate the true prevalence of crimes that are often underreported, such as "common assault" and sexual offenses. It seems likely that a similar approach applied to the U.S. would yield an estimate markedly greater than 2 per cent.<sup>5</sup>

Estimates for developing countries are less common and more conjectural. Incorporating intangible costs, Londoño and Guerrero (1999) offer 14 per cent of annual GDP per year for crime in Latin America. Bourguignon (2009) estimates 7.5 per cent for Latin America (and 3.7 per cent for the U.S.), for 1995. Acevedo's (2008) study of costs of violence in Central America produced estimates of 10.8 per cent per year for El Salvador, 10.0 per cent for Nicaragua, 9.6 per cent for Honduras, 7.8 per cent for Guatemala, and 3.6 per cent for Costa Rica. A study of South Africa, which has very high crime rates, finds that 3.7 per cent of GDP is spent on the criminal justice system alone (Altbeker 2005). Ward and Grant (2008) estimate 4 per cent for Jamaica in 2006, although they emphasize that this is probably a significant underestimate since they consider only medical costs and costs from victims' loss of productivity. Studies of two cities in Brazil, Belo Horizonte and Rio de Janeiro, produced estimates of 5 per cent and 4 per cent of city output. By sharp contrast, one of the very few studies of the costs of crime in low-crime Asia – for Thailand in 2005 – gives estimates for direct medical costs and lost productivity that imply a cost of 0.22 per cent of

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<sup>4</sup> Three of the seven index crimes are (probably mostly) nonviolent – burglary, larceny, and auto theft – and contribute to about 15 per cent of the total costs. The violent index crimes are murder, rape, robbery, and assault. Chalfin's review of a large number of studies using quite different costing methodologies tend to come up with roughly similar unit cost estimates for different categories of crime, so that it is "unlikely that a researcher's choice of cost methodology will be an important driver of whether a given intervention is found to be cost effective" (p. 12). The 2 per cent estimate is similar to that of Bourguignon (2000) (2.1 per cent).

<sup>5</sup> The British Home Office studies look only at crimes against individuals and households, excluding the costs of crimes against businesses. They do include nonviolent crimes, although as in Chalfin's review of U.S. studies, these appear to make up a very small proportion of the total estimated costs.

GDP (Bundhamcharoen et al 2008).<sup>6</sup> This and most of the other studies take no account of intangible costs such as pain and suffering, what non-victims would be willing to pay for reductions in fear, or, as noted, dynamic economic costs.

The most comprehensive attempt to measure violent crime costs across countries is a study by the Institute for Economics and Peace (IEP 2014). They use McCollister et al.'s (2010) estimates of unit costs, together with the most recent UNODC data on total homicide and violent assault rates across countries, to produce estimates of total costs for these specific categories. However, IEP's goal is to produce an estimate of total costs of both all violence and what they call "violence containment," the latter being a category that includes costs for deterring or otherwise containing violence. So, for example, in their total estimates they include spending on national defence, as well as spending on "internal security" (police and other security services), "private security" (spending by households and businesses on protection from crime), and UN peacekeeping operations.

Should such "containment costs" be considered when trying to assess the benefit-cost ratios of efforts to reduce violence?<sup>7</sup> This is a tricky question, as it depends on the nature of intervention we want to evaluate. Suppose we want to evaluate a program that provides after-school sports or other activities for youth in a high-crime neighbourhood. If this spending reduces crime rates and so allows the city to spend less on policing, then we would surely say that costs of policing had been part of the costs of crime prior to the intervention, and that reducing these was a benefit of the intervention. But if instead we consider policing itself as an intervention intended to reduce crime, then we would not count the costs of policing as a cost of crime. So, for the purpose of providing rough estimates of the scale of the costs of societal violence, in what follows we will exclude the IEP's policing and "internal security costs," along with military spending, private security, and UN peacekeeping (for the same reasons). However, it should be kept in mind that for any intervention that attempts to reduce violence by means other than spending on police or other criminal justice services, the benefits of reduced violence would ideally include reduced spending on these as well.

The cost of civil wars has been estimated in previous rounds of the Copenhagen Consensus (Collier and Hoeffler, 2004; Chauvet et al, 2008; Dunne, 2012), but here we use the IEP estimates of the cost of internal conflict. We use the IEP estimates for two reasons. First, they allow us to compare different types of violence, for example interpersonal violence and collective violence. Second, using the IEP methodology we can produce estimates for violence against women and children, which are currently not part of the IEP estimates.

Tables 2 and 3 use the IEP's most recent estimates for 186 countries to calculate measures of the welfare cost of interpersonal and collective violence as a percentage of GDP circa 2013. In Table 2, costs are summed by region and divided by total GDP for the region.

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<sup>6</sup> For a good review of these and other estimates, see Soares (2010).

<sup>7</sup> Note that for program evaluation the relevant question is what are the marginal benefits relative to marginal costs of spending on the program, and not the total costs of some form of violence. However, estimating total costs is valuable for identifying where a given percentage reduction would have the greatest benefits, which is a useful first step given that, in this area, we have few studies that allow estimates of BCRs for specific interventions.



Table 3 provides country averages, and country averages weighted by population; these are perhaps more useful for summarizing the welfare cost experienced by (respectively) the average country or person. Interpersonal violence costs includes the IEP categories of homicide, violent crime, fear, and incarceration. Collective violence costs include the IEP categories called terrorism, internal conflict (civil war), spending on internally displaced people and refugees, interstate wars, and GDP losses from civil or interstate wars.<sup>8</sup>

We see that the global welfare cost of interpersonal violence is estimated at 2.1 per cent of GDP for the average country, 1.44 per cent if we weight by country population (the lower number reflects the typically lower violence estimates for Asian countries, which tend to have large populations). By contrast, the global costs of collective violence – which is dominated by the costs of civil war – come in at .33 per cent of GDP on average across countries, or less than one sixth of the estimated costs for interpersonal violence within societies. Region by region, we find that the ratio of the costs of interpersonal to collective violence is much greater than six to one for Latin America, Sub-Saharan Africa, the advanced industrial countries, and Eastern Europe/former Soviet Union. The world average is pulled down by Middle East/North Africa, where civil conflicts emerging out of the Arab Spring make for unusually large estimates of collective violence costs in this region (for 2013).

Many plausible costs of violence are not included in these estimates – in particular dynamic effects on economic organization and production; pain and suffering costs for family members and friends from homicide and assault; most likely, a large undervaluation of welfare losses due to fear and behaviour modification to avoid violence; and, as we discuss below, costs for violent child abuse and intimate partner violence that are not counted in the assault data, and which are highly prevalent. Thus the estimates in Tables 2 and 3 are arguably quite conservative.<sup>9</sup> To summarize, these estimates suggest that both civil war and interpersonal violence impose large costs globally, with interpersonal violence being much more pervasive and much costlier than civil war violence.

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<sup>8</sup> IEP bases homicide and violent crime estimates on UNODC data for homicides and assaults, multiplying these for each country by the relevant unit costs from McCollister et al (2010) scaled by the ratio of country per capita income to U.S. per capita income. The costs of fear of crime is estimated by using data from a Gallup World poll that asked about perception of safety, and multiplying by an estimate of annual health costs of fear from a U.K. study, scaled again by country income. (The fear costs are very small compared to other components, less than two per cent of the total on average.) Incarceration costs use data on national prisoner populations multiplied by a per-prisoner cost from a U.S. study, scaled again by country income. GDP losses from civil war use a conservative estimate of 2 per cent per year for countries with conflicts in progress, based on Collier and Hoeffler (1998) and other studies. GDP losses should incorporate infrastructural damage from fighting. IDP and refugee costs simply use the UNHCR budget allocations.

<sup>9</sup> See IEP 2014 for further discussion of the conservatism of their estimates (in the categories we are using). The one highly consequential component of these estimates that one might argue overstates true costs is the value of human life based on the VSL approach (or that of other methodologies), and scaling this for developing countries by the ratio of GDP per capita to US GDP per capita. Perhaps people put a proportionally high value on years of life at higher income levels, for example.

*Table 2 Estimates of welfare costs of interpersonal and collective violence as a share of regional and global GDP for 2013*

	Interpersonal violence		Collective violence	
	Cost (\$	% of GDP	Cost (\$	% of GDP
L. America/Carib.	334.5	4.43	40.8	0.54
SubSaharan Africa	85.5	3.90	14.6	0.67
Europe and Central	86.7	1.58	53.4	0.98
High Income	592.8	1.33	1.41	0.00
M. East/N. Africa	25.6	0.95	40.2	1.48
South Asia	47.4	0.78	15.6	0.26
East Asia/Pacific	72.5	0.41	1.03	0.01
World	1245.2	1.44	167.1	0.19

Notes: Estimates based on IEP data for 2013. % of GDP refers to total GDP of region.

*Table 3 Estimates of welfare costs of interpersonal and collective violence as a share of country GDP for 2013, by region*

	Interpersonal violence		Collective violence	
	cost as % of GDP		cost as % of GDP	
	Avg.	Avg (pop weighted)	Avg.	Avg (pop weighted)
L. America/Caribbean	4.57	4.61	0.11	0.45
SubSaharan Africa	3.31	3.23	0.47	0.72
East Asia/Pacific	1.26	0.46	0.02	0.01
High Income Countries	0.97	1.23	0.01	0.00
Europe and C. Asia	0.94	1.41	0.11	0.74
M. East/N. Africa	0.90	0.96	2.03	2.05
South Asia	0.74	0.76	0.4	0.27
World	2.10	1.44	0.33	0.34

Notes: Estimates based on IEP data for 2013.

## **Violence Against Children**

### ***Background***

Violence against children takes many different forms (for overviews see Krug et al 2002; Pinheiro 2006; UNICEF, 2010). Maltreatment of children includes neglect, physical, sexual and emotional abuse and happens at home, in school, in care institutions, prisons, at work and in the community. In 1989 the United Nations Convention on the Rights of the Child set out legally binding standards for the civil, political, economic, social, health and cultural rights of children. The convention defines a child as persons under the age of 18. It is the most widely accepted human rights treaty and it has been ratified by all UN member states, except Somalia, South Sudan and the United States. Two optional protocols were adopted on 25 May 2000. The First Optional Protocol restricts the involvement of children in military conflicts, and the Second Optional Protocol prohibits the sale of children, child prostitution and child pornography. Both protocols have been ratified by more than 150 states.

Despite the worldwide recognition that children should benefit from safeguarding measures, there is no universally accepted definition of what constitutes child abuse and neglect. There are large cultural differences in attitudes towards violating children's rights, where we understand 'culture' as a society's shared beliefs and norms that guide their members' actions. Some societies prohibit any violence against children, some permit it under certain circumstances and others encourage specific types of violence. For example Sweden passed a law prohibiting any corporate punishment, including in the home, in 1979 and 29 countries have followed suit. In 168 countries the corporate punishment of children remains legal (UNICEF, 2010:64). Corporate punishment of children is common throughout the world and what is regarded as excessive is a cultural issue. In some societies, e.g. Egypt, Somalia and Ethiopia, the rights of girls are routinely violated: the majority of girls are still abused by undergoing female genital mutilation (FGM). Persistent social acceptance is a major determinant in the perpetuation of violence against children (Pinheiro, 2006: 10).

Little is known about the global prevalence of violence against children. This is due to the difference in definition across societies but also because child abuse and neglect is massively underreported. In many cases the victims never report the abuse or neglect. This may be for a number of reasons, for example because they are too young to report the violence, they have a limited understanding what constitutes abuse and neglect, they feel ashamed, alternative care situations are difficult or impossible to arrange, thus they feel they have to put up with the violent environment.

Although some violence against children receives considerable media attention (e.g. FGM, forced early marriages, child prostitution, child pornography, child soldiers), most of the violence happens in the home Pinheiro (2006). Nationwide surveys for the US provide strong support for this hypothesis: 80 per cent of all perpetrators of child abuse are the child's parents (USDHHS, 2012:63). Our main focus is therefore on violence perpetrated at home. Although the data are sparse, we present some estimates of the prevalence of violence against children, their approximate cost and which interventions might provide be cost effective.

### ***Fatal Violence***

In this section we discuss the prevalence and cost of child deaths. The UNODC homicide data discussed above does not provide information on the age of the victim. Using WHO data we approximate the number of child homicides.

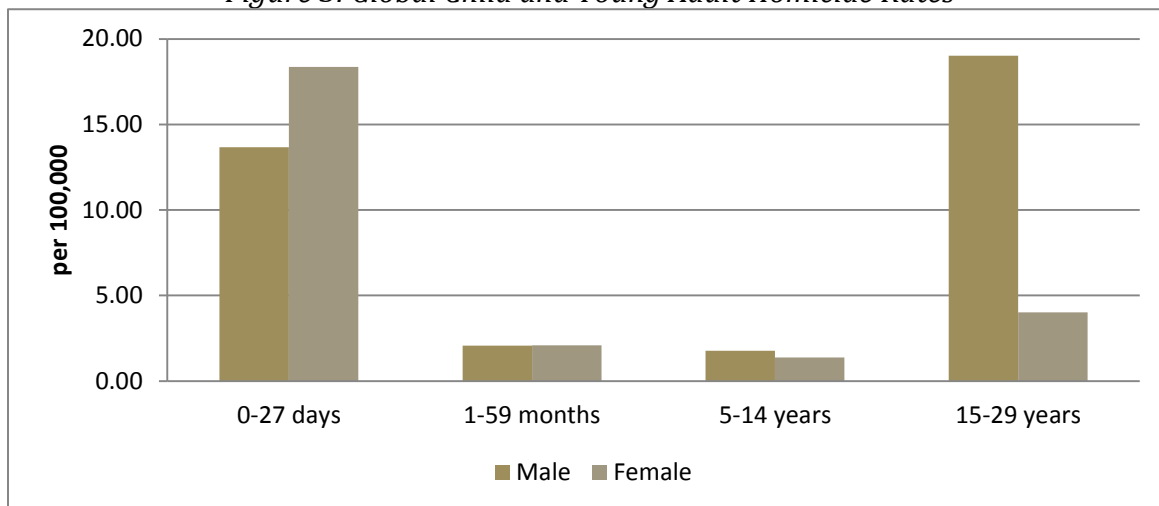
### **Prevalence**

The WHO provides global information on deaths by causes and age for 2011. Almost 34,000 children's deaths were attributed to interpersonal violence. This definition includes children 14 years and under. We would have preferred to use data for the under 18 year olds, but these are not available. Using the information on interpersonal violence only, we can approximate the homicide rate. Figure 3 presents the homicide rates per 100,000 of the population, the figures are based on using the total population of the relevant age group. Figure 3 presents the homicide rate for all children killed worldwide, for comparison we also present the homicide rates for adolescents and young adults (aged 15-29 years). Newborns (under one month) are more likely to be killed than older children and newborn

girls are at higher risk. During the first month of their life 18 girls per 100,000 are killed. This corresponds to a rate of 14 boys per 100,000. This is mainly due to higher homicide rates for newborn girls in the East Asia and Pacific region, which has the highest homicide rate for newborn girls, 46 per 100,000, the corresponding rate for newborn boys is 18 per 100,000. The causes, consequences and trends of the “missing girls and women” have been analysed in detail for a number of countries, for example China, India and Korea (Bhaskar and Gupta, 2007; Das Gupta et al 2009; Doo-Sub 2004; Ebenstein, 2010; Ebenstein and Sharygin, 2009).

