

THE ECONOMIC VALUE OF PEACE

2016



MEASURING THE
GLOBAL ECONOMIC IMPACT
OF VIOLENCE AND CONFLICT

INSTITUTE FOR
ECONOMICS
& PEACE



Quantifying Peace and its Benefits

The Institute for Economics and Peace (IEP) is an independent, non-partisan, non-profit think tank dedicated to shifting the world's focus to peace as a positive, achievable, and tangible measure of human well-being and progress.

IEP achieves its goals by developing new conceptual frameworks to define peacefulness; providing metrics for measuring peace; and uncovering the relationships between business, peace and prosperity as well as promoting a better understanding of the cultural, economic and political factors that create peace.

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EXECUTIVE SUMMARY

This report is the latest release by the Institute for Economics and Peace (IEP) of its estimates of the economic impact of violence and conflict on the global economy. It provides an empirical basis to calculate the potential additional economic benefits from improvements in peace. Estimates of the economic impact of violence are provided for 163 countries and independent territories representing 99.5 per cent of the global economy and population.

The total economic impact of violence to the world economy in 2015 was estimated to be \$13.6 trillion and is expressed in purchasing power parity (PPP) terms. This is equivalent to 13.3 per cent of world GDP or \$1,876 PPP per annum, per person. These figures are considered conservative as there are many items that have not been counted in the study due to the lack of available data.

If the economic activity related to violence containment was considered to be a single industry it would be one of the largest in the world. To put this into perspective, a ten per cent reduction in the economic impact of violence is equivalent to ten times the value of official development assistance (ODA), more than the total value of global food exports in 2014 or more than total global foreign direct investment in 2014.

The methodology for accounting for the economic impact of violence and conflict is based on 16 separate categories of violence, conflict and public and private expenditures to contain violence. The Global Peace Index (GPI), developed by IEP, is used as the basis for measuring differing levels of peace and conflict which are then scaled based on unit costs developed in the model. The selection of the 16 expenditure categories is based on the definition of activities related to “*containing, preventing and dealing with the consequences of violence*”. The report uses the term ‘violence containment’ or ‘violence containment industry’ to holistically describe these expenditures.

The numbers are broken down into either direct or indirect costs and divided into three domains; (1) security services and prevention oriented costs, (2) armed conflict-related costs and, (3) consequential costs of interpersonal violence. The direct costs associated with violence are accounting losses which occur in the current year, such

as government spending on the military, judicial systems, healthcare and police.

Indirect costs are economic losses as a consequence of violence perpetuated within the current year. For example, this may include the decreased productivity resulting from an injury, lost life-time economic output from a murder, pain and trauma stemming from being a victim of violence, and the yearly reduced economic growth resulting from a prolonged war or conflict. The methodology also includes a multiplier effect which calculates the additional economic activity that would have been accrued if the direct costs of violence had been avoided.

The report is broken into three main sections:

- **Section 1. Conceptual background on the economic cost of violence and value of peace.**
- **Section 2. Results and trends broken into global results, regional trends and trends on the economic impact of different indicators of violence and conflict.**
- **Section 3. Comparison of containment and prevention costs to losses from violence measuring the economic losses across different government types and countries according to their levels of Positive Peace.**

Overall, the major contributor to global violence containment costs is military expenditure which accounts for 45 per cent of total costs. Internal security expenditure is the second largest category, which encompasses mostly containment and preventative expenditures involving police, judicial and prison system spending among other

factors. It was over three and half trillion dollars PPP in 2015, which is approximately 26 per cent of global violence costs.

The country average for the impact of violence is ten per cent of national GDP, but there is significant variation between countries, with the median at 7.2 per cent of GDP. While there are 35 countries which record relatively low violence containment costs of less than five per cent of GDP, by contrast, there are 15 countries where the economic impact of violence is equivalent to more than 20 per cent of GDP. This highlights the global inequality in peace and the unequal economic impacts that violence and conflict has on countries.

There are at least two major trends emerging from the data. Firstly, where countries have experienced dramatic increases in conflict and violence there is a corresponding impact on their economies. The primary example of this is the case of Syria where the civil war has devastated the country and economy, with violence and conflict costs equivalent to 54.1 per cent of GDP in 2015. Conversely, countries that have achieved peace have reaped significant economic gains. The economic impact of violence in Sri Lanka has decreased 66 per cent since 2009 resulting in a peace dividend of \$48 billion PPP which is equivalent to 20 per cent of the country's 2015 GDP.

Secondly, the changing dynamics in global peace over the past ten years have seen military expenditure and internal security spending proportionally decrease and the consequential costs of violence, such as GDP losses from conflict, lost lifetime earnings and lost productivity from violence increase. This is largely due to ongoing conflict in the Middle East and North Africa region and to a lesser extent within the Russia and Eurasia region due to the conflict in Ukraine.

Even though the average country score of peacefulness deteriorated by 0.6 per cent in 2015, reflecting a less peaceful world, the economic impact of violence actually decreased by two per cent or \$246.4 billion. This reflects the fact that much of the world's violence has been concentrated in lower income countries which impact the global costing model to a lesser extent. It also underlines the fact that the economic impact of violence and conflict varies by country.

The report compares losses from violence to the costs of containing it and aims to assess the optimal level of spending on violence containment. The research shows a distinct link between the broader environment for Positive Peace and the level of spending required to contain violence. This shows countries with the highest levels of Positive Peace spend between one and two per cent of GDP on internal security whereas countries with average levels of Positive Peace tend to spend more.

Meanwhile those countries with the lowest levels of Positive Peace and resilience generally spend less than one per cent of GDP on internal security highlighting an under-investment in violence containment. This is common among low income, fragile conflict-affected countries which tend to spend only a fraction of the per capita costs that higher income countries are spending.

The research also shows there are certain levels of Positive Peace where increases in internal security and public order are not linked to greater peacefulness. This situation occurs in many hybrid and authoritarian governance types. Conversely, full democracies continue to improve their Positive Peace and levels of violence while tending to spend less on internal security.

Understanding the optimal level of violence containment spending is important for improving levels of peace. The data show no country that spends less than 0.8 per cent of GDP on internal security is ranked above 42nd on the GPI. However, no country that spends more than two per cent of GDP on internal security is ranked amongst the top 20 most peaceful countries either. Further understanding the systemic interactions between violence containment, violence and Positive Peace is a complex ongoing research project.

It is well understood that violence destroys human and physical capital as well as social and political institutions. Aside from the human impact, it can lead to disruptions in consumption, investment, trade and production. Further, violence requires the diversion of investment from productive areas such as business development, innovation, education, infrastructure and health into less productive, albeit necessary areas such as private security expenditures, the criminal justice system, and the military.

Through understanding the economic losses caused by violence and which types of violence have the greatest effect on economic performance, governments and policymakers can better understand how a lack of peace is affecting their future economic growth. By identifying the right violence containment strategies, policymakers may be able to lower economic costs of violence and provide greater peacefulness.

PURCHASING POWER PARITY

All values shown in this report are given in 2014 constant purchasing power parity (PPP) international dollars, to allow for cost comparability between countries and over time. For a detailed definition and explanation of the calculations see Appendix A.

KEY FINDINGS

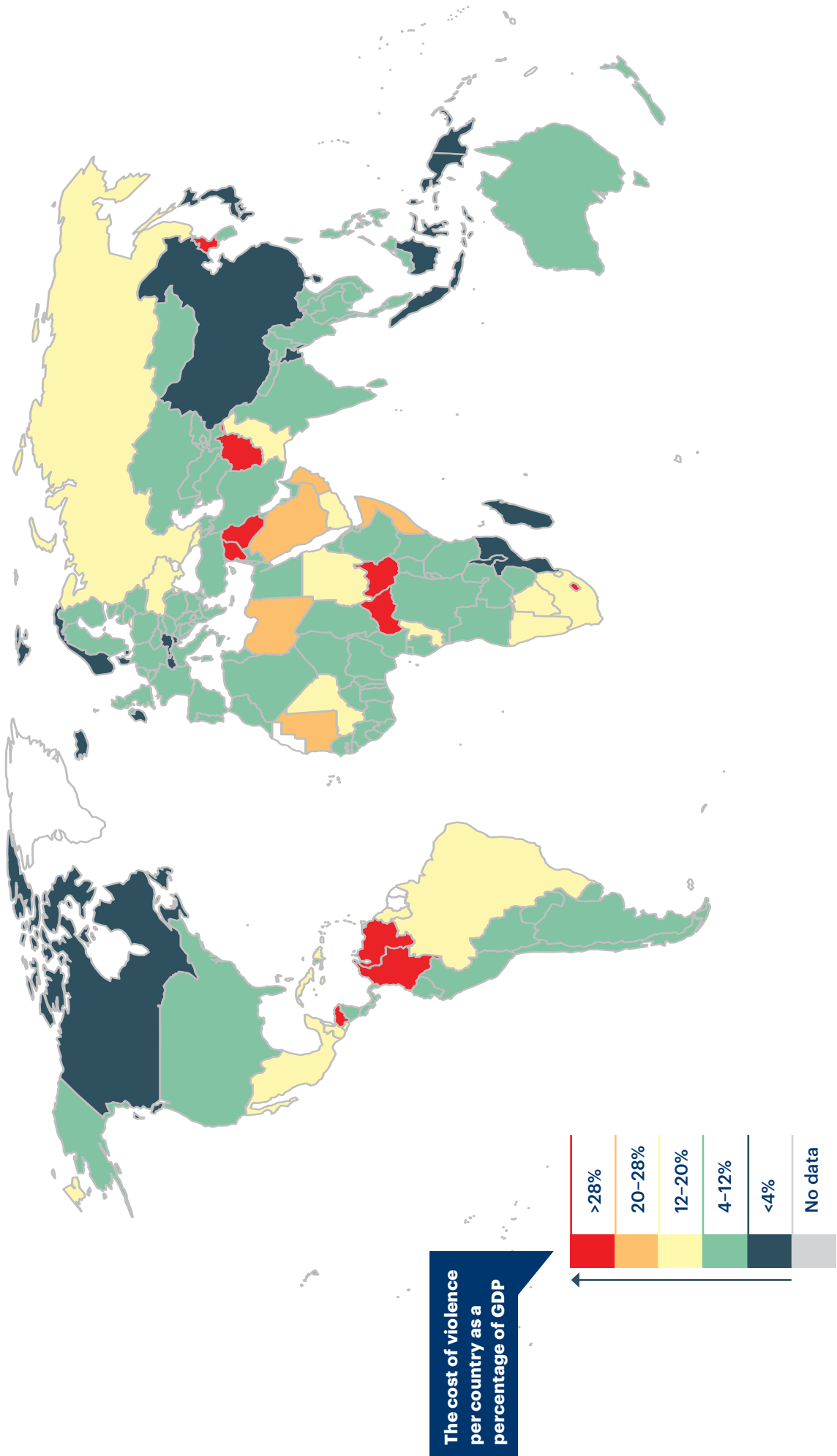


VIOLENCE COSTS OF WORLD GDP **13.3%**

- The total economic impact of violence to the world economy was \$13.6 trillion in 2015, expressed in purchasing power parity (PPP) terms. This is equivalent to 13.3 per cent of world GDP.
- The country average for the economic impact of violence is 10.2 per cent of its GDP. However, there are large differences between countries with the median being 7.2 per cent of GDP.
- The economic impact of violence is equivalent to less than five per cent of GDP in 35 countries. By contrast, there are only 15 countries where the economic impact of violence is more than 20 per cent of GDP.
- Countries with the highest levels of Positive Peace spend between one and two per cent of GDP on internal security. Countries with average levels of Positive Peace tend to spend more, whilst those countries with the lowest levels of Positive Peace generally spend less than one per cent of GDP on internal security.
- The Syrian economy is most affected by violence, at 54.1 per cent of GDP. Iraq, Afghanistan, and Venezuela are the only other countries where the impact of violence is more than 40 per cent of GDP.
- Indonesia has the lowest economic impact of violence as a percentage of GDP, at 1.98 per cent. This is largely due to Indonesia's low levels of military and internal security expenditure. The economic impact of violence is also under 2.5 per cent of GDP in Canada, Iceland and Austria.
- The total global economic impact of violence fell two per cent between 2014 and 2015. This is equivalent to \$246 billion PPP. The decrease was driven by a fall in both military and external security expenditure.
- Internal security expenditure, which encompasses police, judicial and prison system spending among other factors, is the second largest category. It stood at just over three and half trillion dollars PPP in 2015, which is approximately 26 per cent of the global total.
- Military expenditure is the single largest category in the economic impact of violence model, accounting for approximately 45 per cent of the total figure. US military expenditure alone accounts for 12 per cent of the global total. The economic impact of total world military expenditure in 2015 was an estimated \$4.46 trillion PPP. However, it has been decreasing in recent years, with falls every year from 2011 onwards.
- Regionally, the cost of violence has surged in Latin America as well as in the Middle East and North Africa. Of all the regions, only North America, Europe, and Russia and Eurasia had a lower total cost of violence in 2015 than 2007.
- There are vastly different impact profiles between the regions. 78 per cent of the total economic impact of violence in North America stems from military expenditure, compared to only 14 per cent in Central America and the Caribbean. Military and internal security spending is more than 50 per cent of the total economic impact in all but two regions.
- Identifying the optimal level of violence containment spending is complex. No country that spends less than 0.8 per cent of GDP on internal security ranks better than 42 on the Global Peace Index. However, no country that spends more than two per cent of GDP on internal security ranks among the top 20 most peaceful countries. Spending too much or too little on violence containment does not lead to a peaceful society.
- ODA targeted at security sector reform has risen substantially over the last decade, increasing 145 per cent between 2005 and 2014. However, it still comprises less than one per cent of total assistance in 2014.
- Spending on peacebuilding and peacekeeping is small compared to the economic losses caused by conflict, representing respectively 0.9 per cent and 1.1 per cent of the cost of conflict in 2015.