For older children the rates are much lower. For boys aged 1 month to 5 years the rate is about 2 per 100,000 and for girls 1.8. These rates are very similar for children aged five to 14 years. As a comparison, the homicide rate is highest for boys and men aged 15-29, it is about 19 per 100,000. Girls and young women are less likely to die as a result of homicide, the corresponding rate is about 4 per 100,000.

*Figure 3: Global Child and Young Adult Homicide Rates*



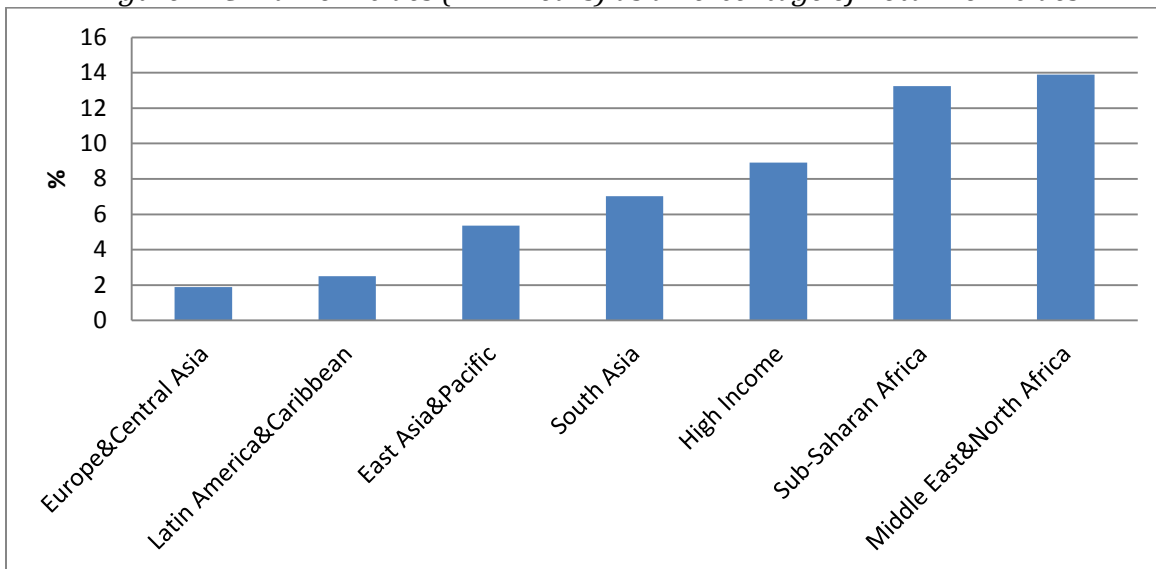
Source: WHO Global Health Estimates (GHE) 2013

The high homicide rate for young men (aged 15-29 years) is mainly driven by deaths in Latin America and the Caribbean. This region has similar child homicide rates to the global average but the homicide rates for boys and young men are much higher: there are about 88 violent deaths per 100,000 in the 15-29 year age bracket. Sub-Saharan Africa also has a relatively high homicide rate for this age bracket (40 deaths per 100,000 for 15-29 year old boys and men).

Data on child homicide, in particular neo-natal homicide, are difficult to collect. If no signs of physical violence are present, is it difficult to attribute the death to neglect rather than illness. For most countries detailed studies of child homicides are not available and it is therefore difficult to establish whether the WHO figures represent an accurate estimate of the magnitude of the problem. For South Africa we can compare the figures to a detailed data compilation by Mathews et al (2013). They conducted a retrospective, national mortuary-based study of child homicide cases. Children were defined as persons under 18

year olds and the study period was 2009. They estimate a homicide rate of 5.5 per 100,000, this rate is higher for boys (6.9) than for girls (3.9). Keeping in mind that although the definition of children is different, this compares well to the WHO statistics for Sub-Saharan Africa where the homicide rate is about 5 per 100,000 for 5-14yr old boys and 4.6 per 100,000 for 5-14 year old girls.

*Figure 4: Child Homicides (0-14 Years) as a Percentage of Total Homicides*



*Source: WHO Global Health Estimates (GHE) 2013*

Using the WHO data, we calculate the percentage of child homicides (persons aged under 14 years) in total homicides. Figure 4 presents these child homicide figures by region. For high income countries this percentage is comparatively high, almost nine percent of all homicide victims are children. It may be the case that children are relatively more likely to become victims of homicide than adults, but this number may also be due to more accurate crime statistics in high income countries. In any case, in order to compare the cost of child homicide to the homicide costs presented above, we apply this percentage to the UNODC homicide data in order to approximate the total number of child homicides per region. Since we only have regional data on child homicides and no detailed information by country we calculate the costs of child homicides by region. Thus, we are not able to provide the country averages per region.

### **Cost of Child Homicides**

Using the same costs for child homicides as for the average homicide, we assume that the cost of child homicide is \$8.44 million, corresponding to the intangible cost of homicide (McCollister et al, 2010).<sup>10</sup> As for our homicide estimates above we inflate this 2008 value and scale this unit cost according to country level GDP.

<sup>10</sup> Studies that use the VSL methodology to try to estimate the value of a child's life (versus adults) do not find a definite pattern – it may be higher or lower, according to Leung and Guria (2006). Theoretical considerations and some evidence (Aldy and Viscusi 2007) suggest that VSL should be highest for children and should decline over a lifetime. If one accepts these arguments, using the value for adults for children is conservative.

Multiplying the unit costs with the number of child homicides, we estimate a total cost of \$37.7 billion corresponding to 0.044 per cent of World GDP.

*Table 4: Cost of Child Homicide*

<b>Region</b>	<b>(1)</b> Total Cost in USD billions	<b>(2)</b> Regional Averages % of GDP
<b>High Income</b>	15,2	0.034
<b>East Asia&amp;Pacific</b>	2,7	0.016
<b>Europe&amp;Central Asia</b>	1,2	0.022
<b>Latin America&amp;Caribbean</b>	6,5	0.086
<b>Middle East&amp;North Africa</b>	1,3	0.047
<b>South Asia</b>	2,7	0.044
<b>Sub-Saharan Africa</b>	8,2	0.356
<b>World</b>	37,7	0.044

### ***Child Abuse - Violent Disciplinary Practices***

There are no internationally comparable statistics on child abuse and we approximate the rate of non-fatal child abuse by using information from internationally representative surveys on child disciplinary practices. Survey evidence from UNICEF (2010, 2014) shows that many parents use violent methods to discipline their children.<sup>11</sup> Again, we concentrate on violence in the home since it is the most common form of violence against children (Pinheiro, 2006).

#### **Prevalence**

The data on child abuse (UNICEF, 2014) were collected through the representative Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS). The surveys were conducted during the period 2005-12 and cover one high income country and 33 low and middle income countries. While this is an impressive compilation of data, it is important to keep in mind that this only represents about ten percent of children in developing countries.

In these surveys primary care givers were asked about their child disciplinary practices at home, whereby discipline was assessed according to the Parent-Child Conflict Tactics Scale (CTSPC) (see Straus et al 1989). Mothers (or the primary caregiver) were asked whether they, or any other member in the household, had used one of the following disciplining methods during past month:

- Non-violent discipline (e.g. gave him/her something else to do, explaining why behaviour was wrong, taking away privileges)

<sup>11</sup> Runyan et al (2010) also provide a cross-cultural study of child abuse, but their data only cover six countries and the surveys are not nationally representative.

- Psychological aggression (e.g. shouted at him/her, called him/her dumb or lazy)
- Physical punishment (e.g. shook him/her, spanked, hit with bare hand on the bottom or other parts of the body, hit with a belt, stick or other hard object on the bottom/other parts of the body)
- Severe physical punishment (e.g. hit or slapped him/her on the face, head or ears, beat him/her with an implement repeatedly)

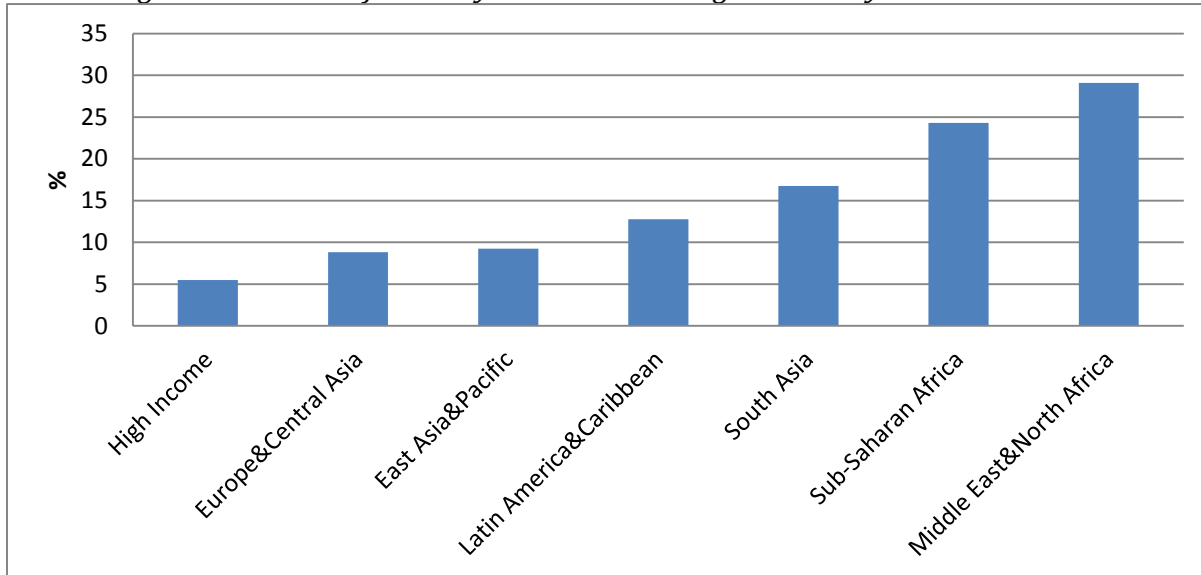
The survey evidence suggests that almost all mothers and other primary care givers use non-violent discipline (93 per cent). However, aggressive and violent punishment is common, 73 per cent of all those surveyed used it for child discipline. What is excessive punishment and thus unacceptable discipline of children varies across societies. We only define severe physical punishment as violence against children and exclude less severe physical punishment and psychological aggression from our analysis. We limit our analysis to severe physical punishment because we want to provide a definition that is more likely to be accepted across societies and cultures. We believe that most people would consider this severe form of violence as child abuse while they might not agree that slapping constitutes child abuse. We also exclude psychological aggression, because it is difficult to measure the extent of the psychological damage. Psychological aggression as a disciplinary practice does damage children and can impede their development, we just see no way of measuring the cost of the damage based on the data available.

Figure 5 shows the averages from the MICS and DHS studies. Severe physical punishment is most common in the Middle East and North Africa region, 28 per cent of primary care givers use severe physical punishment, followed by Sub-Saharan Africa (24 per cent).

In the wealthiest regions, High Income and Europe and Central Asia extreme physical punishment is not as common, the rates are 5.5 and 8.8 per cent, respectively. We have to point out though that we only have evidence from one high income country, Trinidad and Tobago. We do not know how representative this one country is for all high income countries.

We estimate the total number of children in all regions at 1.88 billion, which is equivalent to about 27 per cent of the global population. If we restrict child abuse to be defined as severe physical punishment and using the regional averages for countries with missing data and the overall sample average rate for countries in South Asia (UNICEF, 2014 did not include a country from this region), we can calculate the number of abused children per country and region. A total of about 290 million children received severe physical punishment, this corresponds to about 15.5 per cent of all children.

*Figure 5: Percent of Primary Care Givers Using Severe Physical Punishment*



Data Source: UNICEF (2014), no data available for South Asia (using sample average). Trinidad and Tobago is the only high income country.

### **Cost of Child Abuse**

There are few studies that provide unit costs of child abuse. Fang et al (2012) estimate the lifetime cost per victim of non-fatal child abuse at around \$98,000 (discount rate seven per cent) to \$210,000 (discount rate three per cent).<sup>12</sup> In contrast to the cost estimates of violence used in this study, their estimate includes tangible costs, e.g. court costs and child welfare costs, as well as intangible costs. However, as discussed above the intangible costs (mainly loss of future earnings) tend to be much higher than the tangible costs (McCollister et al 2010). While specific estimates of child abuse are difficult to come by, estimates for the unit cost of assault are more readily available. Our definition of child abuse includes slapping on the face, head or ears, and/or beaten repeatedly with an implement. If someone outside the family received such treatment this would be classified as assault. Thus, we suggest that figures for the unit cost of assault can be used to approximate the cost of child abuse. Chalfin (2014) surveys the extant literature on the cost of violence and puts the median cost of assault at \$89,250. In order to follow the IEP (2014) methodology we use their unit cost of assault (\$95,023), which are based on McCollister et al (2010). Since this estimate is close to the Fang et al (2012) child abuse estimates and the median cost of assault in the literature, we feel reasonably confident in using this figure as our unit cost estimate.

As for the calculation of the child homicide costs we inflate and scale the abuse costs by the average GDP per capita for the country and apply these scaled unit costs in order to derive the total cost of domestic child abuse.

<sup>12</sup> Fang et al (2012) consider short and long run medical costs, productivity costs in later life (discounted future earnings), child welfare costs, criminal justice costs and special education costs.