COST OF VIOLENCE, 2015

THE COST OF VIOLENCE BY COUNTRY
AS A PERCENTAGE OF GDP



SECTION 1:

CONCEPTUAL BACKGROUND

In addition to its social and political impact, violence imposes enormous economic costs for individuals, communities and nations.

Interpersonal violence results in medical, policing and judicial costs in the short term, and longer term impacts on productivity and economic growth. Social unrest and collective violence destabilise governments and social institutions and reduce business confidence. Warfare destroys both private and public infrastructure. Not only are private houses and businesses destroyed in war, but electricity, water supply, telecommunications, schools and health facilities are affected as well. For instance, the capital stock damage in Syria from the start of the civil war through to the end of 2014 is estimated at US\$72 billion, or nearly twice the size of the country's 2010 GDP.¹

Moreover, the mere anticipation or expectation of future violence has a deleterious economic impact. Fear of falling victim of violence changes consumption and work related decisions. It leads to increased transportation costs, reduced productivity, and reduced consumption. Fear of victimisation could also lead to adverse mental health effects such as anxiety, anger and reduced mental wellbeing, all of which have productivity implications. In addition, the social cost of the fear of violence manifests itself in reduced trust in society and the erosion of social cohesion. The economic impact of the fear of crime is high in regions with high level of violence due to crime or conflict.

As public finances are necessarily limited, increased public spending on violence needs to be funded by either increases in revenue through debt and higher taxes, or the reallocation of resources from other sectors. Given that it is generally less politically feasible to increase taxes, debt and the reallocation of resources are the more likely options. The financing of violence containment through debt increases the economic impact of violence in the long run, due to the interest on this debt. For instance, Stiglitz and Blimes calculated the cost of interest for a period of 13 years on borrowing to fund the war in Iraq at US\$400

billion to the United States.² Such high levels of spending on violence containment may also lead to reductions in spending on high return activities such as education, health and public infrastructure.

Violence produces spill-over effects both within countries and across national borders. For example, population displacement has adverse impacts on income, consumption, health and well-being of displaced people. Mass displacement also cost the governments of origin, transition and destination countries. Forced migrations have the largest effects on neighbouring countries but can also result in mass movements of migrants across continents. The migration crisis resulting from conflicts in Syria, Iraq and Afghanistan challenged the global humanitarian systems in 2015. Over one million people arrived in Europe and the level of global refugees and displaced people reached an all-time high at 65.3 million people.³

Correspondingly, the UNHCR's budget also reached an all-time high at over US\$7 billion in 2015.

Terrorism is another spill-over effect from conflict and imposes substantial costs due to loss of life, destruction of property and dampening of the economic outlook. The number of deaths from terrorism worldwide has increased over 800 per cent since 2000. The majority of these deaths occurred in conflict-affected countries, however, terrorism incidents and casualties also impacting Europe, North America and Asia-pacific regions. Terrorism also exacts costs on the larger economy by decreasing production, tourism, trade and investment. It also leads to an increase in security spending both domestically and internationally. For instance, the average daily cost of the war on ISIL for US forces alone is US\$11.7 million per day.⁴

THE MACROECONOMIC IMPACT OF VIOLENCE

In addition to higher and inefficient public spending, violence has both short and long term adverse effects on the economy of affected nations. Violence reduces investment in capital intensive sectors, lowering productivity and reducing returns. Also, businesses tend to shift investment to conflict related goods instead of investing in the production of consumption and exportable goods. Similarly, investors shift from high risk, high return long term investment to low risk, low return and short term projects.⁵ Foreign direct investment also declines due to risks associated with violence and the higher cost of crime to businesses. In the cases of high intensity conflict, capital flows out of the country. These adverse effects lead to a vicious circle of economic effects such as lower economic growth, high volatility, uncertainty and high unemployment.

The relationship between conflict and economic performance is not one way, lower economic performance combined with social and political fragmentation in a vulnerable context can contribute to the deterioration of peace. For instance, lack of opportunities due to weak economic growth has the potential to aggravate violence.

Table 1 compares lower and middle income countries on a number of macroeconomic variables grouped by whether they are fragile or non-fragile.⁶ Real GDP growth is lower in fragile countries compared to similar non-fragile countries. Further, fragile countries are more dependent on foreign aid.

“...violence has both short and long term adverse effects on the economy of affected nations.

TABLE 1 FRAGILE AND NON-FRAGILE LOW AND LOWER MIDDLE INCOME COUNTRIES BY KEY MACROECONOMIC VARIABLES

Fragile developing countries have lower GDP growth, higher inflation, and have higher debt.

INDICATOR	2010-2015	
	FRAGILE STATE	NON-FRAGILE STATE
Real GDP growth (%)	4.1	4.5
Real GDP per capita (US\$, average)	1031	2741
Inflation (%)	6.8	6
Current account balance	-7.1	-6.6
Debt (% of GDP)	43.1	45.1
Net ODA (% of GDP)	18.8	4.4
Net ODA per capita	281	111

Source: IMF

Economic growth is slower in fragile countries compared to non-fragile countries with a similar level of national income. Furthermore, economic growth also varies greatly between the two groups. As an example, economic growth in the MENA region has slowed considerably since 2009 following the events of the Arab Spring and the high level of violence resulting from it. Regional GDP per capita growth in MENA grew faster than world economy between 2000 and 2009 and suffered less compared to the global economy from the effects of global financial crisis (GFC). However, the average growth has been lower compared to global growth since 2010. The post Arab spring growth in Egypt also shows a greater fluctuation. Figure 1 shows MENA GDP growth compared to world economic growth from 2000 to 2014.

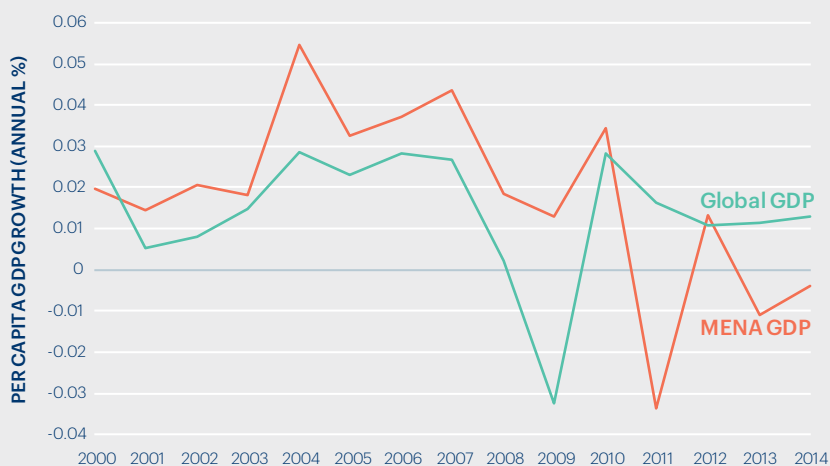
Both positive and negative peace have deteriorated in MENA since 2009. The conflicts in Iraq, Syria, Yemen and Libya and the social unrest resulting from Arab spring are the primary drivers of this deterioration. This decrease in the level of peacefulness has had a severe macroeconomic impact. The economic impact of violence increased by 21 per cent between 2007 and 2014 reaching \$1.7 trillion.

From 2000 to 2009 the MENA economy grew at an average yearly rate of 2.98 per cent. While it is not possible to fully separate out other economic trends like the impact on oil prices during this period, violence and conflict has significantly contributed to a negative economic climate leading to an average regional contraction of 0.2 per cent between 2009 and 2014.

A more ambitious goal in the research focused on measuring the cost of violence, is to determine the optimal level of violence containment spending. The size of such spending will depend on the level of violence in a society. From a purely economic perspective, after a certain point there are decreasing returns on violence containment expenditure. Therefore, finding the optimal level of violence containment spending can aid the allocation of scarce economic resources.

FIGURE 1 MENA GDP PER CAPITA GROWTH COMPARED TO GLOBAL GDP PER CAPITA GROWTH, 2000-2014 ⁷

Increased violence and conflict in the MENA region coincided with a fall in GDP growth beneath the global average from 2011 onwards.



Source: IMF

“ The relationship between conflict and economic performance is not one way, lower economic performance combined with social and political fragmentation in a vulnerable context can contribute to the deterioration of peace.

SECTION 2: RESULTS & TRENDS

The total economic impact of violence was \$13.6 trillion PPP in 2015. This represents a slight decline of two per cent from its 2014 level.

The single largest contributor to the economic impact of violence is global military expenditure, which reached \$6.16 trillion PPP, or 45 per cent of the economic impact of violence in 2015. According to IEP data, global military expenditure decreased slightly in 2015, by one per cent or \$67 billion PPP.⁸ There are large regional disparities in military spending. The North America and MENA regions have the highest levels of military expenditure per capita, while South Asia and sub-Saharan Africa have the lowest levels in per capita terms.

In the case of the US, military-related expenditures such as spending on Veterans Affairs, the maintenance of the nuclear arsenal and interest payments on military-related debt are also included in the accounting. Due to the size of these expenditures, at \$848 billion or \$1.69 trillion

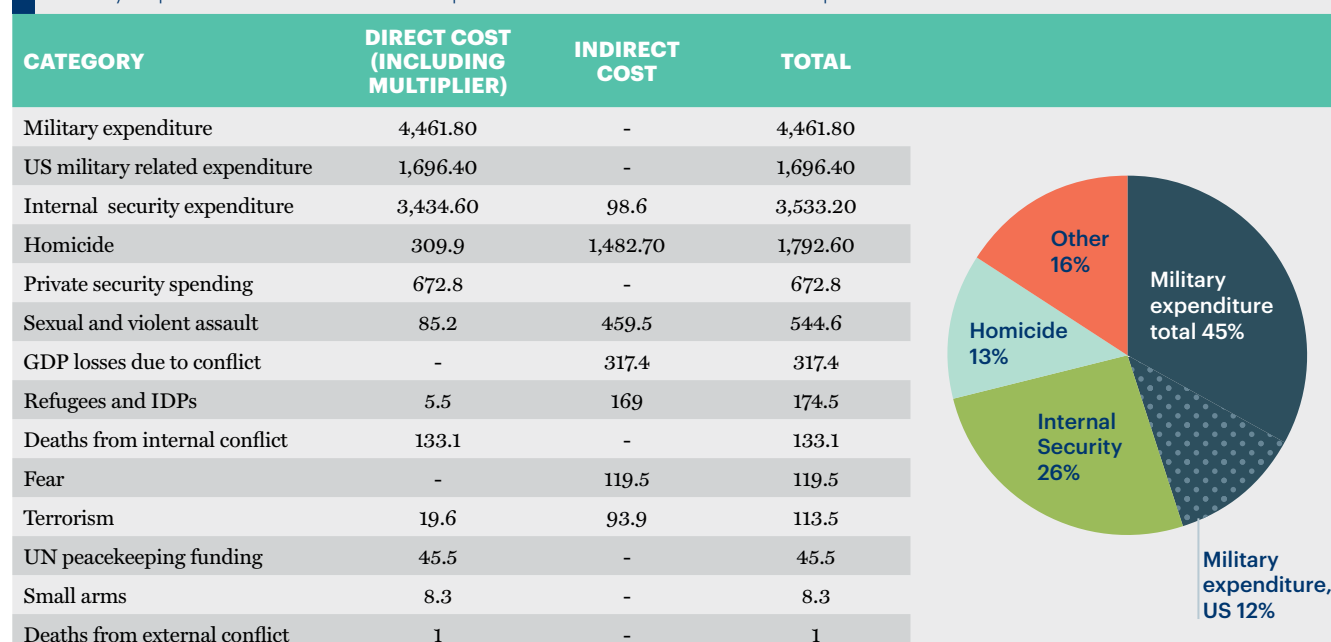
including the multiplier, and the significance of the US military, the US military related expenditure is shown as a separate line item in Figure 2. Data limitations mean that similar estimates cannot be calculated for other countries at this time.