Table 5: Cost of Non-Fatal Domestic Child Abuse

	(1)	(2)	(3)
Region	Total Cost (in UDS billions)	Region Average (% of GDP)	Country Average (% of GDP)
High Income	829	1.87	1.87
East Asia&Pacific	608	3.60	5.29
Europe&Central Asia	173	3.16	3.46
L.America&Caribbean	512	6.78	7.41
Middle East&NAfrica	437	16.13	17.52
South Asia	604	9.93	10.96
Sub-Saharan Africa	431	18.66	19.89
World	3,594	4.21	9.57

The total cost of child abuse is in the region of \$3.6 trillion, corresponding to 4.21 per cent of World GDP. However, with this estimate we have to keep in mind that we only have survey data representing less than ten percent of the world's children and that we have used this evidence to approximate the global cost of non-fatal domestic child abuse. Furthermore, our definition of child abuse focuses entirely on severe physical discipline within the home.

## ***Sexual Abuse***

### **Prevalence**

The UN provides data on reported cases of sexual assault and rape (UNODC, 2013). Although definitions vary across countries the data were categorized in the following way: Sexual violence includes sexual assault and rape, where "rape" means sexual intercourse without valid consent. UNODC provides the number of reported cases of sexual violence for child victims. About 72,000 cases were reported, these make up almost one quarter of all reported cases of sexual violence.

As we will discuss further below, these reported cases of sexual violence are likely to represent the 'tip of the iceberg'. For women, some studies have compared victimization rates with reporting rates and have found that only a small proportion of violence is reported to the police (4 per cent of all physical and sexual violence, Palermo et al, 2014). We do not know of a similar comparison of child victimization and reporting rates. However, the reported cases of child sexual abuse are also likely to constitute a small proportion of the abuse committed. Like in child homicide cases, most of the abusers are probably significant adults in their life or at least known to the victims. Nationwide surveys for the US provide strong support for this hypothesis: 80.3 per cent of all perpetrators of child abuse (this includes neglect, physical, psychological and sexual abuse) are the child's parents (USDHHS, 2012:63). Many children will never speak out, because they are ashamed, they think nobody will believe them and many abusers are able to use their power to intimidate the children into keeping silent about the abuse.

### Cost of Child Sex Abuse

McCollister et al (2010) provide a unit cost of rape/sexual assault at \$ 199,642. This is not a specific number for child sexual abuse, but for all victims regardless of age.

The UN provides data for 88 countries, as before we assume regional averages of prevalence rates for countries with missing data. The UNODC (2013) data show that the high income countries are the region with the highest proportion of children that have reported sexual abuse (0.08 per cent of all children). This may be because child sexual abuse is indeed more prevalent in high income countries, or perhaps because it is easier to report child sexual abuse and there is better record keeping. In any case, using only reported cases – surely a vast underestimate -- the total costs of child sex abuse are about \$37 billion (0.043 per cent of World GDP).

Table 6: Cost of Reported Sexual Abuse of Children

<b>Region</b>	<b>(1)</b> Total Cost (in UDS billions)	<b>(2)</b> Region Average (% of GDP)	<b>(3)</b> Country Average (% of GDP)
<b>High Income</b>	25.4	0.057	0.066
<b>East Asia &amp; Pacific</b>	3.9	0.023	0.023
<b>Europe &amp; Central Asia</b>	1.1	0.020	0.013
<b>Latin America &amp; Caribbean</b>	4.9	0.065	0.079
<b>Middle East&amp; North Africa</b>	0.2	0.008	0.008
<b>South Asia</b>	0.1	0.002	0.002
<b>Sub-Saharan Africa</b>	1.2	0.051	0.051
<b>World</b>	36.8	0.043	0.046

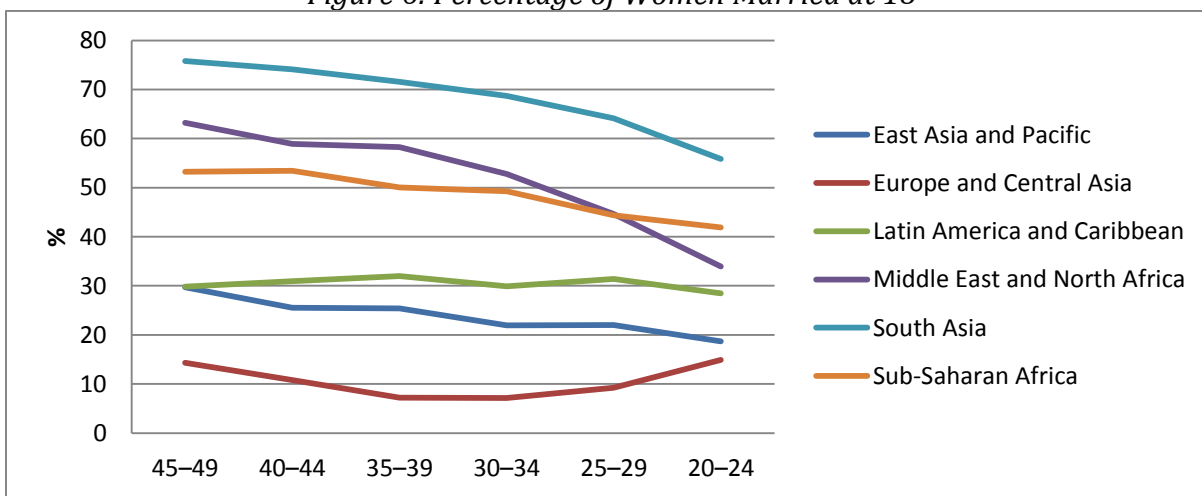
### Early Marriage

In the context of violence against children it appears to be sensible to highlight the impact of some cultural practices. For example in a large number of countries girls are married at a very young age. We have data on marriages for girls under 15 and 18 years of age. Often the girls did not consent to these marriages, their education is curtailed, they are more likely to be physically and sexually abused by their (older) husbands, they will have more children, are poorer and come from rural areas (for an in depth discussion see UNICEF, 2005). They are also likely to conceive at an early age. Teenagers are immature in a physiological as well as in a social sense and their health risks associated with pregnancy and childbirth are higher than are those of older women. For girls under 16 in Nigeria, Cameroon and Ethiopia the maternal mortality rates were found to be about six times higher than for mothers aged 20-24. These early pregnancies are dangerous because they can cause a number of health problems, such as obstructed and prolonged labour, haemorrhages, infections, anemia, pregnancy induced high blood pressure (eclampsia and pre-eclampsia). The children born to these very young mothers are also at a high risk, the

number of perinatal deaths has been estimated as about 80 percent higher than for babies born to older mothers (Zabin and Kiragu, 1998). Death due to maternal conditions is the leading cause of death for girls and women aged 10-24, fifteen per cent of all deaths were due to maternal conditions (Patton et al 2009). While these numbers do not distinguish between married and unmarried mothers, they provide an indicator of how many deaths that could be avoided if fewer girls were encouraged/forced by their families to marry early.

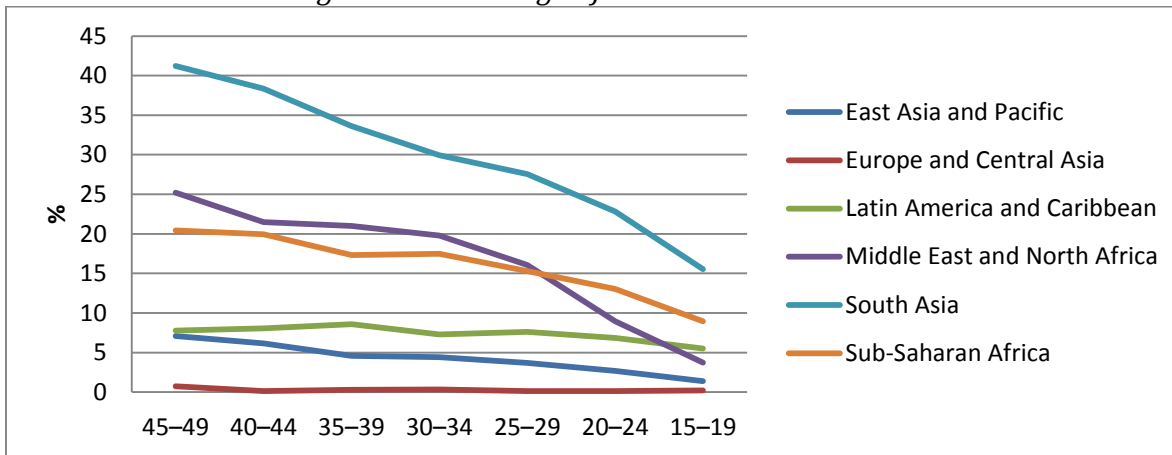
Figures 6 and 7 show the percentage of women married at a young age. UNICEF (2005) compiled these data based on surveys collected around the year 2000 in 49 low and middle income countries. This compilation makes it possible to compare the prevalence of early marriage across regions and over time. A large proportion of women in South Asia married very young: 56 per cent of all young women (aged 20-24) were married before they were 18. All other regions have lower rates, e.g. Sub-Saharan Africa (42 per cent), Middle East and North Africa (34 per cent), Latin America and the Caribbean (28 percent) and Europe and Central Asia (19 per cent). Figures 6 and 7 show that the percentage of women married at 18 (15) years of age is lower in the lower age groups. For example in South Asia 41 per cent of women aged 45-49 were married by the time they reached 15 but only 15 per cent of women aged 20-24 were married before the age of 15. This indicates that the practice of early marriage has declined over time. This is the case for all regions when looking at marriages before 15 and for most regions when considering marriage before the age of 18. Taking the average over all the individual countries, the data suggest that in these 49 countries in the year 2000 47 per cent of women aged 45-49 were married before the age of 18. For the youngest age group (20-24) this percentage is 37. If we extrapolate this trend, in 2030 this percentage would be 25 percent.

Figure 6: Percentage of Women Married at 18



Source: UNICEF (2005)

Figure 7: Percentage of Women Married at 15



Source: UNICEF (2005)

These data are indicative of the custom of early marriage but not definitive numbers. Many countries do not have a functioning system of registration of marriages and the data are based on surveys, covering only about 50 countries. These countries may not be representative of their region or the global situation. However, it is important to highlight this practice not only as a violation of girls' rights but also because it contributes to maternal and perinatal deaths, so bearing on prospects for reaching targets for reducing maternal and perinatal/infant mortality.

### ***Other Violence Against Children***

In this section we have concentrated on violence against children in the home, because it is considered to be the most important aspect of child abuse and neglect. However, neglect, physical, sexual and emotional abuse of children also happens in school, in care institutions, prisons, at work and in the community. Pinheiro (2006) provides a comprehensive overview of the violence against children in different settings. We could not obtain cross-country data on the prevalence of violence against children in schools, care institutions, prisons, in the workplace and in the community. Thus, we did not consider these forms of violence against children.

## **Violence Against Women**

### ***Introduction***

In the 1994 'Declaration on the Elimination of Violence against Women' the United Nations defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life."

Violence against women has a number of consequences: some victims die, many suffer physical and mental pain and it instills fear. In addition to these personal consequences there are socio-economic externalities for the wider society. Violence stops women from

fulfilling their potential it restricts economic growth and undermines development. Violence against women can be understood as discrimination, a violation of human rights, a development problem and a public health issue. The UN and the WHO have published a number of reports on violence against women (e.g. WHO 2013 and UN, 2006).

Across the world there are a number of harmful traditional practices that constitute violence against women. Examples include: Female infanticide and prenatal sex selection, early marriage, dowry-related violence, female genital mutilation (FGM), crimes against women committed in the name of “honour”, and maltreatment of widows, including inciting widows to commit suicide. (UN, 2006) However, we have very limited information on the prevalence of some of these practices and can only offer some discussion of FGM in this section. Early marriage was already discussed above in Section 4 on violence against children.

The most common form of violence experienced by women globally is intimate partner violence (UN, 2006, WHO 2013). About 30 per cent of all women experience some form of intimate partner violence (IPV) during their lifetime (Devries et al, 2013). In surveys women who suffered IPV report significantly poorer health when compared to non-abused women. They have difficulty walking, struggle with daily activities, suffer from pain, memory loss, dizziness and vaginal discharge. They also report significantly higher levels of emotional distress, suicidal thoughts and suicidal attempts (Ellsberg et al 2008). Based on country studies the WHO (2013) also concludes that women who suffer IPV are 16 per cent more likely to have a low birth weight baby and in some regions they are 1.5 times more likely to acquire HIV and 1.6 times more likely to have syphilis when compared to women who do not suffer partner violence. In addition there are long term consequences for the next generation that witnessed the violence. Daughters are more likely to be abused by their partners and their sons are more likely to become abusers themselves (Hindin et al, 2008; WDR 2012: 152).

## ***Fatal Violence***

### **Prevalence**

UNODC (2013) provides homicide count data but does not provide any information on the sex of the victim. Based on WHO (GHE 2013) data we calculate that about 16 per cent of all homicide victims are women aged 15 and over. Stöckl et al (2013) present a systematic review of the literature on intimate partner homicide and suggest that globally about 43 per cent of all female victims were killed by a current or former intimate partner. The data from 59 countries exhibit a large variation, but almost half of the data points come from high income countries (30). Using the World Bank classification of regions we find that the prevalence of intimate partner homicides among all female homicides was highest in high income countries (56 per cent) and lowest in Europe and Central Asia (20 per cent). The only country in the Middle East and North Africa region for which data is available is Jordan. Prevalence rates are very low (5.6 per cent). It is not clear whether this is a representative figure for the region. For East Asia and the Pacific Stöckl et al (2013) present no data and we assume the global average prevalence rate for this region. As with other cross-country data sets it may be that women are more at risk from their intimate

partners in high income countries, but it is perhaps more likely that there is considerable underreporting of intimate partner homicides in many low and middle income countries. Thus, our resulting cost estimates are most likely to be conservative.

### **Cost of Female Homicides**

As before we assume a unit cost of \$8.44 million per homicide (McCollister et al 2010). This may be too high, because on average women’s earnings are lower than for men, but in the absence of gender specific estimates of the unit cost of homicide we use the average cost of homicide for men and women.

Globally the total cost of female homicides is estimated at around \$105 billion (or 0.12 per cent of World GDP) and Table 7 sets out the cost estimates.

*Table 7: Cost of Female Homicide*

<b>Region</b>	<b>(1)</b> Total Cost in USD billions	<b>(2)</b> Regional Averages % of GDP
<b>High Income</b>	34.7	0.078
<b>East Asia&amp; Pacific</b>	12.8	0.076
<b>Europe &amp; Central Asia</b>	15.2	0.277
<b>Latin America &amp; Caribbean</b>	23.3	0.309
<b>Middle East&amp; North Africa</b>	1.8	0.067
<b>South Asia</b>	5.7	0.094
<b>Sub-Saharan Africa</b>	11.8	0.511
<b>World</b>	105.3	0.123

Note: WHO (2012) provides data on deaths due to interpersonal violence by sex and age. We use the ratio of deaths of females aged 15 and over to total deaths and apply this ratio to the UNODC (2013) homicide rates to estimate the number of female homicide victims.

Since we have data on the homicides due to IPV from Stöckl et al (2013) we can also calculate the cost estimates for female homicides committed by intimate partners.

Table 8: Cost of female homicides by intimate partners

<b>Region</b>	<b>(1)</b>	<b>(2)</b>
	Total Cost in USD billions	Regional Averages % of GDP
<b>High Income</b>	19.3	0.043
<b>East Asia &amp; Pacific</b>	4.1	0.024
<b>Europe &amp; Central Asia</b>	3.1	0.056
<b>Latin America &amp; Caribbean</b>	6.6	0.087
<b>Middle East &amp; North Africa</b>	0.1	0.004
<b>South Asia</b>	2.5	0.041
<b>Sub-Saharan Africa</b>	4.5	0.193
<b>World</b>	40.1	0.047

Note: WHO (2012) provides data on deaths due to interpersonal violence by sex and age. We use the ratio of deaths of females aged 15 and over to total deaths and apply this ratio to the UNODC (2013) homicide rates to estimate the number of female homicide victims and the information from Stöckl et al (2013) to approximate homicides perpetrated by intimate partners.

## ***Non-Fatal Violence***

### **Prevalence**

Even if we ignore the fundamental problem of underreporting, prevalence rates of violence against women are difficult to determine. This is because some information is not disaggregated by sex, while some data are for women only but they do not distinguish between different types of violence, for example physical and sexual assault.

Reported figures of assault from UNODC (2013) do not provide information on whether the victim was male or female. Thus, we cannot produce estimates on how common the assault of women is.

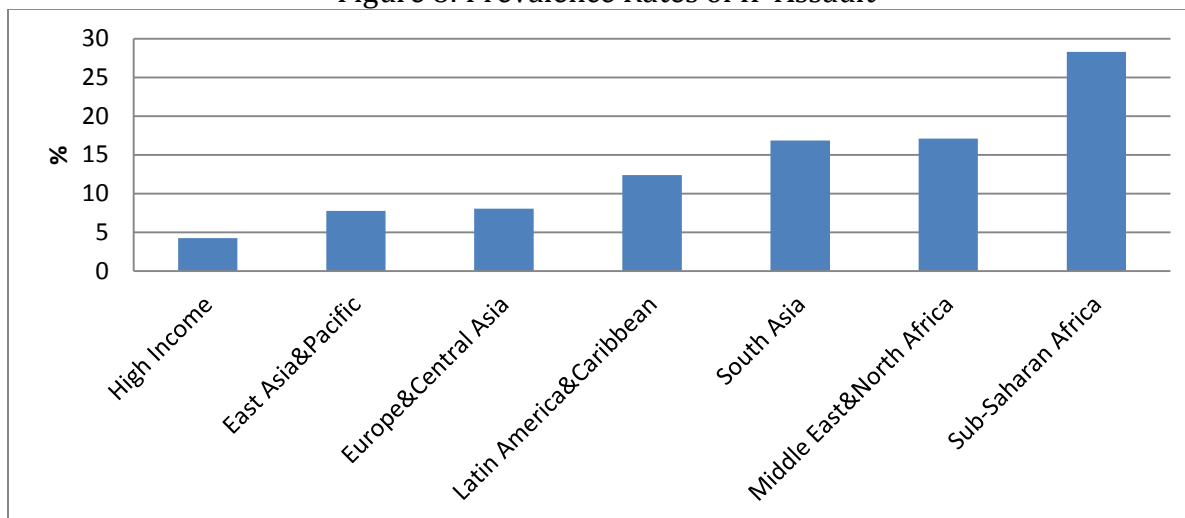
However, the UN provides data on sexual assault and rape (UNODC, 2013). Although definitions vary across countries the data were categorized in the following way: Sexual violence includes sexual assault and rape, where “rape” means sexual intercourse without valid consent. Some countries only report rape figures and if sexual assault figures were missing we used the rape figures instead. This violence creates massive suffering in the form of psychological trauma, STDs, unwanted pregnancies, stigmatization, rejection, injury and sometimes death. Sexual violence and rape tend to increase in wartime and the victims are overwhelmingly female. The extent of this additional sexual violence is discussed in detail in the Human Security Report (2012), but here we only concentrate on the most recently available data for each country from UNODC (2013). Latin America and the Caribbean is the region with the highest number of cases, followed by South Asia. We use these counts of reported cases to calculate the cost of sexual violence. However, reported sexual violence is likely to be only the ‘tip of the iceberg’, most cases are never reported (Palermo et al 2014). Thus, the figures on sexual violence should be regarded as a very conservative estimate of sexual violence.

Like homicides, much violence against women is perpetrated by their intimate partner. The UNODC (2013) data does not provide any information about the perpetrator but the study by Devries et al (2013) focuses on non-fatal intimate partner violence. Based on survey evidence from a large number of cross-country studies they compile self-reported evidence of violence perpetrated by an intimate partner (1) during their life time and (2) during the past year. Since all our other data pertain to yearly estimates we base our IPV estimates on the violence experienced during the past year. IPV is defined as any kind of physical and sexual violence perpetrated by a partner and also includes emotional abuse, e.g. being humiliated, insulted, intimidated or threatened. Examples of IPV include: being slapped, pushed, shoved, kicked, choked, burnt on purpose, threatened with a weapon, physically forced to have sexual intercourse, having sexual intercourse because of fear what a partner might do and being forced to do something sexual that is perceived as humiliating or degrading (WHO, 2013).

The wider health consequences of IPV are analysed by Ellsberg et al (2008). Attitudes towards IPV have been examined by Cools and Kotsadam (2013). Based on DHS data for Sub-Saharan Africa they find that more than half of all women (55 per cent) think that their husbands are justified in beating them in any of these five scenarios: going out without telling him, neglecting the children, arguing with him, refusing to have sex with him or burning the food. Interestingly, only 37 per cent of the men said that they agree that beating their wives is acceptable in any of these scenarios.

Devries et al (2013) focus on physical and sexual violence in their analysis and do not consider emotional abuse. Using their data we find that prevalence rates vary considerably across regions (Figure 8). While only four per cent of women aged 15 and older in High Income countries report IPV during the past year, about 28 per cent of women in Sub-Saharan Africa do so.

Figure 8: Prevalence Rates of IP Assault



Source: Devries et al (2013).



To estimate of how many women are affected by IPV we have to make an assumption about how many women (aged 15-64) are currently partnered. We assume that 90 per cent of all women are partnered.

### **Cost of IP Assault**

McCollister et al (2010) offer an estimate of the cost of rape and sexual assault of \$199,642 and about half of that figure for aggravated assault, \$95,023. Since the main information on IPV is based on the Devries et al (2013) estimates, it is impossible to determine how many cases of IPV constituted sexual assault or rape or how many were physical assault. We use the lower figure of assault (\$95,023) for IP assault in order to produce conservative estimates. The total cost of IPV are thus estimated at \$4.4 trillion, corresponding to 5.2 per cent of global GDP.

*Table 9: Cost of Intimate Partner Assault*

	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>Region</b>	Total cost of IPV, USD billions	Regional Averages, % of GDP	Country Averages, % of GDP
<b>High Income</b>	1,360	3.06	2.93
<b>East Asia &amp; Pacific</b>	894	5.29	4.81
<b>Europe &amp; Central Asia</b>	333	6.08	5.81
<b>Latin America&amp; Caribbean</b>	605	8.01	7.65
<b>Middle East&amp; North Africa</b>	286	10.55	10.15
<b>South Asia</b>	600	9.87	9.52
<b>Sub-Saharan Africa</b>	345	14.94	14.28
<b>World</b>	4,423	5.18	8.02

In addition to these physical and sexual assaults from IP we can also provide estimates for the cases of reported sexual violence. Using data from UNODC we apply the cost of rape and sexual assault of \$199,642 and as before scale the cost by country GDP. There is no information whether the perpetrator of this sexual violence was an IP, a family member, an acquaintance or a stranger. The summary of the cost calculations is presented in Table 10. The total cost of the reported cases is estimated at about \$67 billion, which corresponds to 0.08 per cent of World GDP.

*Table 10: Cost of Reported Cases of Sexual Violence*

	(1)	(2)	(3)
<b>Region</b>	Total cost, USD billions	Regional Averages, % of GDP	Country Averages, % of GDP
<b>High Income</b>	49,3	0.111	0.112
<b>East Asia &amp; Pacific</b>	5,5	0.033	0.033
<b>Europe &amp; Central Asia</b>	0,8	0.014	0.012
<b>Latin America &amp; Caribbean</b>	8,2	0.109	0.122
<b>Middle East &amp; North Africa</b>	0,3	0.011	0.011
<b>South Asia</b>	1,3	0.022	0.022
<b>Sub-Saharan Africa</b>	1,3	0.056	0.057
<b>World</b>	66,7	0.078	0.066

Source: UNODC (2013)

In many societies reporting sexual violence and rape is very difficult and we realize that the UNODC figures are likely to be a tremendous underrepresentation of the sexual violence that women experience. Palermo et al (2014) provide some estimates to assess the degree of underreporting. Using DHS surveys they examine the reporting of gender-based violence in low and middle income countries. Violence includes partner and non-partner violence. The study finds that although about 36 per cent of all the interviewed women were victims of physical or sexual violence, four per cent reported the violence to the police. This suggests that only one in nine women reported the assault. The most common reasons cited for not reporting physical or sexual violence was embarrassment, a belief that there was no use reporting and that violence is a normal part of life that women must bear.

### ***Female Genital Mutilation***

The practice of female genital mutilation (FGM) is common in a number of African and Middle Eastern countries. How much of a girl's genitalia is removed varies, the WHO classifies FGM I (removal of the prepuce or clitoris or both), FGM II (removal of the clitoris and labia minora) and FGM III (removal of part or all of the external genitalia with stitching or narrowing of the vaginal opening). The practice is a recognized abuse of human rights: in 1979 the UN General Assembly adopted the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which explicitly recognizes that practices harmful to women, such as FGM, are violations of human rights.

### **Prevalence**

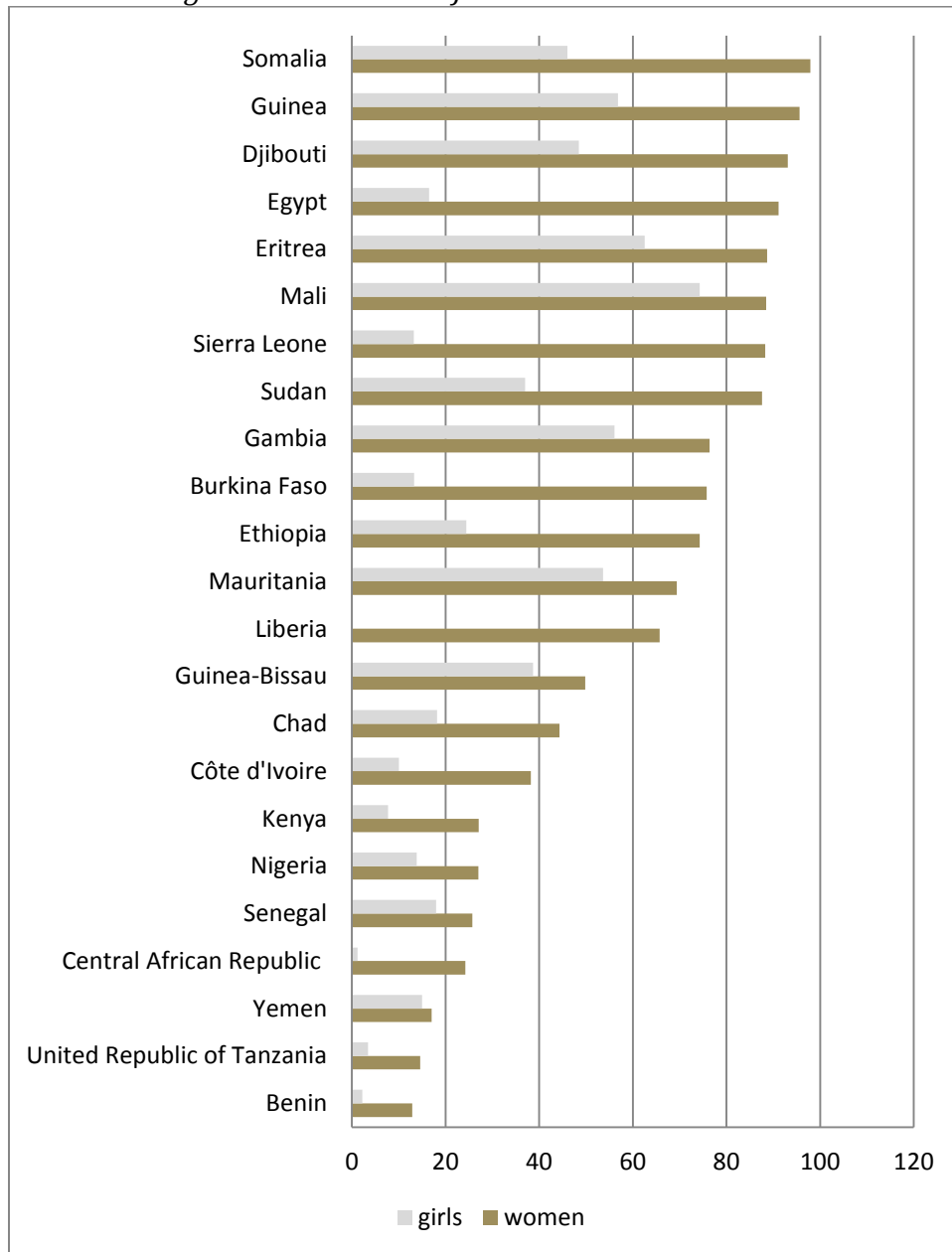
UNICEF (2013) presents a detailed report and data on the prevalence of and attitude towards FGM. Data are available for the 29 countries in which FGM is most prevalent and are based on representative surveys (MICs and DHS). Although FGM is outlawed in 26 of these countries, UNICEF estimates that about 100 million women worldwide have undergone FGM and that 30 million girls are at risk over the coming decade. Figure 9 shows the data for countries where FGM prevalence rates are high or moderately high. Amongst women aged 15-49 FGM is almost universal (88 per cent or higher) in Somalia, Guinea, Djibouti, Egypt, Eritrea, Mali, Sierra Leone and Sudan. Dark grey bars show the percentage of women who have undergone FGM. Most commonly girls are mutilated before

the age of 5 and in addition to self-reported FGM women were asked whether their oldest daughter had undergone FGM. The light grey coloured bars show that in all countries the prevalence rates among girls aged 0-15 are lower than for their mothers for all countries. In other words there is a decline of the prevalence of FGM over time. UNICEF (2013) also suggests that FGM is more common in poorer households, if the mother has undergone FGM herself and if she is uneducated. The prevalence of FGM is higher than attitudes suggest: In most countries (22 out of 29) girls and women think the practice should stop. For the countries for which boys and men were asked about their attitudes, a similar picture emerges (in 9 out of 16 countries the majority think FGM should end). The most common justification for the practice cited by women and men is social acceptability.