Figure 2 highlights the composition of the total economic impact of violence by category.

The second largest contributor to the economic impact of violence in 2015 is internal security, which accounts for 26 per cent of the total. Internal security expenditure includes spending on the police and prison systems as well as the indirect costs associated with incarceration. The data for internal security spending is obtained from the OECD and the IMF.⁹

FIGURE 2 ECONOMIC IMPACT OF VIOLENCE IN BILLIONS PPP, 2015

Military expenditure accounts for 45 per cent of the total economic impact of violence.



Source: IEP

Homicide, at 13 per cent, is the third largest category. The economic impact of homicide in 2015 was approximately \$1.79 trillion PPP. Direct costs of homicide and violent crime include medical costs, lost earnings and damages to the victim and the perpetrator. Indirect costs include lost productivity of the victim, family and friends due to psychological trauma.

Economic costs arising from intentional homicides are greater than the costs of any other category of crime or conflict. The model accounts for the costs related to the victim and perpetrators of crime. The indirect costs of homicide are extremely high, as victims of homicide can have no positive influence on productivity, unlike other crimes where the victim may be able to contribute to the economy after recovery; therefore their lifetime earnings are a loss to the economy. Reflecting this, the economic impact of violent and sexual assault is three times less than the impact of homicide. In 2015 violent and sexual crimes accounted for \$545 billion PPP or four per cent of the global economic impact of violence.

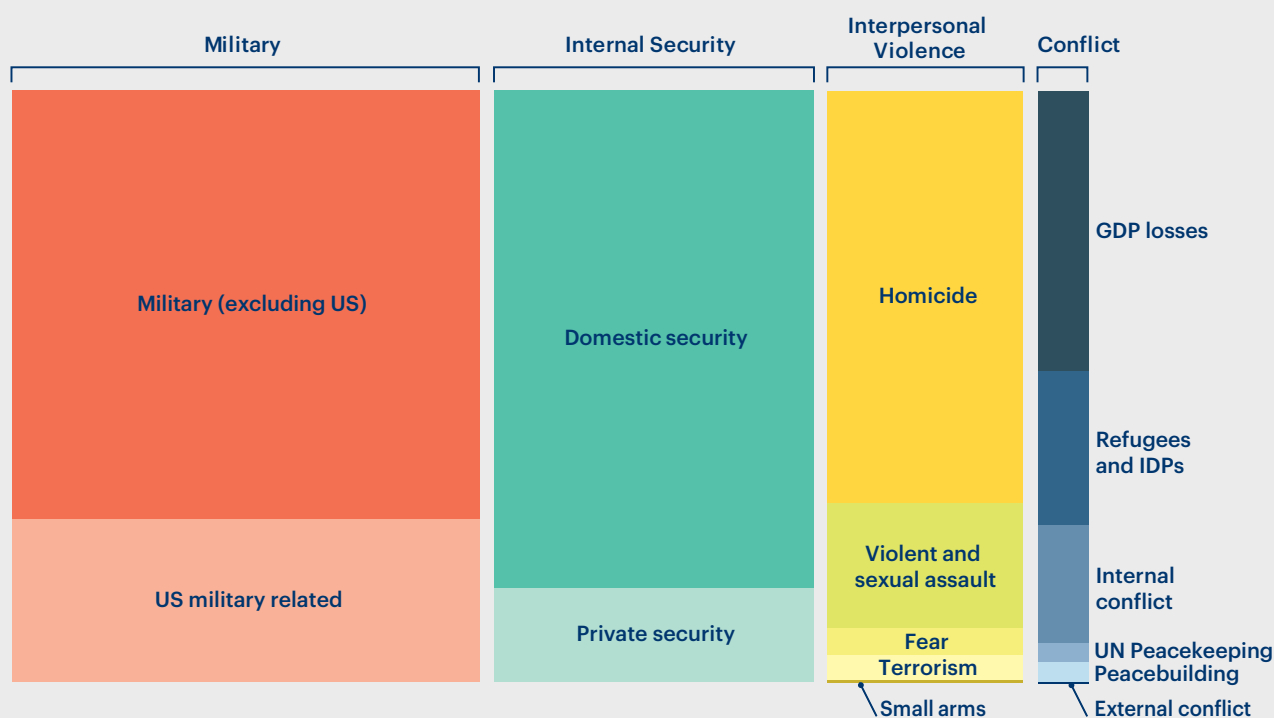
Figure 3 highlights the composition of the total economic impact of violence for 2015, broken out by indicator across four categories: military, internal security, interpersonal violence, and conflict. Government expenditure on both the military and domestic security account for over 70 per cent of the total economic impact of violence.

As would be expected, more peaceful countries have a lower economic impact of violence as a percentage of GDP. However, this relationship is not linear. As the level of peacefulness decreases, costs associated with violence increase exponentially, particularly in situations of protracted conflict, which both increase the cost of violence and shrink the total amount of economic activity. This relationship is shown in figure 4.

The non-linear nature of correlation between the economic impact of violence and peacefulness also shows the economic resilience of developed economies. While the unit cost of most types of violence is higher in developed economies, they do not suffer as many long term consequences of violence as developing countries. Developed and diversified economies can more efficiently reallocate labour and capital from sectors affected by violence to other sectors. By contrast, smaller developing economies lack such diversification and violence cause more economic disruptions. One study on the impact of terrorism on growth in Asian economies showed that economic growth fell by 1.4 per cent for each incident of transnational terrorism per million people in smaller developing economies, with no such growth implication of terrorism in developed economies.¹⁰

FIGURE 3: DETAILED COMPOSITION OF GLOBAL VIOLENCE CONTAINMENT, 2015

The majority of expenditure for violence containment is for the military and internal security.

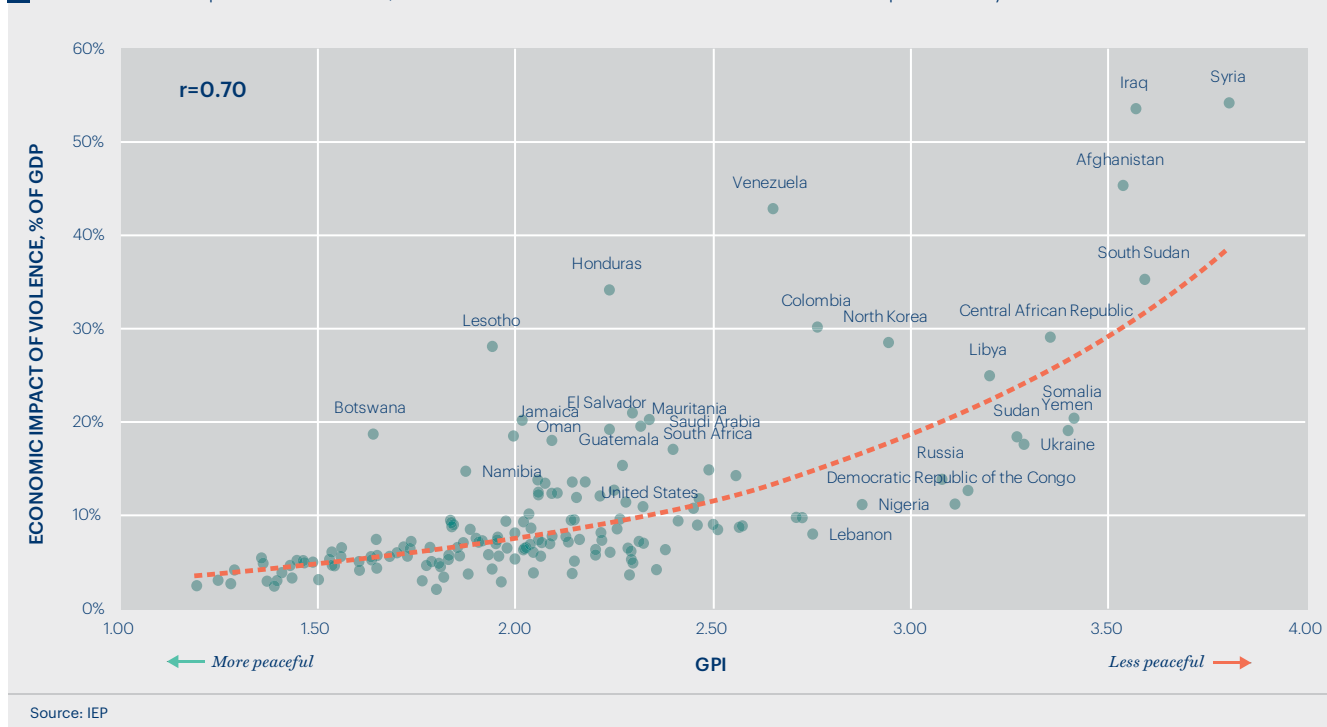


Source: IEP

FIGURE 4

ECONOMIC IMPACT OF VIOLENCE AS A PERCENTAGE OF GDP VS 2015 GLOBAL PEACE INDEX OVERALL SCORE

As the level of peace decreases, the costs associated with violence increase exponentially.



METHODOLOGY AT A GLANCE

IEP’s methodology for accounting for the economic impact of violence and conflict is based on 16 variables grouped into three domains; (1) security services and prevention oriented costs, (2) conflict-related costs and (3) interpersonal violence. The Global Peace Index is used as the initial point of reference for developing the costing model.

The definition underpinning the selection of these categories is all expenditure related to “*containing, preventing and dealing with the consequences of violence*”. IEP’s model includes both direct and indirect costs of the violence, as well as a multiplier. Examples of direct costs include medical costs for victims of violent crime, capital destruction from violent conflict and costs associated with

the security and judicial systems. Indirect costs include lost wages or productivity from crime due to physical and emotional trauma. There is also a measure of the impact of fear on the economy, as people who fear that they may become a victim of violent crime alter their behaviour.¹¹ The multiplier effect calculates the additional economic activity that would have been accrued if the direct costs of violence had been avoided.

An important aspect of the model is the ability to compare the economic impact of violence across countries. Therefore, the methodology uses 2014 constant purchasing power parity (PPP) international dollars, which makes the cost comparable between countries and over time.

TABLE 2 VARIABLES INCLUDED IN THE ECONOMIC IMPACT OF VIOLENCE MODEL, 2015

The cost of violence containment model includes both costs aimed at preventing violence and the consequential costs of violence.

SECURITY SERVICES AND PREVENTION ORIENTED COSTS	ARMED CONFLICT-RELATED COSTS	INTERPERSONAL VIOLENCE
Military expenditure	Direct costs of deaths from internal violent conflict	Homicide
Internal security expenditure	Direct costs of deaths from external violent conflict	Violent assault
Private security	Indirect costs of violent conflict (GDP losses due to conflict)	Sexual assault
UN peacekeeping	Losses from status as refugees and IDPs	Fear of crime
ODA peacebuilding expenditure	Small arms imports	Indirect costs of incarceration
	Terrorism	

The economic impact of violence includes the following components:

- **Direct costs are the cost of violence to the victim, the perpetrator and the government. These include direct expenditure such as the cost of policing.**
- **Indirect costs accrue after the violent event and include indirect economic losses, physical and physiological trauma to the victim as well as the lost productivity.**
- **The multiplier represents the flow-on effects of direct costs, such as additional economic benefits that would come from investment in business development or education instead of containing or dealing with violence. Box 3 in Annex A provides a detailed explanation of the peace multiplier used.**

The model outputs a conservative estimate of the global impact of violence as it only includes variables of violence for which reliable data could be obtained. The following indicators are therefore not counted in the economic impact of violence:

- domestic violence
- household out-of-pocket spending on safety and security
- the cost of crime to business
- spill-over effects from conflict and violence
- self-directed violence
- the cost of intelligence agencies.