### **Cost of FGM**

FGM has considerable health costs. Girls can lose considerable amounts of blood (with the risk of bleeding to death) and there is a risk of infection. Women suffer the life-long consequences of FGM: including loss of libido, painful sexual intercourse, higher risk of STDs, problems with urination and obstetric problems. We have no reliable estimates for the deaths due to FGM or estimates for the cost of pain and the additional risk of STDs. However, we have detailed information on obstetric problems. A WHO study group on FGM conducted an analysis of the obstetric outcomes for women who had undergone FGM (WHO, 2006). Using hospital data on more than 28,000 women they show that women who have undergone FGM are significantly more likely to have deliveries that are complicated by caesarean section, postpartum haemorrhage, episiotomy, extended maternal hospital stay, resuscitation of the infant and inpatient perinatal death. For example when compared to deliveries to women not having undergone FGM, the excess perinatal deaths per 1,000 births were 11 for FGM I, 14 for FGM II and 17 for FGM III. Members of the same study group (Adam et al, 2010) estimate that for the 53 million women represented in their study, the excess cost due to the management of the obstetric costs linked to FGM is in the region of \$3.7 million (PPP adjusted, unfortunately no reference to a base year), which they equate to between 0.1 and 1 per cent of total government health spending on women of reproductive age.

Figure 9: Prevalence of Female Genital Mutilation



Source: UNICEF, 2013

## **Aid programs targeted at reducing violent crime or improving police and judicial system performance**

The prevalence of significant armed conflicts within countries grew steadily from the 1950s to the mid-1990s, reaching a level of about one in six U.N. member states at its high point. It is well documented that civil conflict in this period has been much more common in low-income countries. Moreover, it is obvious that civil war can have a devastating impact on economy and society. The experiences of Syria, Afghanistan, Sudan, and Somalia provide dramatic examples.

For many years aid-donor thinking resisted the idea that conflict needed to be addressed as part of the problem of economic development. This has changed in the last ten or 15 years, as we have seen a large increase in attention given to problems of “fragile states” where potential or actual conflict obstructs economic development (WDR 2011). All major donors, both multilateral and bilateral, have supported extensive aid programs for both post-conflict reconstruction and governance projects intended in part to lower the odds of armed conflict. In addition, the amount of aid directed to humanitarian emergencies – almost all of which are caused by civil war – has increased rapidly since the early 1990s. Emergency aid grew from about 2 per cent of official development assistance (ODA) in 1990 to around 12 per cent in 2006 (Fearon, 2008).

As shown in the preceding sections, violent crime, child abuse, and domestic violence against women are far more pervasive than civil war violence, and appear to be significantly more costly in terms of human welfare. By comparison to other categories of aid, however, societal violence receives relatively little attention or effort. To some extent this may be because a country’s security institutions, such as the police, are often perceived as ‘off limits’ for scrutiny by non-nationals. At the same time, donor countries can be wary of providing aid to police and other security forces due to concerns that they might at some point be judged at fault for human rights abuses.

Table 11 gives shares of total development assistance spent in different sectors for five-year periods beginning in 1990. The categories are based on the purpose codes of the Creditor Reporting System, with corrections and modifications by the project AidData, which is our source for these estimates.<sup>13</sup> The most relevant category for aid directed at reducing societal violence is “legal and judicial development” (purpose code 15130), which is a subcategory of the larger class “Government and Civil Society.” Spending on projects in this larger class – which includes all aid intended to improve governance, administration, policy formulation and implementation, civil society organization, as well as all conflict prevention and resolution programs – has grown sharply since the end of the Cold War, from 4.35 per cent to 13.63 per cent of total aid dollars. Legal and judicial aid has increased as well, but from practically nothing to about 1 per cent of total aid.

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<sup>13</sup> See <http://aiddata.org/>. We use version AidData2.1, which seems to have relatively complete records through 2010.

Table 12 looks more closely within the broad category “Government and Civil Society.” Here we find that about half of this aid goes to programs related to policy formulation and implementation (e.g., macroeconomic or tax policies), and to administrative reforms (e.g., civil service reform). The “governance and civil society” subcategory appears to be aid for local governance-related projects and aid intended to strengthen various civil society groups and processes; this is one quarter of the category. Next, at 13.3 per cent, comes aid related to civil war prevention or post-conflict reconstruction, although this should be seen as an underestimate since it does not include emergency aid, which is mainly civil war-related.

“Legal and judicial development” appears next, at about 11 per cent for the years 2000-2010. What does this include? AidData’s documentation lists a finer level of subcategories comprised of “constitutional development, legal drafting,” “institutional strengthening of legal and judicial systems,” “legal training and education,” “legal advice and services,” and, finally, “crime prevention.” Aid programs under some of these headings (for instance, constitutional development) are probably only marginally relevant to reducing levels of societal violence, although certainly improving access to and fairness of judicial systems are important and closely related goals.

Only 5 per cent of the roughly 66,000 “Government and civil society” aid projects coded at this level have “crime prevention” listed as at least one of the project’s specific purposes.<sup>14</sup> This translates to about half of all “legal and judicial development” projects. In terms of spending, projects coded as having “crime prevention” as one component account for about 4 per cent of aid in the “Government and Civil Society” category, and a mere 0.27 per cent of total aid spending.<sup>15</sup>

The AidData records contain short descriptions of the coded projects, enabling us to look into what sort of projects receive the designation “crime prevention”. For 2010, there are 130 entries that are coded in the “Legal and Judicial Development” category and that also mention “Crime Prevention” in AidData’s specific purpose coding. Of the top 50 of these (in terms of money), all but two are instances of a USAID project that has the short description “Improve the capacity and sustainability of civil and criminal justice sector actors and institutions, enhance coordination amongst them, develop citizen demand for an effective and accountable justice system, and develop associations to advocate for all citizens.” It is unclear how much focus this program has on police reform and professionalism, or on prevention of violent crime in particular. It is also striking that the recipients of the larger grants in this area tend to be post-conflict countries where there has been a general breakdown of law and order, or where there is a need to completely rebuild basic institutions. The top two recipients for 2010 were Iraq and Afghanistan, and 13 of the top 20 are post-conflict countries. Our impression is that this reflects a broader pattern:

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<sup>14</sup> Using the AidData variables “aiddata\_activity\_code” and “aiddata\_activity\_name,” which AidData codes based on project descriptions. AidData notes that there is no definite way of distinguishing continuing from discrete projects, so these estimates are at best rough. The estimates of funding proportions are not subject to this problem.

<sup>15</sup> These are just estimates, because AidData does not have the information to code all aid commitments down to this level project description; only 20 per cent of entries have project descriptions at this level.

Almost all foreign aid focused on police reform appears to go to reform and rebuilding in post-conflict countries.

Figure 10 below plots average “crime prevention” aid for 2008-10 (for each country that received at least some such aid) against the 2008 homicide rate in that country. Both variables are logged to deal with extreme skew. It is evident that however these projects are being allocated, the level of violent crime in the country is not an important consideration. There is no relationship at all between the two variables.

In sum, these data suggest that, at present, some development aid flows to programs to improve judicial systems and police performance, but the aid appears to be concentrated in post-conflict countries and is probably seen mainly as a component of post-conflict institution building. Many countries with high homicide rates – our best single cross-national measure of violent crime – have received virtually no aid targeted at reducing violent crime (particularly in Sub-Saharan Africa). This pattern probably reflects a set of assumptions in the development community, which has come to see large-scale civil conflict as a phenomenon with adverse development consequences that should be addressed by aid programs, but has not put the same priority on societal violence. As a result, certainly more than twice as much aid – and probably a much larger multiple – flows to programs address conflict and post-conflict reconstruction, versus programs that have even a small component of crime prevention or police training and reform.

Table 11. Sectorial shares of development assistance (% of Total aid)

Sector	1990-94	1995-99	2000-04	2005-09
Social				
health	3.26	3.75	4.81	7.70
education	4.64	4.03	4.79	5.43
water	5.37	4.67	3.83	4.55
environment	1.66	1.79	1.47	2.36
women	0.03	0.08	0.03	0.04
government/civil society	4.35	7.46	10.59	13.63
legal/judicial	0.06	0.24	0.52	1.04
Economic				
transport/communications	13.42	11.02	9.71	10.31
energy	10.48	7.76	5.29	6.95
Production				
agriculture	9.82	6.10	4.45	4.47
industry	8.16	6.41	3.00	2.94
trade	3.60	1.41	1.18	1.25
Multisector	6.49	5.48	5.49	5.60
Budget support and finance				
budget support	11.75	21.35	21.24	10.63
Finance, debt	14.62	13.51	15.33	13.60
Humanitarian emergency	1.87	3.68	4.70	5.50
Other	0.48	1.49	4.09	5.03
<b>Total aid (billions current \$)</b>	<b>437</b>	<b>612</b>	<b>766</b>	<b>1063</b>

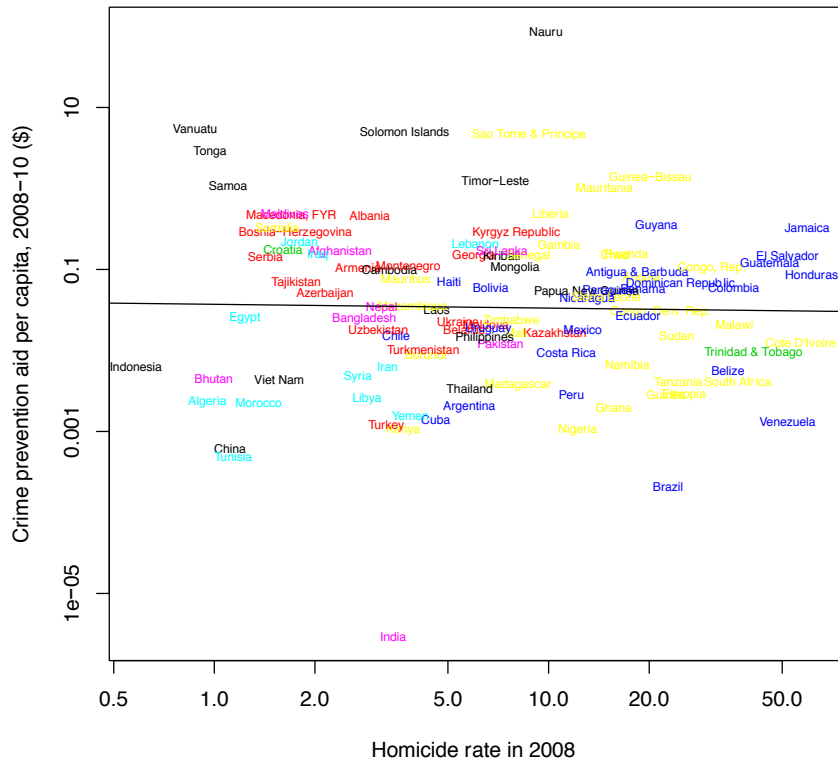


Table 12: Aid shares (%s) within the “Government and Civil Society” category, 2000-2010

Administration, policy	48.32
government administration	21.39
economic and development policy/planning	18.66
public sector financial management	7.43
decentralisation and support to subnational	0.84
Governance and civil society	25.67
government and civil society	22.38
human rights	2.32
women’s equality organisations and anti-corruption organisations	0.85 0.12
Civil conflict-related	13.32
conflict prevention	5.11
reintegration and small weapons control	2.18
security system management and reform	2.54
land mine clearance	1.71
post-conflict peace building (un)	1.71
child soldiers (prevention and	0.07
Legal and judicial development	10.84
legal and judicial development	10.84
Parties, elections, media	1.86
elections	1.35
legislatures and political parties	0.13
media and free flow of info	0.38

Figure 10: Crime Prevention Aid and Homicide Rates

No relationship between homicide rates and crime prevention aid



## What is the return on investment for aid to reduce civil war and societal violence?

To summarize the preceding sections, the welfare costs of societal violence – homicides, violent assaults, IPV, and child abuse in particular – are more pervasive and probably significantly larger than the aggregate welfare costs of civil war. However, much more aid is spent trying to prevent or address the consequences of large-scale civil conflict than on societal violence. And far more aid still is spent on programs to improve “governance” in developing countries.

This pattern could be justified if aid for post-conflict reconstruction and improved governance has a markedly higher benefit/cost ratio than does aid spending on programs to reduce violent crime. This section briefly considers the question of relative benefits of aid in these two areas. At the outset it has to be stressed that in both cases – civil war violence and societal violence – it is impossible to provide benefit-cost ratios for aid spending that are more than extremely conjectural. This is because of intrinsic difficulties of conceptualizing and measuring benefits and costs in this area; the dearth of studies evaluating interventions that try to quantify benefits and costs; and the difficulty of designing convincing studies in the first place, given that in this area opportunities for random assignment or natural experiments are few and far between. Thus, although there

is considerable evidence that different types of violence (e.g. large scale conflicts, homicides, violence against women and children) have been decreasing over time (Pinker, 2012),<sup>16</sup> we only have a sketchy understanding what causes this downward trend and which initiatives, interventions and changes in law and practice have been most effective in the reduction of violence.

### ***Internal Conflict***

Hoeffler (2014) reviews large-N studies of interventions aimed at preventing or ending civil wars. Interventions include mediation, sanctions, aid, arms embargoes and UN Peacekeeping Operations (UNPKO) and the evidence suggests that UNPKOs appear the most effective at increasing peace duration. The costs are small relative to the costs of a return to war. For the period 1st July 2013 to 30 June 2014 the approved UN budget for PKO is about \$7.83 billion. The simulations presented by Hegre et al. (2011) suggest that a 60 per cent increase in UNPKO expenses would result in halving the risk of major armed conflict during the period 2010–2035. Dunne (2012) estimates BCRs for a package of interventions that include UNPKO and arrives at ratios between 2 and 7 (depending on discount rates and general conflict prevention or post-conflict stabilization).