TEN COUNTRIES MOST AND LEAST ECONOMICALLY IMPACTED BY VIOLENCE & CONFLICT

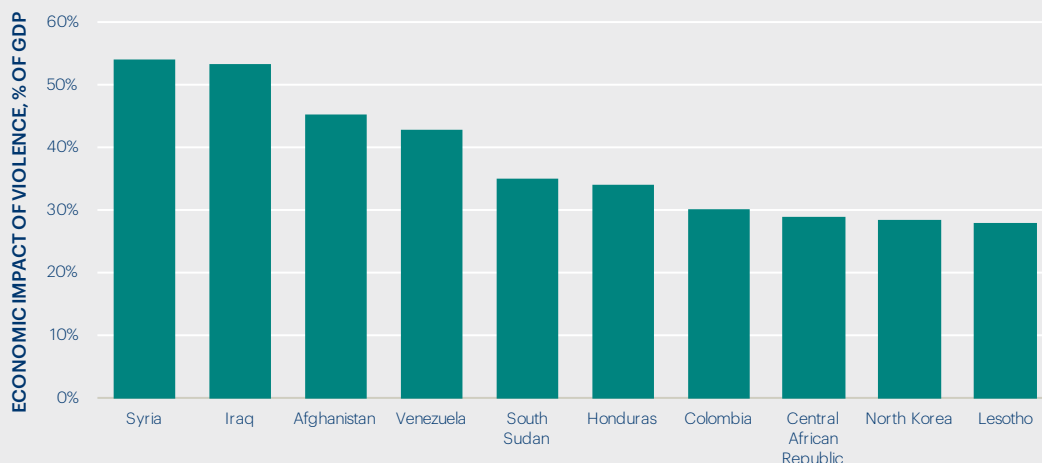
The economic impact of violence for the ten most affected countries is equivalent to more than 25 per cent of their GDP. All of these countries have either high levels of internal conflict or high levels of interpersonal violence. The conflict affected countries mainly suffer from high consequential costs such as deaths and injuries from conflict or terrorism, higher population displacement, and GDP losses. Countries with higher interpersonal violence are affected by higher costs of homicides, violent and sexual assault and higher levels of fear of victimisation.

Figure 5 highlights the ten countries whose economic impact of violence relative to the size of their economy is the highest in the world. Of these ten, five are suffering from armed conflict. They are Syria, Iraq, Afghanistan, South Sudan and the Central African Republic. The other countries have very high levels of interpersonal violence, with the exception of North Korea which is a highly militarised country. Syria has the highest proportion of its GDP related to violence containment expenditure at 54 per cent.

FIGURE 5

TEN COUNTRIES WITH HIGHEST ECONOMIC IMPACT OF VIOLENCE AS PERCENTAGE OF GDP

While five of the ten most impacted countries are experiencing armed conflict, four of the ten are experiencing significant levels of interpersonal violence and organised crime.



Source: IEP

The total cost of violence is three per cent or less of GDP in the ten countries with the lowest impact. These countries have on average lower levels of interpersonal violence than the global average. In addition, military expenditure is significantly smaller in these countries. For example, military expenditure as a percentage of GDP was at 0.2, 0.6 and 0.8 in Iceland, Indonesia and Madagascar respectively, compared to the global average of 2.1 per cent of GDP.¹² Table 3 shows the total cost of violence as a percentage of GDP for the ten least affected countries.

TABLE 3 TEN COUNTRIES WITH LOWEST LEVEL OF VIOLENCE CONTAINMENT COST, AS PERCENTAGE OF GDP

Six of the ten countries with the lowest violence containment costs are also in the ten most peaceful countries.

COUNTRY	COST OF VIOLENCE (% GDP)	COST OF VIOLENCE RANK	GPI RANK
Indonesia	2.0%	163	42
Canada	2.3%	162	8
Iceland	2.4%	161	1
Austria	2.6%	160	3
Mozambique	2.8%	159	68
Switzerland	2.9%	158	7
Madagascar	2.9%	157	38
Japan	2.9%	156	9
Denmark	3.0%	155	2
Norway	3.0%	154	17

Source: IEP

Unsurprisingly, most of the countries with the lowest economic impact of violence are highly peaceful. Six of the ten countries with the lowest economic impact are also ranked in the ten most peaceful countries by the GPI. However, three of the ten are ranked outside the 30 most peaceful countries: Indonesia, Mozambique and Madagascar.

Indonesia is the 42nd most peaceful country (out of the 163 countries ranked by the GPI), but it is the least affected in terms of the economic impact of violence. The country spends relatively less than other countries on military and internal security as percentage of GDP at 0.7 and 0.5 per cent respectively. In addition, the country also has a lower economic impact from homicide, reflecting the low homicide rate of the country. While these trends need to be interpreted carefully due to data limitations and reporting standards for homicide, the economic impact of homicides has decreased six per cent in the last nine years for Indonesia. Mozambique and Madagascar also have low military and internal security spending as well as lower homicide rates than other countries at a similar level of economic development.

GLOBAL TRENDS IN ECONOMIC IMPACT OF VIOLENCE & CONFLICT

Due to higher per capita incomes in the advanced economies, changes in levels of violence in these countries have a greater impact on the global model. Violence containment spending does not always follow the global trends of peacefulness, as there are some categories of expenditure which are more expensive than others. Thus, even though peacefulness decreased last year, the economic impact of violence actually fell slightly.

The total economic impact of violence decreased by approximately two per cent from 2014 to 2015. This was driven by a fall in the number of homicides, and reduced internal security and military spending in the advanced western economies. The economic impact of homicide decreased by \$134 billion PPP or seven per cent from 2014 to 2015. Internal security expenditure, which captures

incarceration and police expenses, had the second largest decrease, declining globally by three per cent or \$118 billion PPP from 2014 to 2015.

Regionally, military expenditure showed some countervailing trends, decreasing the most in Europe followed by South America, North America and sub-Saharan Africa. In contrast, military expenditure increased in Asia-Pacific and South Asia in 2015. The increasing military spending in Asia-Pacific is primarily driven by China's military build-up, which saw the military budget rise by approximately ten per cent in 2015.

US military spending according to the economic model actually increased in terms of its economic impact in spite of the fact the US has made very significant reductions in

total military expenditure of 21 per cent from its peak in 2010.¹³ This is due to the increased value of the US dollar to other international currencies.

Internal security spending fell most significantly in Russia and Kazakhstan, with smaller decreases in Asia and Europe. Russia has seen very significant declines in internal security spending due to cuts to the Interior Ministry's budget by more than 10 per cent in 2015.¹⁴ The cuts are directly related to the country's economic recession.

Table 4 sets out the year-on-year change in the economic impact of violence, showing the categories by improvement in descending order.

The economic impact of deaths from internal conflict increased by 15 per cent or \$17 billion PPP, reflecting the increased intensity of armed conflicts in the MENA region and Afghanistan. In contrast, the economic impact of deaths from external conflict has decreased by 70 per cent from its 2007 level but increased slightly in 2015, by \$300 million PPP. Armed conflict also has economic flow-on effects that spill over into neighbouring countries. During the period from 2012 to 2014, Lebanese real GDP growth was reduced by 2.9 per cent per annum due to the Syrian civil war. The total fiscal cost of the Syrian civil war to Lebanon is over US\$5 billion and includes the costs associated with accommodating high levels of refugees.¹⁵

The indirect cost of conflict comprises the lost productivity resulting from the diversion of public and private capital from productive activities to conflict-related activities. It also captures the destruction of capital due to violent conflict.¹⁶ The GDP losses due to conflict increased by four per cent in 2015 and now stands at \$317 billion PPP.

Although deaths from terrorism have increased by over 800 per cent since 2000, this category only accounts for one per cent of the total economic impact of violence. The model includes deaths and injuries resulting from terrorist incidents, including indirect costs, but does not include property damage, lost tourism revenue or foreign investment. In 2015 the economic impact of terrorism was \$113 billion PPP. European countries, for example, increased counterterrorism expenditure over 16-fold in eight years, from €5.7 million in 2002 to €93.5 million in 2009. This expenditure is only partly counted in the study under the internal security category.¹⁷

Changes in violence containment expenditure over the last decade generally reflect trends in peace. The shift away from armed conflicts between states has meant that fewer countries are impacted by the economic costs of conflict. However, those countries that are currently affected by violent conflict are very heavily impacted. For example, Syria's GDP has shrunk by an estimated 45 per cent as a result of the ongoing civil war.

TABLE 4 CHANGES IN THE ECONOMIC IMPACT OF VIOLENCE FROM 2014 TO 2015

The total economic impact of violence fell from 2014 to 2015, with falls in military expenditure, internal security, and the cost of homicide.

CATEGORY	2014	2015	CHANGE	CHANGE
	ECONOMIC IMPACT (BILLIONS)	ECONOMIC IMPACT (BILLIONS)	(BILLIONS) 2014-2015	(%) 2014-2015
Military expenditure	4,529.10	4,461.80	-67.3	-1%
Internal security expenditure	3,651.00	3,533.20	-117.8	-3%
Homicide	1,926.20	1,792.60	-133.6	-7%
US military related expenditure	1,619.30	1,696.40	77.1	5%
Private security spending	671.8	672.8	1	0%
Sexual and violent assault	547.7	544.6	-3.1	-1%
GDP losses due to conflict	304.8	317.4	12.6	4%
Refugees and IDPs	188.9	174.5	-14.4	-8%
Fear	127.5	119.5	-7.9	-6%
Terrorism	126.8	113.5	-13.3	-10%
Deaths from internal conflict	115.7	133.1	17.4	15%
Peacekeeping and peacebuilding spending	42.8	45.5	2.7	6%
Small arms	8.3	8.3	-	0%
Deaths from external conflict	0.7	1	0.3	44%
Total	13,860.60	13,614.20	-246.4	-2.00%

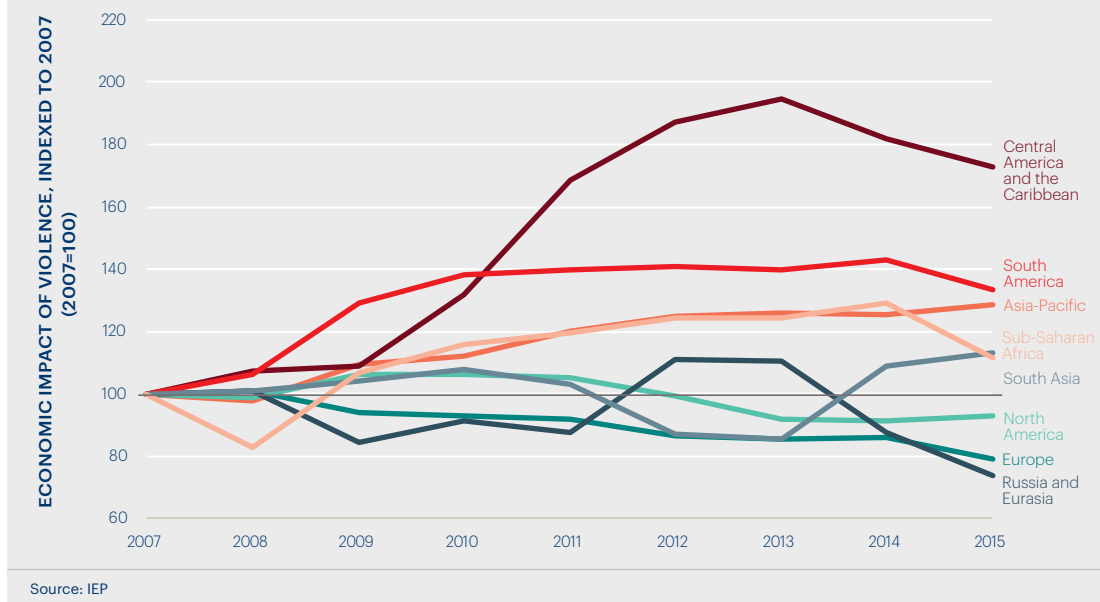
Source: IEP

REGIONAL TRENDS IN ECONOMIC IMPACT OF VIOLENCE & CONFLICT

The economic impact of violence increased the most between 2007 and 2015 in Central America and the Caribbean and the Middle East and North Africa regions, by 65 and 18 per cent respectively. Although North America accounts for 30 per cent of the total global economic impact of violence, this proportion has actually fallen since 2007, owing to decreased military expenditure in the US. Figure 6 shows the trend in the economic impact of violence by region.

FIGURE 6 REGIONAL TRENDS IN THE ECONOMIC IMPACT OF VIOLENCE, 2007 TO 2015

The economic impact of violence has substantially increased in the Central America and the Caribbean and the MENA regions since 2007.



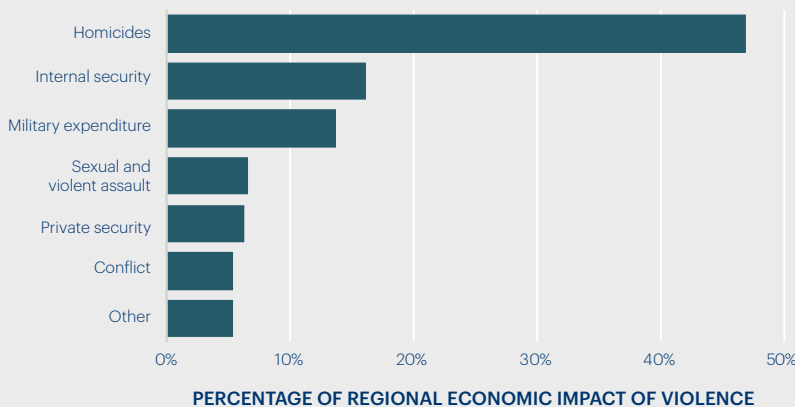
Latin America

South America and the Central America and the Caribbean regions together account for ten per cent of the total global economic impact. The total economic impact of violence in Central America and the Caribbean decreased eight per cent from 2013 to 2015. However, the economic impact of violence is still 75 per cent higher than its 2007 level. South America has seen large increases in the cost of violence since 2007, although the total fell eight per cent in the last year. These two regions have similar trends and cost profiles, so they are grouped together here as Latin America and discussed as a whole.

Homicide accounted for 47 per cent of the total impact of violence in Latin America. The high levels of violence in Latin America are primarily driven by organized crime activities, including drug trafficking organisations. El Salvador, Honduras, Guatemala and Jamaica are all ranked in the worst ten globally in terms of homicide rates. The average per capita cost of homicide is equivalent to \$1,133 PPP in Central America and the Caribbean. Figure 7 shows the composition of the cost of violence in Latin America.

FIGURE 7 THE COMPOSITION OF THE ECONOMIC IMPACT OF VIOLENCE IN LATIN AMERICA

The economic impact of homicide in Latin America is greater than internal security and military spending combined.

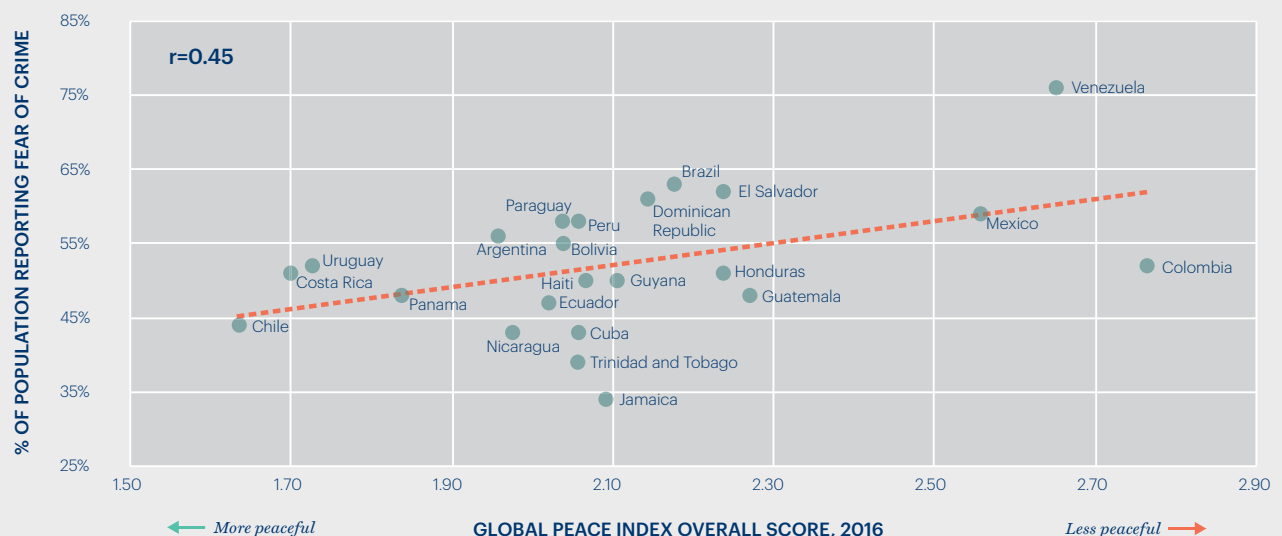


Source: IEP

Higher levels of homicide and violent crime have led to a higher proportion of people fearing that they will be victims of crime. On average, more than half of the people in South America (55 per cent) and approximately half in Central America and the Caribbean (49 per cent) report fearing violence, the highest rate in the world. Figure 8 illustrates that as the level of peacefulness deteriorates in Latin America, fear of victimisation typically increases.

FIGURE 8 LEVEL OF PEACEFULNESS VS FEAR OF VICTIMISATION IN LATIN AMERICA, 2015

Countries with lower levels of peacefulness experience higher levels of fear, especially in South America and Central America and the Caribbean.



Source: Gallup, IEP

Middle East and North Africa

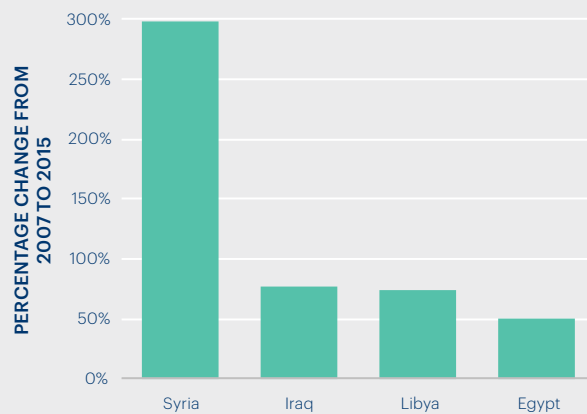
The economic impact of violence in the MENA region increased by 21 per cent between 2007 and 2014, before falling slightly from 2014 to 2015. Ongoing conflict in Syria, high levels of terrorism, and economic contraction caused by conflict and instability have driven this increase in the impact. Military spending accounts for approximately half (49.1 per cent) of the economic impact of violence in the region. Internal security spending and the cost of conflict account for 23 and 14 per cent of the economic impact of violence respectively. Seven countries in the region were involved in active conflicts during 2015.

The economic impact of violence in Syria has increased by 300 per cent since 2007. This increase was driven by the devastation arising from the civil war: deaths from conflict, population displacement and GDP losses. The Syrian war has cost the country approximately \$84 billion PPP when compared to a non-conflict scenario.¹⁸ However, this is a highly conservative estimate, as the lack of accurate economic data on Syria since the start of the war makes accounting for the full cost of the war extremely difficult.

Other countries in the region have also suffered large economic losses due to conflict. Figure 9 shows the changes in the economic impact of violence in Syria, Iraq, Libya, and Egypt between 2007 and 2015. The economic impact of violence increased by 77 and 74 per cent in Iraq and Libya respectively since 2007. In Iraq the economic impact of terrorism increased by 185 per cent between 2009 and 2015 mainly due to the rise of ISIL and the international community's war against the group. Despite decreasing revenue from lower oil prices, Iraq increased its military expenditure by 14 per cent in 2015.

FIGURE 9 PERCENTAGE CHANGE IN THE ECONOMIC IMPACT OF VIOLENCE, 2007 TO 2015

In addition to Syria and Iraq, Libya and Egypt also experienced an increase in the economic impact of violence.



Source: IEP

“ The economic impact of violence in Syria has increased by 300 per cent since 2007. This increase was driven by the devastation arising from the civil war: deaths from conflict, population displacement and GDP losses.

South Asia

The economic impact of violence in South Asia increased five per cent in 2015, mainly rising due to the conflict in Afghanistan and Pakistan with the Taliban and other militant groups. Sri Lanka was the only country in the region to reduce the economic impact of violence, due to its improvement in peacefulness and emergence from the civil war. Figure 10 shows changes in the economic impact of violence between 2007 and 2015 in South Asia.

The economic impact of violence has tripled in Afghanistan over the last nine years. The country has particularly struggled to contain violence since the drawdown of the international troops starting from 2011. The economic impact of deaths from internal conflict doubled in 2015 and has increased 592 per cent since 2007. Similarly, military spending has increased 11 times and internal security spending has increased three fold, predominantly funded by foreign aid from international community which amounted to US\$5.35 billion in 2015.¹⁹

In Nepal, the security-heavy response to protests, involving the military for the first time since the civil war, has led to an almost 50 per cent increase in the economic impact of violence over the period from 2007 to 2015.

Pakistan has experienced a smaller but still notable 11 per cent increase in the economic impact of violence in 2015. The rise in the cost of violence is driven by increased

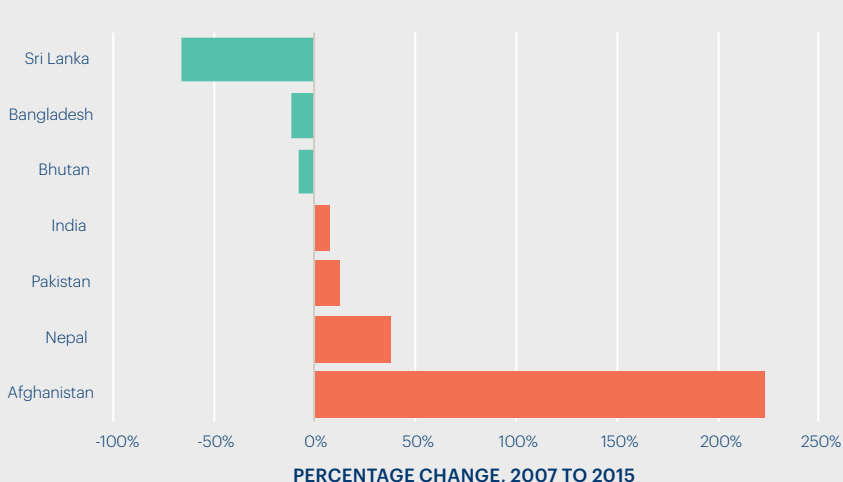
internal battle deaths, a rising number of refugees and IDPs and increased military spending in 2015. Conflict-related casualties are the result of military operations that took place after the peace negotiations between militant groups and the government failed in 2014.

The economic impact of violence has also increased five per cent in India, mainly driven by an increase in military spending. It is also important to note the continued incidents of crossfire on the India-Pakistan border resulting in military and civilian casualties which contribute to negative impacts on the economic model. The cost of external battle deaths increased from \$44 to \$100 million PPP, or an increase of 124 per cent in 2015. The border disputes with Pakistan in the Kashmir region and the exchange of fire are the primary reason for increased external conflict deaths.

In contrast, Sri Lanka has recorded the largest decline in the economic impact of violence in the world since 2007, decreasing by 42 per cent. The economic impact of violence peaked in 2009 during the civil war between the Sri Lankan government and the militant group LTTE. The economic impact of violence has decreased 66 per cent since 2009 resulting in a peace dividend of \$48 billion PPP which is equivalent to 20 per cent of the country's 2015 GDP.

FIGURE 10 PERCENTAGE CHANGE IN THE ECONOMIC IMPACT OF VIOLENCE IN SOUTH ASIA, 2007 TO 2015

Sri Lanka and Bangladesh achieved a peace dividend of \$17 billion and \$4 billion PPP respectively.

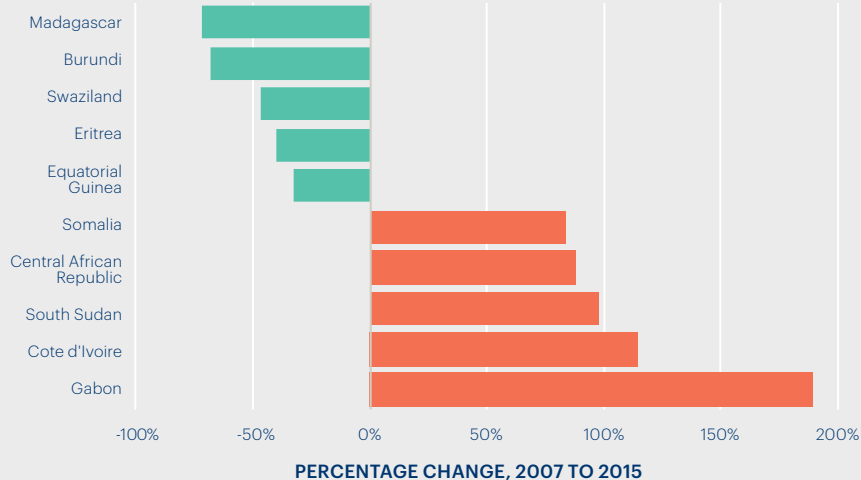


Source: IEP

Sub-Saharan Africa

FIGURE 11 PERCENTAGE CHANGE IN THE ECONOMIC IMPACT OF VIOLENCE IN SUB-SAHARAN AFRICA, 2007 TO 2015

A peace dividend of approximately \$9 billion has been generated by improving peacefulness and decreasing the economic impact of violence in the top five countries.