There is limited evidence that aid prevents conflict. Although there is no evidence that aid prevents civil war onset (Hoeffler, 2014), there is some evidence that development aid helps to stabilize post-conflict situations. Aid has a positive effect on growth in postwar economies. However, the effect is moderate: an extra 1 per cent of aid might increase growth by 0.05 –0.1 per cent per year.

While these main forms of intervention against civil war – PKOs and post-conflict aid – do appear to have favorable benefit-cost ratios (especially PKOs), they suffer from inherent limitations concerning their application. With rare exceptions UN and other PKOs tend to only become feasible after the combatants have signed a tentative peace deal and called on third parties for assistance in implementing it. So they are limited in the first place to already on-going wars, and in the second place to a subset of wars where both (or all) sides want to make a deal and the UN or other major regional organizations want to supply resources to facilitate this. Whole classes of civil war are very rarely candidates for PKO “treatment.” For example, secessionist or autonomy-seeking conflicts rarely get PKOs – despite the fact that most ongoing conflicts are of this type – and conflicts in Asia have only rarely received PKOs (East Timor and Cambodia).

### ***Other Forms of Violence: Homicides, Assaults, Child Abuse and Violence against Women***

How can aid be used to reduce the other forms of violence, namely homicides, assaults, violence against women and children? Most of our tables and graphs above suggest that wealthier regions tend to be characterized by lower rates of violence. Thus, development is likely to decrease violence over time. Here we want to consider some more specific social programs and their possible impact on the reduction of violence. However, the evidence

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<sup>16</sup> For a discussion of some of Pinker’s central claims see for example the Human Security Report Project (2013).

base for effective strategies to address violence is limited and consequently there is little knowledge on the effects of many prevention measures and programs. Some interventions can be evaluated through rigorous Randomized Controlled Experiments (RCTs) or by multivariate regression analysis. However, there are methodological and frequently practical problems that can undermine the claims made from RCTs (Deaton, 2010). Many development issues also cannot be studied through an experimental design – often it is not ethical or politically possible to try certain programs or reforms on small control groups before rolling these out nationwide. Regression analysis can provide a useful tool to assess correlations between specific interventions and violence levels; for example there is a large literature on the impact of capital punishment on crime rates, albeit with unclear results (National Research Council, 2012). However, it is often difficult to statistically identify the effect of a particular intervention, since unobserved causes may be correlated with the presence or implementation of interventions, thus biasing estimates of their casual effect.

In addition to social programs, one of the commonly suggested measures is to criminalize certain forms of violence, e.g. corporate punishment of children, FGM, rape within marriage. It is hoped that legal reforms will change harmful traditional practices, change attitudes and prevent violence. However, when legal norms run counter to social norms, legislative reform often appears to have a limited effect on changing attitudes and practices (UNICEF, 2013:89). The deeper underlying question is therefore how social norms can be changed. We refer to Platteau and Wahhaj (2014) who provide an in depth discussion of interactions between traditional customs and the modern statutory law.

Another difficulty in estimating BCRs in this area is that most of the data and most of the policy interventions that have been evaluated come from high-income countries (World Bank, 2014). For example, the Crime Lab at the University of Chicago provides a summary review of major intervention approaches aimed at crime reduction, “with a special focus on interventions that have been rigorously evaluated using randomized experiments, or ‘natural’ experiments where receipt of the intervention is affected for some people or places and not others due to changes in state or local laws or other means.”<sup>17</sup> They summarize results concerning the effects on crime of incarceration, community policing programs, “problem-oriented policing” that focuses on “hot spots” or illegal gun carrying, methadone and other drug treatment programs, legal innovations that target gang-related activities, early childhood educational programs, and adolescent mentoring programs. All of the studies discussed, however, were carried out in U.S. cities. Many of them require a significant degree of institutional capability on the part of the police, other parts of the criminal justice system, or civil society in order to effectively introduce and implement the intervention.

By contrast, in many low-income countries, police corruption, abuse, and simple poor performance appear to be a large part of the problem of societal violence. For example, using data from the latest Afrobarometer round, we find that in the 20 countries surveyed, the average percentage who responded that they trusted the police “not at all” was 21 per cent, with another 23 per cent saying they trusted the police only “a little.” On average 15

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<sup>17</sup> See [www.crimelab.uchicago.edu/page/know](http://www.crimelab.uchicago.edu/page/know).

per cent in each country said that “all” police were corrupt; 27 per cent on average said that “most of them” were corrupt. The numbers for Latin America, using Latinobarometer to look at average responses for 24 countries (not including the U.S. and Canada), are comparable. On average 16 per cent said they trusted the police “not at all,” and a remarkable 42 per cent (average across countries) responded that “the police are involved in crime” when asked if they thought that the police protect people from crime or are involved in it (or neither). For the U.S. and Canada, the percentages saying that they trusted the police “not at all” were 6.9 and 5.2 per cent respectively, while the question about police involvement in crime was not even asked.

The rarity of aid and other interventions to try to improve police performance and criminal justice institutions in low-income countries makes it especially difficult to estimate benefit-cost ratios in this area. However, given the magnitude of the costs of societal violence estimate in preceding section, it also suggests that this is a very important and fertile area for research and experimentation with different types of programs.

### ***Violence Prevention through Improved Police Performance***

As noted, most of evaluations of the impact of different strategies of policing come from developed countries, the U.S. in particular. The 2004 report by the National Research Council, “Fairness and Effectiveness in Policing: The Evidence,” provided a comprehensive assessment of some 30 years of increasingly sophisticated research on evolving police approaches in the U.S. cities (Skogan and Frydl 2004). They judged that multiple high-quality studies (including randomized trials) had found that “hot spots” policing where police focus on small geographic areas with persistent high crime rates appears to be effective in reducing crime rates, including violent crimes in some cases. (These effects are relative to a “traditional” approach of roughly uniform coverage of a jurisdiction.) They also found solid evidence that “problem-oriented policing” strategies lead to reductions in crime rates. These approaches encourage police to consult with communities about problems of greatest concern to devise solutions that are context- and problem-specific, and to measure outcomes explicitly.

Typical of this literature, the NRC report makes no effort to estimate benefit-cost ratios; the question is simply what police strategies and tactics cause reductions in crime in U.S. cities. However, the material costs of “hot spots” and “problem-oriented policing” appear to be very small, which suggests that if they have non-trivial effects, as reported, BCRs should be large. Concerning costs, for both approaches the main difficulties appear to be in getting police departments to want to learn the new approaches and to implement them faithfully and competently.<sup>18</sup>

For police reform in developing countries, this suggests that the BCRs for programs to implement “hot spots” and problem-oriented policing methods (or other programs aimed increasing professionalism) could be very large in places where the police and state authorities are interested in improving performance but lack knowledge, training, or

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<sup>18</sup> In sophisticated forms, hot-spots policing methods may employ crime-mapping software and real-time incorporation of crime data into predictive models.

equipment. Or they might be very small in places where donors or governments might spend large sums on reform efforts but with little impact, because police or local politicians have vested interests in not performing well.

For police reform in developing countries, this suggests that the BCRs for programs to implement “hot spots” and problem-oriented policing methods – or other programs aimed increasing professionalism – could be very large in places where the police and state authorities are interested in improving performance but lack knowledge, training, or equipment. But they could be very small in places police or local politicians have vested interests in not performing well, so that money spent on reform efforts would be wasted because the targets can easily undermine implementation if they wish.

For example, consider the only randomized controlled experiment on police reform in a developing country that we have been able to find, Banerjee et al’s study of an ambitious program in the Indian state of Rajasthan (Banerjee et al. 2012). Here, a reform-minded group of senior police staff agreed to allow random assignment of several low-cost interventions, including additional training for police, an attempt to eliminate frequent transfers, a more formalized duty rotation for officers, random checks of whether police registered reported crimes, and regular days off. Partially excepting the training program and random checks, these reforms in principle required little more than administrative fiat to implement, rather than any additional funding – thus if they have significant benefits, the BCR would necessarily be large. For outcomes, the project focused almost entirely on diverse measures of public perception of police effectiveness and integrity, along with a few measures of actual police performance in responding to crime reports from citizens. Training (if applied to a large majority of constables in a district), random checks, and reduction of transfers were found to significantly improve both perceptions of and actual police performance. There were no detectable effects on levels of crime, although none were expected given the study’s intention and design.<sup>19</sup>

These results suggest that BCRs for programs to improve police performance in developing countries could be very large in cases where there is significant “political will” to implement even simple and low cost administrative and procedural reforms. The problem will often be political will, something incorporation of violence prevention into the MDGs could potentially help with. Moncada’s (2009) study shows how, starting in the mid 1990s, a reformist mayor in Bogotá, Colombia, used dissemination of statistics and data on crime to enable and encourage popular monitoring and mobilization that brought pressure to bear on the police to implement serious and successful reforms. As noted in the Introduction above, rates of homicide plummeted in Bogotá in this period, and Moncada and others make a strong case that reform and improvement of the police was a very important or even decisive factor. Although a specific BCR cannot be estimated, this case does suggest that BCR for police reform might be very high in particular settings.

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<sup>19</sup> It was certainly hoped that increased trust in police, which is seen as a major problem in Rajasthan along with many other developing countries, would lead to greater reporting of crimes and use of police services; in the longer run these would be expected to reduce crime rates.

## ***Violence Prevention through Alcohol-focused Interventions***

The harmful use of alcohol is regarded as a major contributing factor to violence. The WHO (WHO, 2009) surveys the evidence and suggests that about one third to half of the perpetrators consumed alcohol before assaulting their victims. A number of studies, mainly carried out in high income countries, have evaluated the impact of interventions that regulate the consumption of alcohol. Intervention strategies include (WHO, 2009): Changing permitted alcohol sales times, reducing the density of alcohol outlets, increasing alcohol prices, specific interventions targeted at problem drinkers and improving drinking environments by encouraging/training service staff to serve alcohol responsibly. The last intervention strategy is for example analysed by Moore et al (2012). They suggests that RCTs are feasible to assess the effectiveness of reducing alcohol-related violence. In the UK they matched pairs of 32 licensed premises (pubs, bars and night clubs) and in the treatment group they encouraged the enforcement of the existing laws, e.g. not supplying alcohol to already intoxicated customers. This trial study suggests that the incidence of violence decreases by about 10 per cent in the control group. The BCR appear to be phenomenal, they cite a cost of the intervention of £600 which prevents roughly one assault, costed at £10,407. This provides a BCR of about 17.

Following these general remarks we discuss some specific programs for which BCR have been estimated or could potentially be estimated in future work.

## ***Parenting Techniques – Reducing Violent Disciplinary Practices in the Home***

As discussed in Section 4 about 16 per cent of children are punished in an extremely violent manner, but when asked about attitudes to parenting only one in four mothers/primary caregivers believed that physical punishment is needed in order to bring up children properly (UNICEF, 2010). The prevalence of violent discipline is highest among children aged 5-9 but characteristics such as wealth, age of caregivers and household size were not associated with the prevalence of violent discipline (these results are based on simple correlations, not on multivariate regression analysis). Boys were only slightly more likely to be subjected to violent discipline in about half of the countries. The UNICEF (2010) recommendations include bringing about changes in norms, attitudes and behaviours to safeguard children. The strengthening of legal frameworks, policies and services is seen as an integral part in the prevention of and the response to violence against children.

These recommendations are similar to the ones listed by Pinheiro (2006) and Krug et al (2002). However, it is difficult to cost and assess the impact of some of these changes by calculating a BCR. However, there are a number of parenting and home visitation programs that have been assessed in a rigorous manner and BCRs are available. The Washington State Institute for Public Policy (WSIPP, 2013) offers BCRs for a number of programs designed to reduce child abuse and neglect in the home. In their model the WSIPP determines the current and future benefits of an intervention program and contrasts it to the current costs. The benefit of the program is the reduction in the number of cases of child abuse and neglect. The monetary benefit of the program is the sum of the avoided cost to the society (child welfare system and court costs) and to the victim (estimated medical,

mental health and quality of life costs). The victim costs are discounted at a rate of 3.5 per cent. These avoided costs are then compared to the cost of the intervention. Early response of trained social service and welfare officers appear to provide the best BCR, they are about 13-14. Given that social services are very small in low and middle income countries it may be difficult to implement these programs. Home nurse visits to at risk mothers and newborns also offer a positive BCR, it is estimated at around 2.75. However, given that the health care systems in developing countries are under pressure to treat patients, it may be unrealistic to expect nurses to take on additional preventative work. On the other hand, these BCRs suggest that additional funding for welfare officers and nurses for home visitation programs would constitute a good return to this investment.

Programs to improve parenting skills also offer considerable BCRs. The impact of some of these programs and the associated costs have been assessed. The best known, and possibly most studied parenting program is 'The Positive Parenting Program' or also referred to as 'Triple P' (for an overview see Sanders, 2012). This parenting program has been developed over 30 years at the University of Queensland, Australia and has its origins in social learning theory. It was designed to improve parenting and help with behavioural, emotional and developmental problems in children under the age of 16. It has five levels, ranging from general parenting information campaigns to specific family interventions to help with severe problems, such as support to parents at risk of maltreating their children. The program helps parents to increase their confidence, skills and knowledge about raising children. An important aspect is to develop realistic expectations, assumptions and beliefs about their children's behaviour and choosing goals that are developmentally appropriate for the child. Parents who are at risk of abusing their children often appear to have unrealistic expectations of children's developmental capabilities. Level 1 aims to inform parents about strategies about positive parenting and to de-stigmatize parenting and family support. Level 2 offers brief consultations for individual parents or parenting seminars with large groups of parents. Level 3 involves a series of brief consultations for parents to manage discrete child problem behaviours that are not complicated by other major behaviour management difficulties or significant family malfunction. Level 4 is designed to help parents who are struggling with challenging behaviour that does not yet meet diagnostic criteria for a behavioural disorder. Level 5 provides support to families with additional risk factors (e.g. stress, divorce, depression, parents at risk of maltreating their children).

Triple P has been applied in a number of countries – including Australia, the US, the UK, Germany, Switzerland, Japan, Hong Kong, Turkey, Panama and Iran – and has been evaluated in randomized controlled trials (RCTs). So far the program has had very limited application in low income countries. The Triple P International website states that the program has been used in South Africa and in Kenya, but we could find no further information on these programs.