Source: IEP

The economic impact of violence in sub-Saharan Africa was \$483 billion PPP, which represents a decrease of 12 per cent from its 2014 level. However, trends in the economic impact of violence in the region are highly volatile due to the fast growth of the economies as well as the sporadic conflicts in the region.

As a consequence, the economic impact of violence has fluctuated significantly over the past decade, increasing nine per cent between 2012 and 2014 before falling. Sub-Saharan Africa has the largest fluctuations in the economic impact of violence, varying significantly from country to country. As such, changes in the regional economic impact of violence masks individual country trends. Figure 11 shows the five largest increases and the five largest decreases in the region between 2007 and 2015. The breakdown of regional costs shows that homicide accounts for 40 per cent, at \$193 billion PPP. The two countries most affected by high homicide rates are Lesotho and Swaziland, where the economic impact of homicide is equivalent to 22 and 9 per cent of GDP, respectively.

The losses from conflict were 14 per cent of GDP in 2015 and were relatively steady between 2014 and 2015, decreasing by only one per cent. The civil wars in South Sudan and Central African Republic and the insurgencies in the region resulted in high economic impacts associated with conflict and terrorism. The economic impact of terrorism in the region increased by 12 per cent reaching \$22 billion PPP.

Internal security spending in sub-Saharan Africa is among the lowest globally and accounts for 22 per cent of the region's violence containment costs. However, the regional average masks greater variation at the country level. For instance, average annual internal security spending per person is US\$44 in sub-Saharan Africa but the country with the lowest per capita spending spends 145 times less compared to the highest spending country. South Africa spends \$678 PPP per person while Central African Republic spends only \$4.7 per capita.

This highlights the need for greater internal security spending especially in places with weak law enforcement and lack of resources to adequately fund security.

Asia-Pacific

The economic impact of violence in the Asia-Pacific region increased by five per cent from 2014 to 2015. Figure 12 shows countries for which the economic impact increased and decreased the most between 2007 and 2015.

China's high economic growth has enabled continuously increasing investment in the military and internal security. Both military and internal security expenditure in China increased by 10 per cent in 2015. This drove the regional increase as China is the largest economy in the region and accounts for 56 per cent of the total regional economic impact of violence. To put this into context, the second largest economy and major power in the region, Japan, accounts for a much smaller proportion of the regional economic impact of violence at 10 per cent of the total.

In contrast to China's rising investments in the military, the economic impact of violence fell in several countries in the Asia-Pacific region over the last nine years. The cumulative peace dividend for the top five improving countries from 2007 to 2015 was \$170 billion PPP. The economic impact of violence decreased the most in Timor-Leste and Indonesia, by approximately 70 and 50 per cent respectively. The main drivers of the decrease in the economic impact in Timor-Leste were declines in military and internal security expenditure and a fall in the homicide rate. In Indonesia, the largest improvement was in homicide and the indirect cost of incarceration.

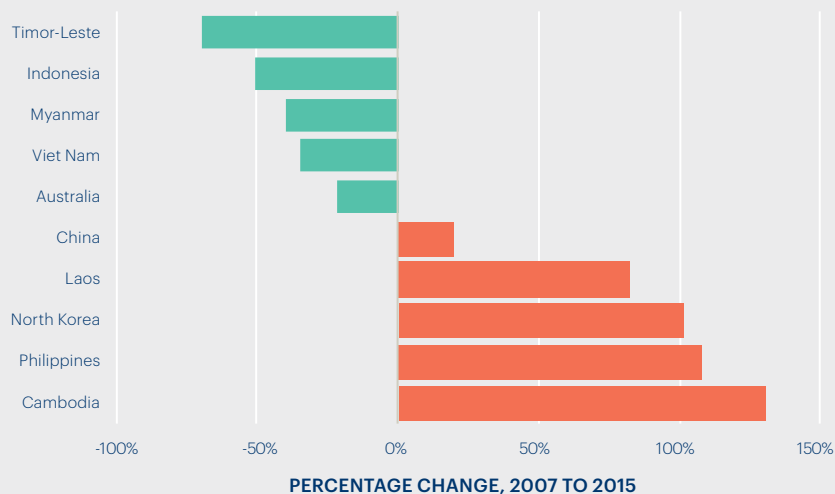
The biggest increase in the economic impact of violence was in Cambodia, which saw a 130 per cent rise due to increasing military and internal security spending. It has also increased 107 per cent in the Philippines driven by increasing military spending, internal securing spending and rise in the economic impact of terrorism.

In spite of an increase in the economic impact of homicide and violent crime, the overall economic impact of violence declined in Myanmar. The cost of violence declined as tensions eased between different ethnic groups from 2011 levels. The largest improvement came from a decline in the GDP losses due to conflict, as the number of conflict-related deaths fell. Meanwhile, the economic impact of homicide and violent crime has also dropped in Australia in the last nine years, resulting in a slight overall improvement.

When looking at the breakdown by category, military and internal security expenditure are the two largest categories, at 40 and 38 per cent of the regional total in 2015. This highlights that the region has relatively fewer expenditures on the consequential costs of violence and conflict compared to other regions.

FIGURE 12 PERCENTAGE CHANGE IN THE ECONOMIC IMPACT OF VIOLENCE IN ASIA-PACIFIC, 2007 TO 2015

The cumulative peace dividend by the five countries with the largest improvements in the region was \$170 billion PPP between 2007 and 2015.



Source: IEP

North America

The North American region includes only two countries; Canada and the United States. The United States accounts for 99 per cent of the regional economic impact of violence and its economic impact of violence increased two per cent from 2014 to 2015 due to rises in terrorism, increased internal security expenditure and the increased need for UNHCR and UN peacebuilding funding to address rises in violence and conflict around the world.

The increase in the economic impact of violence and conflict to the United States' economy over the past two years contrasts with the longer term trend which shows a six per cent decline since 2007.

The overall regional trend is significantly affected by US military expenditure. The United States today accounts for 38 per cent of global military expenditure even though it decreased 2.4 per cent in 2015 and has declined by 21 per cent from its peak in 2010. This decrease is due in part to the drawdown of forces in Iraq and Afghanistan as well as

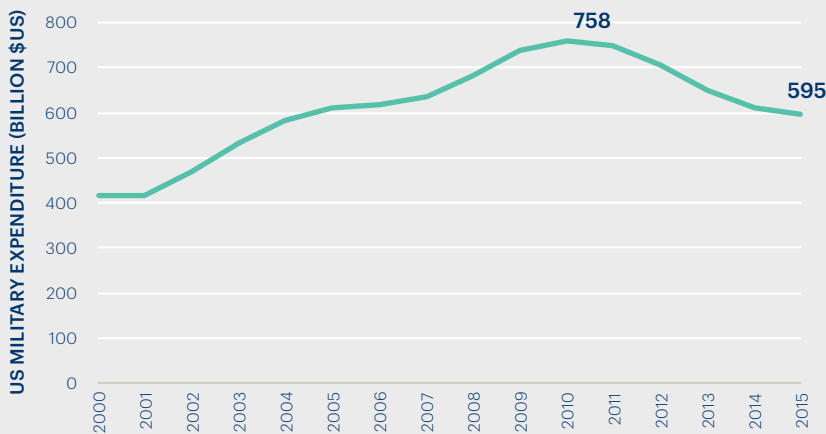
the Budget Control Act 2011. Figure 13 shows US military expenditure between 2000 and 2015.

In addition to recurrent yearly military expenditures, the United States also incurs sizable costs from the legacy of past conflicts. The primary examples of these are the large costs associated with the Department of Veterans Affairs and interest payments on military related debt. When looking at all of these expenditures as well as the maintenance costs of the nuclear arsenal, the full US military related expenditure reached US\$848 billion in 2015.

During the last nine years the cost of deaths due to external conflict in the United States has dropped 22 fold, due to the drawdown of forces from Iraq and Afghanistan. Similarly, the level of violent crime and homicide in the United States has also fallen since 2007 by 27 per cent. The economic impact of violence in Canada declined seven per cent during 2015 and 12 per cent since 2007 level.

FIGURE 13 TRENDS IN US MILITARY EXPENDITURE, 2000-2015

Military expenditure has decreased 21 per cent since 2010 as the military withdrew from Iraq and Afghanistan.



Source: IEP

“ The increase in the economic impact of violence and conflict to the United States' economy over the past two years contrasts with the longer term trend which shows a six per cent decline since 2007.

Europe

The economic impact of violence in Europe decreased by eight per cent in 2015. The main trend in the data for the region is related to terrorism which saw a very significant increase albeit off a very low base. Terrorist attacks in Turkey, France, Belgium and other parts of Europe, resulted in an increase of 1700 per cent in the economic impact of terrorism in Europe. But the European cost of terrorism is still only six per cent of the cost in MENA and 34 per cent of South Asia.

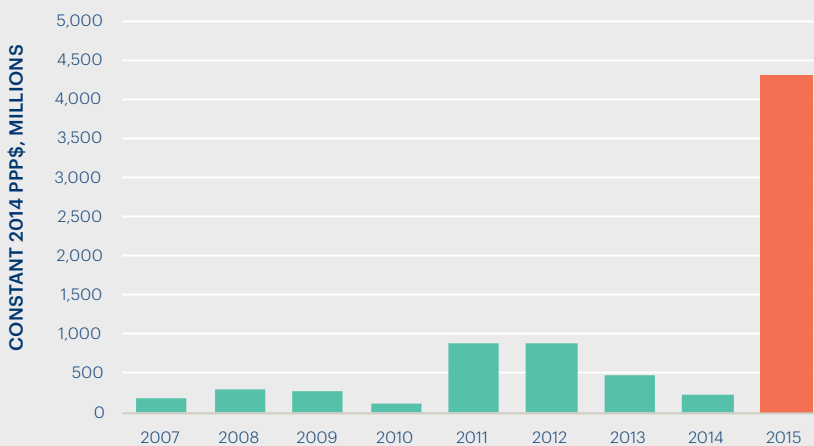
While the terrorist attacks in Europe have produced negative economic effects via reduced consumption and tourism in the aftermath of the attacks, these effects are usually short to medium term due to the robust and more resilient nature of European economies.

In terms of the larger category of military spending, many European countries have reversed their austerity-driven policies and have recently increased military expenditures. This spending far outweighs the increased economic losses due to terrorism. In 2015 Central European countries increased spending by 13 per cent. There were also increases in countries bordering Russia and Ukraine, with Estonia, Latvia, Lithuania, Poland, Romania and Slovakia all increasing military expenditure in 2015. In terms of spending on conventional internal security for policing, on average, Europe is the third highest spender on a per capita basis, after North America and MENA.

Figure 14 shows the trend in economic impact violence due to terrorism in Europe.

FIGURE 14 THE ECONOMIC IMPACT OF DEATHS AND INJURIES FROM TERRORISM IN EUROPE, 2007-2015

The terrorist attacks in France, Turkey and Belgium significantly increased the economic impact of terrorism in Europe.



Source: IEP

“ Terrorist attacks in Turkey, France, Belgium and other parts of Europe, resulted in an increase of 1700 per cent in the economic impact of terrorism in Europe.

Russia and Eurasia

Russia accounts for 75 per cent of the regional cost of violence and conflict reflecting its size and role as the major power in the region. As a consequence, the Russian trend often drives the broader regional trend and narrative. When looking at the region as a whole, the economic impact of violence and conflict decreased during 2015 but within this overall trend were two countervailing trends. There was an increase in conflict related costs reflecting increased conflict, but a decrease in the costs related to internal peace and security.