The study by Prinz et al (2009) evaluates the Triple P intervention for child maltreatment at a population level in the US in a RCT. The evaluation period spans the two years after the start of the intervention. The authors found that in a population of 100,000 children under 8 years of age there were 688 fewer cases of substantiated child maltreatment recorded by



child protective services staff, 240 fewer out-of-home placements and 60 fewer children with injuries requiring hospitalization or emergency room treatment. WSIPP (2013) uses this evidence and calculates a BCR of 8.74. Given that Triple-P has been applied in a number of different countries, it appears to be a promising candidate as an intervention in low and middle income countries. As the UNICEF (2010) study suggests, most caregivers did not believe that physical punishment is necessary in disciplining their children. Thus, the majority of caregivers appear to be open to improving their parenting skills to avoid physical punishment.

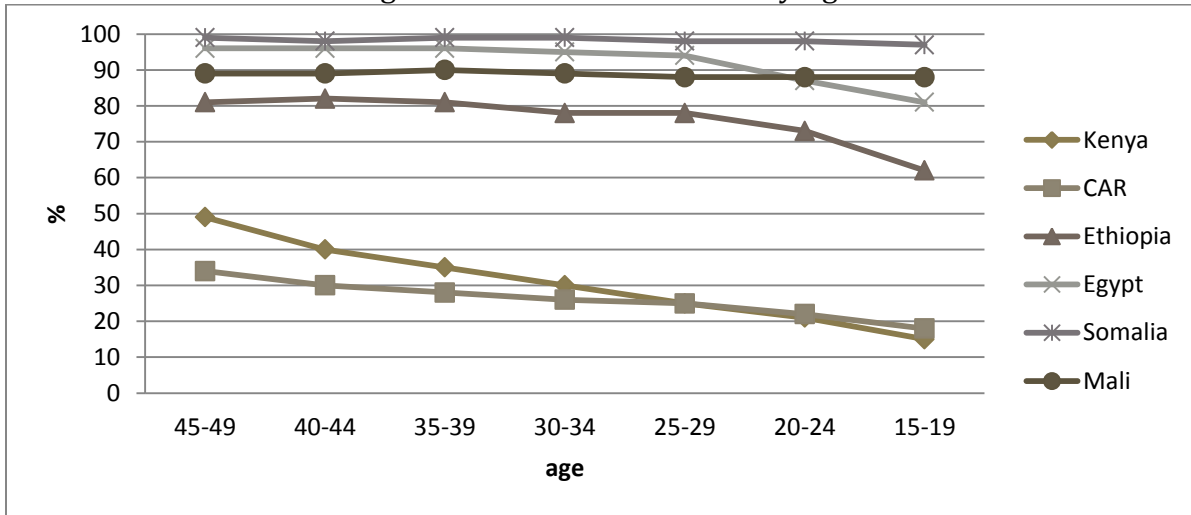
### ***FGM***

FGM is an example where legal reform has had little impact on a harmful traditional practice. Currently, 26 countries in Sub-Saharan Africa, the Middle East and North Africa prohibit FGM by law. Most countries introduced this legislation since the mid 1990s, but as the summary statistics suggest, the practice of FGM is tenacious.

In addition to legal reform a number of programs have been designed to stop the practice of FGM. The study by Denison et al (2009) offers a systematic assessment of interventions designed to change attitudes and end the practice of FGM. Based on an extensive literature search they found only six studies that employed a controlled before-and-after study design. These studies involved a total of 6,803 participants at entry from seven different African countries (Burkina Faso, Egypt, Ethiopia, Kenya, Mali, Nigeria, Senegal). The interventions consisted of a variety of activities, including training and educational sessions, advocacy, empowerment, and mass media. Only two studies examined the impact on prevalence. Four of the studies targeted communities, one health personnel, and one female students. The impact of the intervention was assessed by its impact on: prevalence, knowledge, attitudes and intention. However, Denison et al (2009) conclude that although the calculated effect sizes for the interventions were positive, the low quality of the study designs affects the interpretation of results and raises doubts about the validity of the findings. To summarize, there is to date no reliable evidence that specific interventions change attitudes and lower the rate of prevalence of FGM.

However, most recent data provide hope that the incidence of FGM is declining in a number of countries. Based on DHS and MICS data presented in UNICEF (2013) we find that the practice of FGM has declined over the past 15 years. Figure 16 presents the prevalence rates by age group for a selected number of countries. When comparing women aged 30-34 to girls/adolescent women aged 15-19 the decline in FGM has been strongest in Tanzania, Kenya, Benin, Liberia and Nigeria (ranging from 63-37 per cent). Other countries show very little or no decline in FGM rates (0-5 per cent), namely Sudan, Guinea-Bissau, Mali, Senegal and the Gambia. Most of the high prevalence countries have achieved very little reduction. If we understand FGM as a network good, it is most likely that the incidence of FGM will decline more quickly in countries with medium to low prevalence rates. In societies with low prevalence, women are likely to have more interaction with uncut women through school, work or religious institutions. This provides them with the opportunity to observe that uncut women do not suffer adverse social sanctions.

Figure 11: Prevalence of FGM by Age



Source: UNICEF, 2013

### ***Domestic Violence - DASH***

In the UK there have been considerable changes in the ways that police and other government agencies assess domestic violence and how they intervene in cases of concern. Police records suggest that many cases of (fatal) violence include previous contact with the police and that pregnancy, separation and change of custody arrangements are common trigger points for violence. Richards et al (2008) provide a careful study of policing domestic violence and suggest a checklist to identify risk to victims of domestic abuse. Since 2009 UK police and partner agencies (for example social services) now use the Domestic Abuse, Stalking and Honour Based Violence (DASH) Risk Identification, Assessment and Management Model. Although it is aimed at adult victims of domestic violence (women and men), the children who are living with and witnessing domestic abuse are also at risk of suffering significant harm. Thus, in the DASH questionnaire the details of children resident at the address must also be provided. To our knowledge, the impact of the DASH approach has not been evaluated.

### ***Duluth Model***

The Duluth Model is named after the community in Minnesota where it was first pioneered in 1981. It is a domestic abuse intervention project that is now a commonly used batterer intervention program used in the United States. The Duluth Model consists of a number of elements. It encourages the different agencies to work together from the first emergency call to court proceedings. This coordination helps to hold batterers accountable. The voices of the victims are regarded as central and women are provided with shelter, support and advice. A further element is to help abusive men change through nonviolence program. However, although widely used in the US and in other countries it is unclear how effective the Duluth model is. Corvo et al (2008) review the evidence and conclude that the success rates of the program are at best low but that it is not possible to properly evaluate because studies have not employed proper control groups. Studies of men who moved through Duluth's criminal justice system and men's nonviolence classes have a rate of reoffending

of between 32-40 per cent. Among other criticism of the Duluth Model, Corvo et al (2008) suggest that the program could be improved by addressing substance abuse.

To summarize, although the Duluth Model appears to be widely used, we do not know how widely used it is, where it is applied and how effective it is. The website for the Duluth Model states that the nonviolence program for men is the most replicated program for men who batter in the world.<sup>20</sup> No further details are provided and the evaluation of the Duluth Model in countries outside of the US does not appear to have made it into the academic literature. It is therefore impossible to comment on the effectiveness of this domestic abuse intervention and thus provide any BCR.

### ***Economic Empowerment and Changing Norms***

The World Bank report on 'Voice and Agency' reviews interventions aimed at preventing gender based violence and like us the report concludes that the majority of available evidence comes from high income countries (World Bank, 2014, chapter 3). However, based on their review there are a number of lessons that can be drawn. Programs aimed at economic empowerment, such as (un)conditional cash transfers and micro-finance programs do not appear to systematically lower levels of violence. In some instances the levels of domestic violence rose. However, a conditional cash transfer program in Ethiopia was effective in reducing the number of child marriages and extending the years of schooling for girls. Girls from families participating in the program were three times more likely to be in school and only one-tenth as likely to be married (World Bank, 2014: 110). The report suggests that short term programs (interventions that lasted less than one month) are unlikely to have any effects in changing norms and behaviour. The evidence seems to suggest that messages condemning violence is less successful in changing men's behaviour because it promotes fear and/or shame. Messages that promote the positive aspects of 'doing the right thing' have been more successful. One example is the SASA! (Kiswahili meaning "Now!") program for the prevention of domestic violence in Uganda which has been rigorously evaluated and shown to halve levels of violence and significantly promoting the view that violence against a partner is unacceptable (World Bank 2014:74). Media campaigns such as soap operas on TV and radio also appear promising. In South Africa one such program (Soul City) resulted in a higher awareness of a domestic violence hotline (41 per cent increase) and an increase in people disagreeing that domestic violence was a private affair (ten per cent increase). To our knowledge BCRs are not available for any of these interventions.

## **Targets**

### ***Civil war violence***

Civil war violence accounts for a relatively small proportion of violent deaths and, as discussed more below, global trends in levels of civil war violence over the last 20 years have been strikingly favourable overall. Nonetheless, civil war violence might have worse "per death" externalities than any other form. To name a few common ones: massive

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<sup>20</sup> <http://www.theduluthmodel.org/>

displacement and refugee flows with large associated costs of all sorts; greatly increased morbidity and mortality in areas where economies, infrastructure, and public services are destroyed or unable to function due to war; long run negative impacts on economic development and thus on the health and welfare of whole societies, including millions not directly impacted by the violence; negative spill-over effects to neighbouring countries, including risks of political and social destabilization for whole regions, as we are currently seeing in the Syrian conflict.

As of 2012, there were some 30 active civil conflicts on-going in 25 countries; this is about one in eight independent states, or about one in six or seven non-microstates.<sup>21</sup> So it makes sense to at least ask about what are plausible global targets for reducing civil war violence over the next 15 years.

We note at the outset that the idea of global targets for civil war incidence is both new and revolutionary. Before the end of the Cold War and for hundreds of years before that, civil wars were considered as both a normative and practical matter to be nobody's business but that of people in the afflicted country, or for interveners who might have power political "reasons of state" to get involved.<sup>22</sup> This has changed so much since the end of the Cold War that we can begin to speak of an "international regime" for civil war, even if it is not yet a particularly effective regime. That is, when a civil war begins in a country, it is widely considered that this could constitute a "threat to international peace and security" that would warrant action by the UN Security Council, and that, at any rate, international organizations, major powers, and regional states have some collective responsibility to pursue policies to alleviate the suffering and help bring the conflict to an end. That the High Level Panel proposed the setting of global targets for this sort of violence is itself a testament to the development of this new international regime.

Further, the nascent regime has a set of tools for achieving these ends. These include an extensive system of IGOs and NGOs for providing emergency relief and humanitarian aid; a system that provides mediation services of various sorts before and during conflicts; and, most of all, collectively organized UN and regional organization peace-keeping operations that (mainly) deploy to facilitate and secure the implementation of peace agreements.

As is clear from the number of continuing or recently begun civil wars, these tools are of limited effectiveness and erratic application. Civil war is probably far less amenable to "treatment" by international aid programs or other policy interventions than are obstacles to development in areas like health and education. So the idea of international targets for levels of civil war is necessarily going to be much more aspirational than operational. Perhaps the hope (of the High Level Panel, for example) is that having reasonable targets could help to focus international and domestic attention and to mobilize and coordinate efforts at prevention.

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<sup>21</sup> ACD data. Non-microstate refers to countries with population greater than half a million.

<sup>22</sup> Partially excepting the Concert of Europe regime in the first half of the 19th century, which involved monarchical regimes coordinating to facilitate the suppression of liberal revolts.

With those caveats in mind, in this section we develop targets for rates of civil war incidence for six different world regions for the period 2013-2030. We distinguish between two types of civil war – those where the rebel parties aim primarily at taking over the central government, and those where they aim at gaining greater autonomy within, or independence from, an existing country. We also distinguish between two levels or magnitudes of civil war – those where the number killed by combat is between 25 and 999 in a given year (“small”), and those where the number killed is 1,000 or more (“large”). These are the thresholds used by the Armed Conflict Database, which codes civil conflicts for 1946-2012 according to consistent criteria. We use their data in the analysis below.

Our approach is to estimate the linear trend (since the end of the Cold War) in the annual share of countries in a region experiencing each type of conflict. We then propose as a target for 2030 a 20 per cent reduction from 2012 level, or level that would result from 20 per cent reduction in the existing trend, whichever yields the greater decline. For war types that are currently at or close to zero levels in a particular region, a “zero target” is both a reasonable and of course a desirable objective.

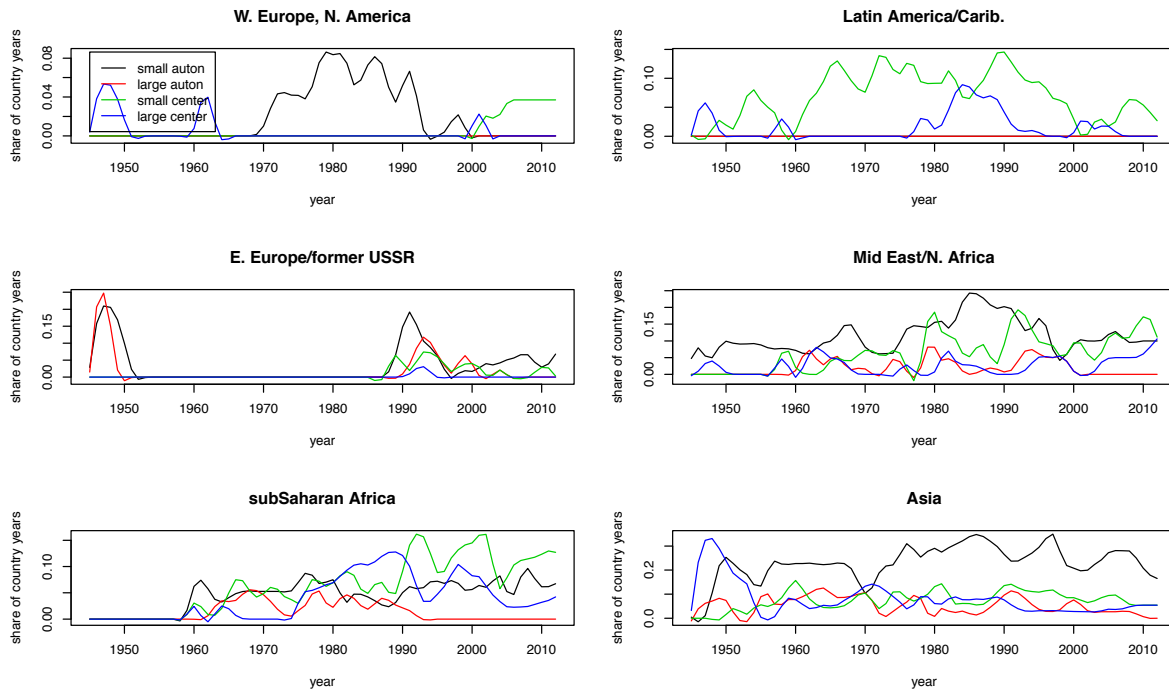
The specific percentage reduction-versus-trend that we use for projecting a target is obviously a judgement call about what would constitute a feasible but sufficiently motivating aspiration. More or less aggressive reduction rates could be chosen; but regardless, we would still argue that it makes more sense to take into account different prior trends in different types of civil war than to just name a level of global warfare that we would like to see attained by 2030.