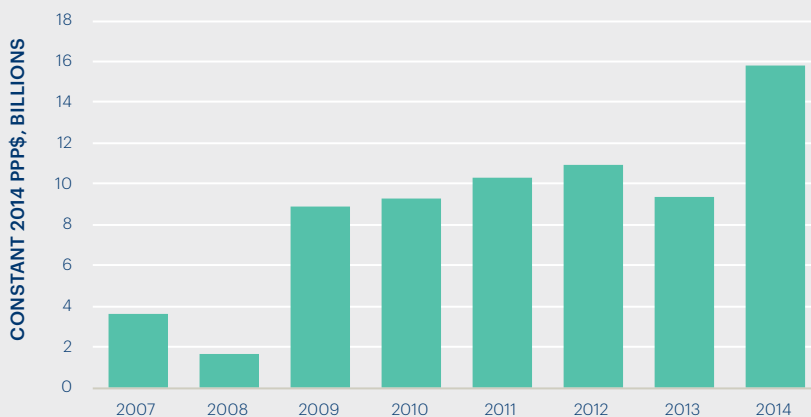
The primary reason for the increase in conflict-related costs was GDP losses due to conflict and the number of refugees and IDPs because of the ongoing civil unrest and conflict in Ukraine. The economic impact of conflict there alone increased 46 per cent in 2015. Likewise, the economic impact of displaced people increased 292 per cent between 2007 and 2015. Figure 15 shows the refugees and IDPs trend for the Russia and Eurasia region showing losses reaching \$16 billion in the latest year.

In terms of improvements, the primary positive shift was driven by the notable decrease in Russian internal security spending by 10 per cent from its 2014 level. This was also associated with a decrease in homicides, violent crime, terrorism and private security spending throughout the region. The economic impact of homicide dropped by eight per cent and violent crimes by six per cent showing interpersonal violence is improving in spite of the broader negative trend in conflict in the region.

“ Russia accounts for 75 per cent of the regional cost of violence and conflict reflecting its size and role as the major power in the region.

FIGURE 15 THE ECONOMIC IMPACT OF POPULATION DISPLACEMENT IN RUSSIA AND EURASIA, 2007 – 2014

The largest increase in the economic impact of violence in the Russia & Eurasia region accrued due to an increase in the number of refugees and IDPs.

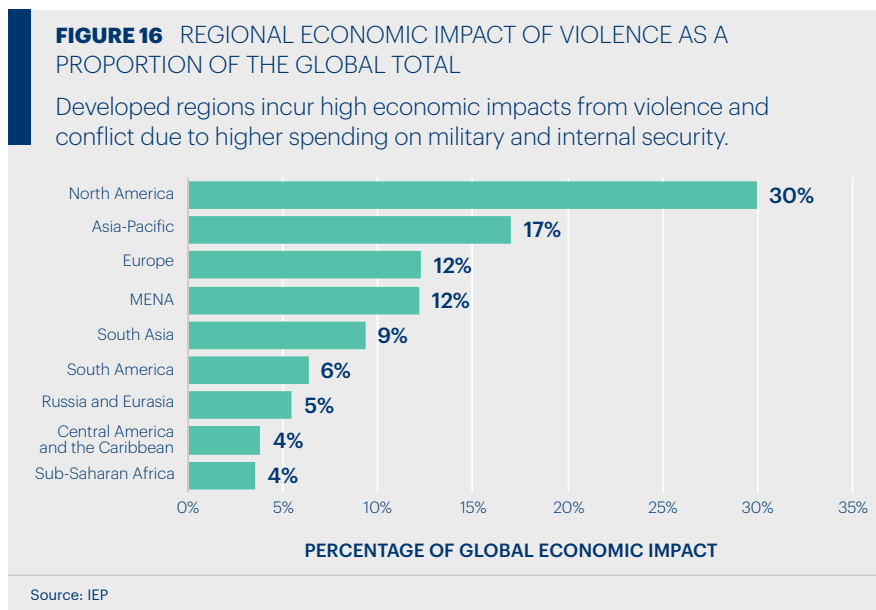


Source: IEP

REGIONAL COMPOSITION OF ECONOMIC IMPACT OF VIOLENCE

The economic impact of violence by type of expenditure is not evenly distributed across regions, with large variations in both the magnitude of expenditure and its composition. North America accounts for 30 per cent of the global economic impact of violence, which is almost entirely attributed to the United States. The next largest regional share comes from Asia-Pacific, which was dominated by China, contributing 17 per cent. This is notably higher than Europe and MENA which both account for 12 per cent of the total.

Figure 16 illustrates regional costs as proportion of the global economic impact of violence.

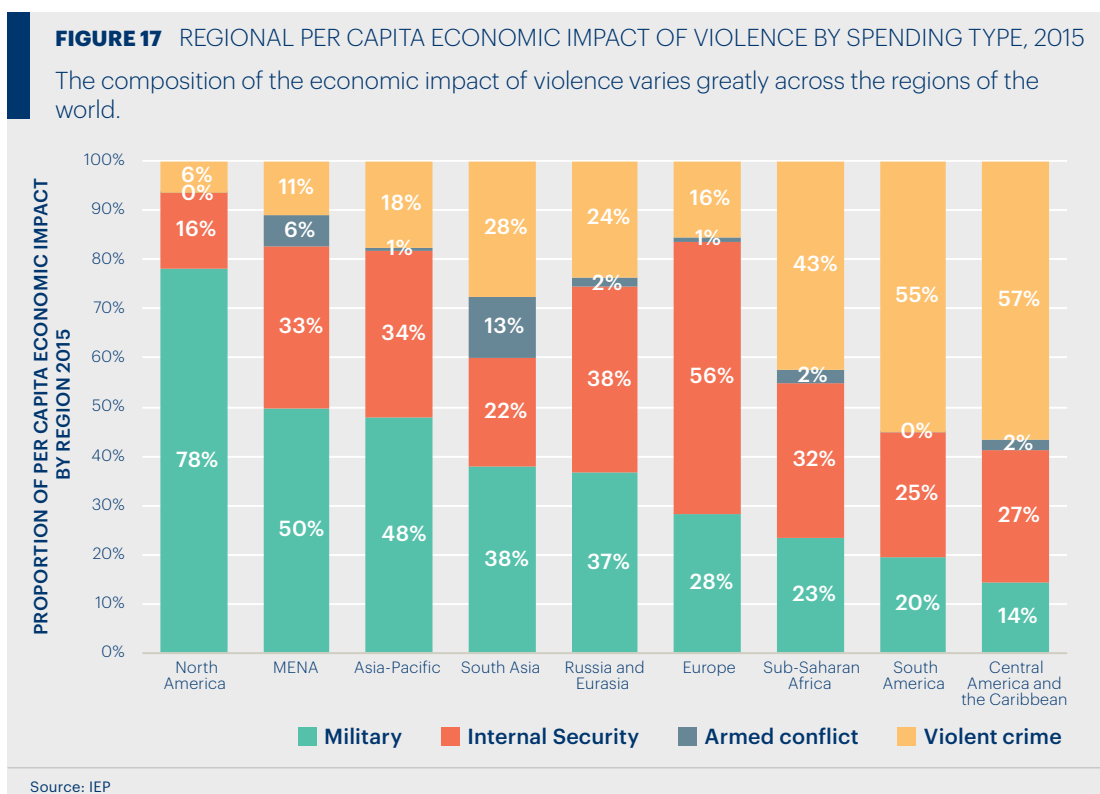


In terms of the composition of costs, there are large differences between regions. Most of the costs in North America, Asia-Pacific and Europe are due to military and internal security expenditure whereas sub-Saharan Africa and Central America and the Caribbean suffer more economically from the burden of interpersonal violence.

The highest proportion of military expenditure was in North America, where it accounts for 78 per cent of the total economic impact. Europe spends the most

proportionally on internal and private security, accounting for 56 per cent of the economic impact of violence. In contrast, Central America and the Caribbean has the highest proportion of expenditure related to interpersonal violence, at 57 per cent. The economic impact of homicide in Venezuela and Honduras is the equivalent of 36 and 30 per cent of GDP respectively.

Losses from armed conflict represent the smallest component of the four categories shown in figure 17.



TRENDS IN THE CATEGORIES OF VIOLENCE CONTAINMENT

Homicide

Homicide accounts for 13 per cent of the global economic impact of violence and has increased eight per cent between 2007 and 2014. However, it decreased seven per cent in the latest year, mainly decreasing in advanced economies. Regionally, South America, Central America and the Caribbean and sub-Saharan Africa are the most affected by economic impact of homicide. Seven out of the ten countries with the highest economic impact of homicide as a percentage of their GDP are located in Central America and the Caribbean or South America.

Venezuela, Honduras, and El Salvador incur the highest cost of homicide as proportion of their GDP reflecting the very significant burden that interpersonal violence and organised crime has on the economic health of these countries.

TABLE 5 TEN COUNTRIES WITH HIGHEST COST OF HOMICIDE AS PERCENTAGE OF GDP

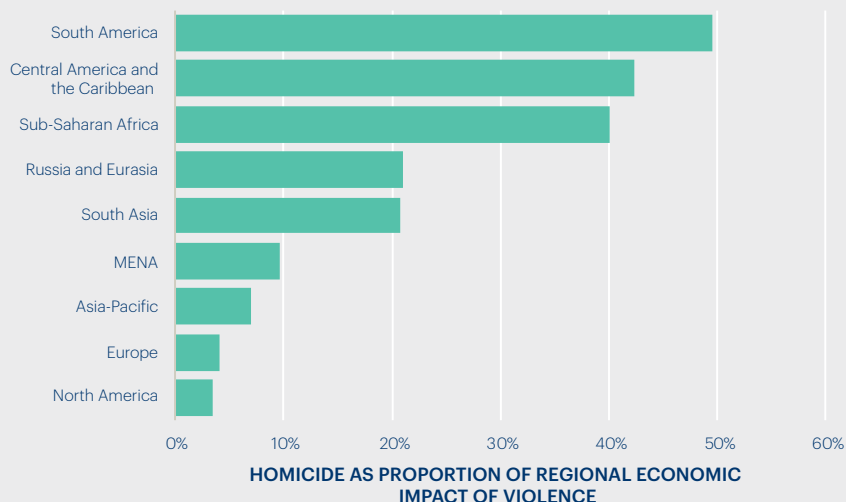
Seven out of the ten countries in the world with the highest homicide rates in the world are located in Latin America.

COUNTRY	TOTAL COST OF HOMICIDE AS % OF GDP
Venezuela	36%
Honduras	30%
Lesotho	22%
El Salvador	14%
Colombia	14%
Jamaica	14%
South Africa	13%
Guatemala	12%
Dominican Republic	9%
Swaziland	9%

Source: IEP

FIGURE 18 HOMICIDE AS A PROPORTION OF THE REGIONAL ECONOMIC IMPACT OF VIOLENCE

The economic impact of homicide is the highest in South America, followed by Central America and the Caribbean.



Source: IEP

Violent Crime

Violent crime includes violent assault and sexual crimes. The global economic impact of violent and sexual assault amounted to \$544 billion PPP in 2015. Sexual assault alone produced an economic impact of \$125 billion PPP. Violent crimes have short and long term consequences to the victim and society. Violence imposes tangible costs, such as the cost of medical and mental health services, police investigation and the justice system. In addition, the psychological trauma and fear of victimization in society impose intangible costs. For example, individuals who have been the victim of rape or sexual assault are six times more likely to report having attempted suicide.²⁰

Large disparities are detected between crime victimisation survey data and law enforcement data on violent assault and sexual crimes due to the high underreporting and under-recording rates of violence. IEP uses data from the United Nations Office on Drugs and Crime (UNODC), which reports police recorded violence at the national level. IEP estimates of the cost of violent assault is highly conservative and underestimates the true economic implication of these crimes, given the underreporting rate and the limited categories of crimes included in the UNODC data.

The large adverse social and economic consequences of interpersonal violence on individuals and societies highlights the importance of prevention activities. Prevention programs on behaviour change, promoting a positive attitude and negative view of violence, correcting misperceptions and engaging the larger society, such as through bystander behaviour change programs, has produced positive results.²¹ These programs are mostly implemented in high income contexts and have proven effective in reducing interpersonal violence and sexual violence in particular.