Figure 13 shows the regional trends over time for our two types of war, at two levels of intensity for the period 1946 through 2012. The y-axis is the share of countries in the region that were experiencing the type of war in question in the year indicated on the x-axis. A first, encouraging observation is that high intensity wars of both types (center-seeking and autonomist) have been in significant decline in all regions except for Middle East/North Africa. Indeed, proposing a zero target for large separatist wars just means aiming to continue the current state affairs. Second, note that in a number of regions the other types and levels of civil conflict have been in significant decline for most of the post-Cold War period.<sup>23</sup>

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<sup>23</sup> The increase since 2001 in low level center-seeking wars in Western Europe and North America is entirely due to ACD coding an “internationalized civil war” between the U.S. and al Qaeda and locating this conflict in the U.S. ACD codes the start of the conflict with 9/11, and then presumably is coding U.S. attacks on al Qaeda abroad since then as part of the same conflict. So the location coding here is not right except for 2001.

Figure 13: Civil War Trends



We estimated the linear trend for each region and war type from 1990 to 2012, and used these to project targets forward to 2030. Table 15 shows the annual rates of change in share of countries in the region with a given type of civil war. We omit Western Europe/North America because here the obvious target for all kinds of civil war in 2030 is zero. The only region/war type with a marked upward trend is large-scale wars over the central government in the Middle East/North Africa (due to conflicts in Iraq, Yemen, Libya, and Syria).

Table 14 shows both current levels (2012) and the projected level for 2030 if the linear trend for 1990-2012 continued forward (and with zeros if the linear trend goes negative). We see quite a few cases where even a simple continuation of the current trend would imply a “zero target.”

Tables 15 and 16 apply our proposal for generating aspirational targets – a 20 per cent improvement on trends or a 20 per cent reduction from 2012 level, whichever is greater. Both the 2012 level and the 2013 target levels are shown, in percentages of countries in the region in Table 15, and number of countries in the region with war in Table 16. Note that by taking trends into account, some region/war type combinations would be expected to make large improvements – for instance, the elimination of small autonomy-seeking wars in Eastern Europe/former Soviet Union and Asia, and of large center-seeking wars in Africa – while others are anticipated to be harder to reduce, such as small autonomy wars in Asia and small center-seeking wars in Africa. Total wars (above the 25 dead per year threshold) would go from 20 in 2012 to 17.1 in 2030 if these target were attained, a modest reduction.

However, large-scale civil violence (above the 1000 dead per year threshold) would become very rare if the targets were achieved, down to about three ongoing conflicts.

*Table 14: Annual change in % with war, 1990-2012*

region	Small Aut.	Large Aut.	Small Cen.	Large Cen.
Asia	-0.29	-0.40	-0.40	0.03
SSA	0.05	-0.04	-0.06	-0.28
NA/ME	-0.33	-0.25	-0.01	0.28
LA/Ca	0	0	-0.41	-0.06
EEur	-0.41	-0.36	-0.20	-0.06

*Table 15: Percentage of countries with war, actual 2012 and 2013 by trend*  
*War type*

region	Small Aut.		Large Aut.		Small Cen.		Large Cen.	
	2012	2030	2012	2030	2012	2030	2012	2030
Asia	16.2	11.3	0	0	5.4	0	5.4	5.9
SSA	6.1	7	0	0	12.2	11.2	4.1	0
MENA	10	4.4	0	0	10	9.8	10	14.8
LA/Ca	0	0	0	0	3	0	0	0
EEur/FSU	6.9	0	0	0	0	0	0	0

*Table 16: Percentage of countries with war, actual 2012 and 2013 target*  
*War type*

region	Small Aut.		Large Aut.		Small Cen.		Large Cen.	
	2012	2030	2012	2030	2012	2030	2012	2030
Asia	16.2	11.3	0	0	5.4	0	5.4	4.3
SSA	6.1	4.9	0	0	12.2	9.8	4.1	0
MENA	10	4.4	0	0	10	8	10	8
LA/Ca	0	0	0	0	3	0	0	0
EEur/FSU	6.9	0	0	0	0	0	0	0

Table 17: Number of countries with war, actual 2012 and 2013 target

region	War type							
	Small Aut.		Large Aut.		Small Cen.		Large Cen.	
	2012	2030	2012	2030	2012	2030	2012	2030
Asia	6	4.2	0	0	2	0	2	1.6
SSA	3	2.4	0	0	6	4.8	2	0
MENA	2	0.9	0	0	2	1.6	2	1.6
LA/Ca	0	0	0	0	1	0	0	0
EEur/FSU	2	0	0	0	0	0	0	0
total	13	7.5	0	0	11	6.4	6	3.2

## ***Reducing the Violence against Children***

In this section we discuss which targets could be set for the reduction in violence against children and any evidence on the effectiveness of interventions aimed at violence prevention. The evidence on violence prevention is scarce and the effectiveness of programs is often unclear. Thus, we do not calculate BCRs but quote BCRs as suggested in the literature on specific interventions.

### **Fatal Violence**

Time trends in child homicide rates could inform us in which targets may be realistic. However, time series evidence is only available for a few countries. The evidence from the UK suggests that over the past ten years child homicide rates have been reduced by about 40 per cent. In 2002/03 the average child homicide rate was about 23 per 1 million, in 2012/13 this had fallen to about 14 per 1 million. Like in other regions, young infants are at a particularly high risk in the UK: the homicide rate for infants under one year old was reduced from 53 per 1 million to 30 during the same period. This corresponds to a reduction of 43 per cent.

For the UK the Office for National Statistics also provides information on the relationship between victim and perpetrator. Child homicides committed by strangers are rare. Using averages for the past decade, 75 per cent of all children were killed by a member of their family, a friend or an acquaintance. 61 per cent of all murdered children were killed by their parents. Interventions should therefore be mainly targeted at the family.

Using Global Health Estimates from WHO (2013) we calculate that if the neo-natal homicide rate (0-30 days) could be reduced by 43 per cent over the next 15 years the number of neo-natal deaths of about 1,700 annually would be reduced by 745. For children under the age of 14 the number of homicides is currently about 14,800. A reduction of 43 per cent would result in 6,370 fewer deaths.

### **Non-fatal violence**

About 16 per cent of all children receive severe physical punishment, this includes slapping them on the face, head or ears and beating them repeatedly with an implement such as a stick, cane or belt. These types of severe physical punishment should have a zero target and



other forms of less violent physical punishment (e.g. shaking, spanking, hitting on the bottom/legs) should be halved from a current 60 per cent.

## ***Reducing the Violence Against Women***

### **Intimate Partner Violence (IPV)**

Intimate Partner Violence (IPV) generates large costs; survey evidence suggests that about 30 per cent of all women suffer some form of abuse in their lifetime. This generates suffering and large costs to societies. These costs are likely to have a large dynamic component because girls who witness abuse in the home are more likely to be abused in the future and boys are more likely to become abusers themselves (WDR, 2012: 152).. Although a zero target is desirable, a target of reducing the proportion of women affected by IPV may be more realistic. Shephard (2005) reports that non-fatal cases of domestic abuse fell from 1.1 million in 1993 to about 590,000 in 2001 in the US. This corresponds to a reduction of 46 per cent. A feasible target for the reduction of IPV would aim to halve the number of women experiencing IPV.

### **Early Marriage**

Many girls are married before the age of 15, causing a number of health and welfare issues. This includes obstructed labour, fistula and a higher prevalence of abuse from their husbands. The incidence of these early marriages is declining and we suggest a target of no marriages before the age of 15.

### **FGM**

As discussed above, in some countries with low prevalence rates the incidence of FGM has been falling (e.g. Tanzania, Kenya, Benin, Liberia and Nigeria, ranging from 63-37 per cent ) but in high prevalence societies there has been little or no decline in FGM rates (e.g. Sudan, Guinea-Bissau, Mali, Senegal and the Gambia, ranging from 0-5 per cent). In societies with lower prevalence, women are likely to have more interaction with uncut women through school, work or religious institutions. This provides them with the opportunity to observe that uncut women do not suffer adverse social sanctions. In such societies an elimination of the practice of FGM by 2030 appears to be possible target. For example, if present trends continue, in 2030 none of the 15-19 year olds will have undergone FGM in Kenya and Tanzania. However, the average rate of reduction over the past 15 years was only about 20 per cent and for most countries with high prevalence rates there is no clear downward trend in prevalence rates. Thus, rather than stipulating zero targets for high prevalence societies, a reduction of FGM by 50 per cent would appear to be aspirational.

## **Conclusion**

The Millennium Development Goals set for 2000-2015 did not include any direct reference to reduction of violence. Accumulating experience in the international development community has led, over the last 15 or so years, to greatly increased acceptance of the proposition that economic and social development in low-income countries very often requires that societies address both the risk and costs of large-scale violence. Civil wars remain depressingly common in the developing world, and civil war is “development in reverse” (Collier et al. 2003).

As shown in the section on trends above, civil war violence, although still widespread in developing countries, has been in general decline in most areas for the last ten to 15 years. (The major exception is the Middle East and North Africa.) As shown in Section 2 above, the costs of civil war violence remain substantial at a global level – following the Institute for Economics and Peace (IEP) approach we estimated welfare costs comparable to about one-third of one percent of global GDP in 2013. Obviously, this becomes a larger share if one restricts attention to the low-income countries where civil war is most prevalent. The international community has a limited but apparently somewhat effective set of policy interventions to try to lower the costs of civil war. Primarily these are UN and other regional organizations’ peacekeeping operations, which deploy to help implement peace agreements where combatants are willing to sign them, and where major powers are willing to fund the interventions. A number of studies, noted in section 6 above, find evidence of highly favourable average benefit-cost ratios for these interventions. However, we noted that they are very limited in application, even for civil wars that reach stalemates, and that they do not address the problem of civil war prevention. Of the approximately 80 civil wars and conflicts ongoing at some point after 1990, about 70 per cent did not receive international peacekeeping “treatment” during or after their conclusion. Of the approximately 28 civil wars and conflicts that were ongoing in 2013, only four had experienced a peacekeeping operation at some point in time.

Our main argument has been that civil war violence is too narrow a category when considering what the next set of international development goals should be. We have presented evidence showing that interpersonal violence in its major forms – homicide and violent assaults, including relatively “hidden” forms such as intimate partner violence, child abuse, and FGM – are far more pervasive than civil war violence and almost surely far more costly in terms of human welfare. Again using the IEP methodology (but omitting costs related to deterring or preventing violence), we estimated that in 2013 the global welfare cost of interpersonal violence was on the order 2 per cent of world GDP, as compared to 0.33 per cent for civil war violence – more than six times greater. Although one can argue with or doubt many of the specific judgments that go into formulating such quantitative estimates, it is *prima facie* plausible that interpersonal violence affects far more people in far more countries than does civil war and other “collective violence,” so it should at least be plausible that it may also be substantially more costly.

Despite its prevalence and apparently very large costs, the international development community has not yet conceptualized interpersonal or societal violence as a development problem that aid and other policy interventions should try to address in a systematic way. As seen in Section 5 above, at best a tiny fraction of development aid is specifically targeted at “crime prevention.” Certainly the share is much smaller than the amounts spent on preventing and dealing with the consequences of civil war violence, and smaller still compared to the amounts spent on programming intended to improve “governance” in low-income countries.

Both of these are without doubt important categories for foreign aid. However, if it is the case that the benefit-cost ratio of interventions are at least comparable across these three

areas (societal violence, civil war-related costs, and poor governance), then there is a strong case that much more aid should be flowing to programs to address violent crime and abuse. This is based on observation of a very low initial level of aid in this area, and the fact of substantially greater global costs than we find related to collective violence.

In principle it could be that the benefit-cost ratios for interventions in this area are very low by comparison to governance and civil war-related aid, but this does not seem especially likely. For example, well-designed evaluations of governance aid using “community driven development” or “community driven reconstruction (post conflict)” approaches tend not to find large positive effects (Mansuri and Rao 2013, King and Samii 2014), and it is difficult even to measure concretely what are the benefits of institutional change at local or national levels.

Most evaluations of programs to reduce violent crime in communities and families have been done in high-income countries, where police institutions are relatively capable of implementing new policies and not (in most instances) riddled with corruption and a major part of the problem themselves. Much less work has been done on programs to improve police performance in developing countries, although there are many ideas being tried out and many that could be tried, based on improvements in policing in developed countries over the last 25 years or so.

There are a number of important issues we did not consider in our analysis. We want to highlight three important agendas for future research. First, the HLP for the UN has focused on stemming violence against children and women. However, there are other forms of violence that are worth considering for post 2015 MDG targets. One example is elder abuse. The comprehensive study on violence and health by Krug et al (2002) suggests that the problem of elder abuse is likely to be considerable. We have insufficient data to examine the extent of the problem, however given the demographic changes in many low and middle income countries the abuse of older members of society is likely to become an even more important problem. Second, all the forms of interpersonal and collective violence discussed in our analysis have consequences for self-directed violence. For example surveys suggest that women who suffer violence from their intimate partners are more likely to have suicidal thoughts. Self-directed violence has received no mention in the HLP report, although it kills more people than interpersonal and collective violence combined. Lastly, like in the previous MDG discussion little reference is made to the complementarity of targets. For example more educated mothers will be healthier, have fewer children and the chances of survival for these children are higher. In general, peaceful societies are more able to combat poverty and the evidence suggests that more prosperous societies experience less civil war and other types of violence.

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This paper was written by Anke Hoeffler, Research Officer at Oxford, and James Fearon, Professor of Political Science at Stanford University. The project brings together more than 50 top economists, NGOs, international agencies and businesses to identify the goals with the greatest benefit-to-cost ratio for the next set of UN development goals.

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