Fear of insecurity & crime

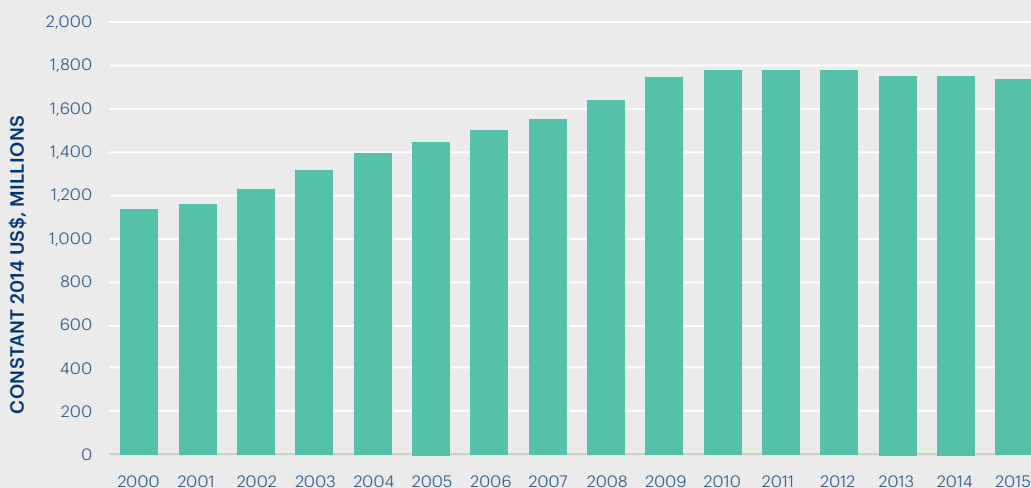
Fear of victimisation due to high levels of violent crime or conflict has social and economic implications. Consumption and investment behaviours are affected by fear of victimisation. In addition, lower levels of economic activity and property value are observed in neighbourhoods with high fear of crime. Similarly, fear of victimisation also decreases social cohesion by reducing the level of trust in society.

Fear of victimisation produces direct and indirect costs. Direct costs include additional personal security measures, productivity losses and health losses. The indirect costs include a changed view of society (loss of trust) and behaviour changes. The economic impact associated with the indirect costs of fear of crime and insecurity was \$120 billion PPP in 2015.

A higher proportion of people report fear of victimisation in South America (50 per cent) and Central America and the Caribbean (49 per cent), followed by sub-Saharan Africa (40 per cent). These regions also suffer from high levels of homicide and violent crimes. The level of fear is high in countries with lower levels of peacefulness. Among other things, previous victimisation, the level of crime in the area and exposure to crime news via the media are significant correlates of the level of fear.²² As would be expected, the proportion of people reporting fear increases as the level of peacefulness deteriorates in a country.

FIGURE 19 TREND IN MILITARY EXPENDITURE, 2000-2015

Total global military expenditure has been falling since 2011.



Source: SIPRI

Military expenditure

Military expenditure slightly decreased by one percent in 2015. Military expenditure is the largest category and accounts for 45 per cent of the global economic impact of violence. The United States accounts for 38 per cent of global military expenditure and has decreased its military spending by 21 per cent since 2011. China the second largest military spender and accounts for 10 per cent of the global total. Figure 19 illustrates military expenditure from SIPRI showing the global trend's stagnation since 2009, reflecting the aftermath of austerity induced cuts to military spending following the global financial crisis.

For the United States, in addition to military expenditure recorded by the Department of Defence, IEP also counts of military related spending on the Veterans Affairs, maintenance of nuclear arsenal and interest repayment on military related debt. While other countries have these expenditures they tend to be denominated in the regular defence budget or are very small. The US case is unique in that these additional expenditures are very large due to a longer history of prior military engagements.

Regionally, military expenditure increased in Asia-Pacific and South Asia and decreased in other regions. The increase in the Asia-Pacific region is mainly driven by China, where military expenditure increased by 10 per cent in 2015. China's rapid and robust growth is reflected in increased military spending in the country. Similarly, in South Asia, India increased its military spending slightly. Also, Afghanistan is undergoing a military build-up and is building its military forces. The country also received US\$5.35 billion in military aid from the international community.²³

Internal security expenditure

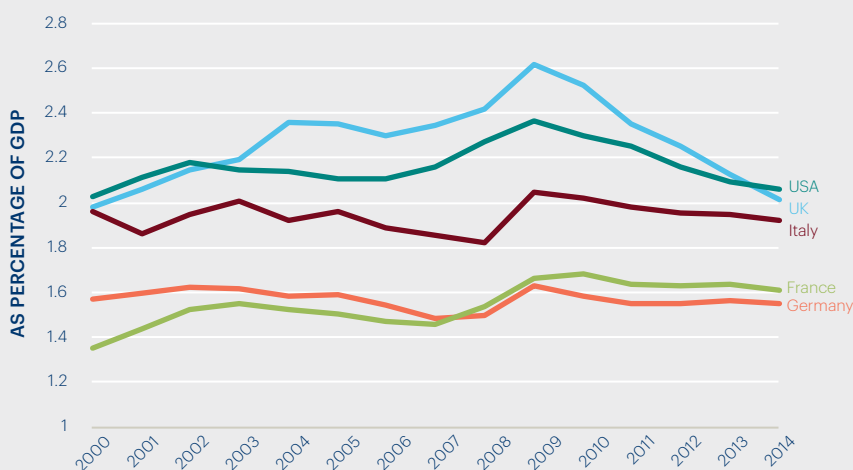
Global internal security spending slightly declined by 3.6 per cent in 2015. However, it is still five per cent higher than in 2007. The category includes cost of police and prison services as well as the indirect cost of incarceration.

Figure 20 illustrates internal security spending for the US and selected European countries. Internal security spending has decreased primarily in advanced industrialised economies. However, China increased internal security spending by ten per cent which countered the effects from decreases in Europe and North America. Russia also decreased its internal security spending by ten per cent. The decline in Russian spending is due to the economic recession in the country and its involvement in conflicts in Ukraine and Syria.

At a regional level, MENA, North America and Europe are the highest spending regions in per capita terms. High income non-OECD countries spend the highest per capita amounts on internal security followed by OECD countries. As expected, lower income countries spend 50 times less per capita compared to high income countries and 145 times less compared to high income non-OECD countries. Interestingly, when examined by regime type, full democracies spend 40 per cent more than authoritarian regimes and two times more than flawed democracies on a per capita basis.

FIGURE 20 INTERNAL SECURITY EXPENDITURE AS PERCENTAGE OF GDP, 2000-2014

Internal security expenditure has fallen or remained stable in most developed economies.



Source: OECD, IEP

Peacebuilding & peacekeeping expenditure

Peacebuilding and peacekeeping expenditure has approximately doubled during last nine years. Peacekeeping expenditure includes the contribution by countries to UN peacekeeping missions which has nearly tripled from 2007 to 2015. Peacekeeping expenditure include spending on military and civilian personnel and the operational cost of the UN peacekeeping missions.

Peacebuilding expenditure is composed of categories of ODA that aim to sustain peace in the longer term. The expenditures include supporting the provision of basic safety and security and post-conflict institutional building for peace. This may involve disarmament, demobilisation and reintegration (DDR) programs, removal of land mines and civilian peacebuilding and mediation activities. Box 1 lists the different categories of peacebuilding expenditure considered.

Peacekeeping expenditure includes all the expenditures to maintain the 16 UN peacekeeping missions currently active. It includes all payments to military and civilian personnel, operational costs to maintain peace and security, facilitate political processes, protect civilians, assist in the disarmament, demobilization and reintegration of former combatants, support the organization of elections, protect and promote human rights and assist in restoring the rule of law. These expenditures are borne by the international community and recorded each year by the UN Department of Peacekeeping Operations.

BOX 1 CATEGORIES OF PEACEBUILDING EXPENDITURE

The following 17 categories are based on three peacebuilding priority areas identified as peacebuilding expenditure by the 2009 report of the UN Secretary-General on 'Peacebuilding in the immediate aftermath of conflict'.

Priority area 1

BASIC SAFETY AND SECURITY

- Security system management and reform
- Reintegration and small arms and light weapons (SALW) control
- Removal of land mines and explosive remnants of war
- Child soldiers (prevention and demobilisation)
- Participation in international peacekeeping operations

Priority area 2

INCLUSIVE POLITICAL PROCESSES

- Legal and judicial development
- Legislatures and political parties
- Anti-corruption organisations and institutions
- Democratic participation and civil society
- Media and free flow of information
- Human rights
- Women's equality organisations and institutions
- Civilian peacebuilding, conflict prevention and resolution

Priority area 3

CORE GOVERNMENT FUNCTIONS

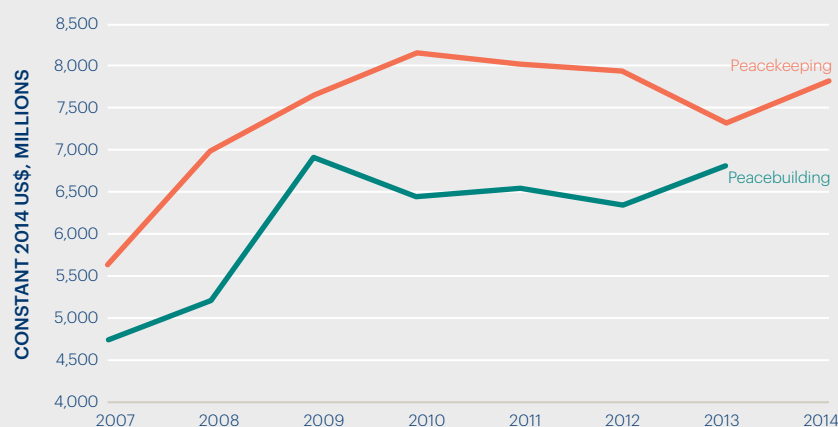
- Public sector policy and administrative management
- Public finance management
- Decentralisation and support to subnational government

OTHER

- Specific peace-related expenditures.

FIGURE 21 PEACEBUILDING AND PEACEKEEPING EXPENDITURE, 2007-2015

Both peacebuilding and peacekeeping expenditures have followed a similar trajectory since 2007.



Source: UN, IEP

Conflict

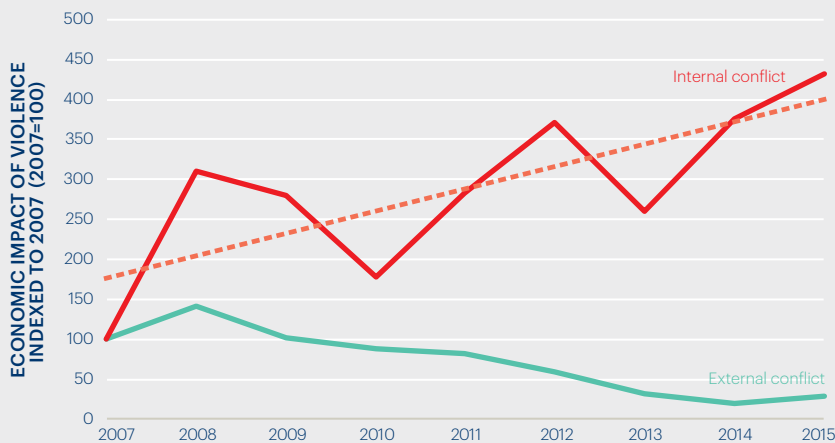
Conflict has a substantial economic impact, through the loss of life, the displacement of civilian population, associated types of violence such as terrorism and GDP losses. The economic impact of conflict has increased over the past nine years by approximately 150 per cent and now stands at \$739 billion. The increase has been driven by the conflicts in MENA, sub-Saharan Africa and South Asia.

While the total cost of conflict has been rising, the costs from purely external conflicts have fallen. The cost of deaths from external conflict did increase by 44 per cent in 2015, however, it is still 70 per cent lower than it was in 2007. The involvement of the international community in the war against ISIL in Iraq and Syria has contributed to greater costs in the external conflict category in the last year but the drawdown of international troops from Iraq and Afghanistan has more than counter-balanced it.

Conversely, the cost arising due to battle deaths from internal conflict has increased more than 400 per cent from its 2007 levels. Figure 22 shows this diverging trend in costs associated with internal and external conflict.

FIGURE 22 ECONOMIC IMPACT OF VIOLENCE FROM INTERNAL AND EXTERNAL ARMED CONFLICTS

Costs associated with internal violent conflicts have increased substantially, but the cost of external conflicts has fallen by more than half.



Source: IEP

“ The economic impact of conflict has increased over the past nine years by approximately 150 per cent and now stands at \$739 billion. The increase has been driven by the conflicts in MENA, sub-Saharan Africa and South Asia.

Refugees and IDPs

As a result of the continuing conflict in Syria and ongoing conflicts elsewhere, the number of refugees and IDPs reached an unprecedented 65.3 million people in 2015, with an estimated economic impact of \$175 billion PPP. This is more than a sixfold increase since 2007. IEP's model accounts for lost production, consumption and investment in the country of origin for displaced persons or refugees. It also includes spending by UNHCR.

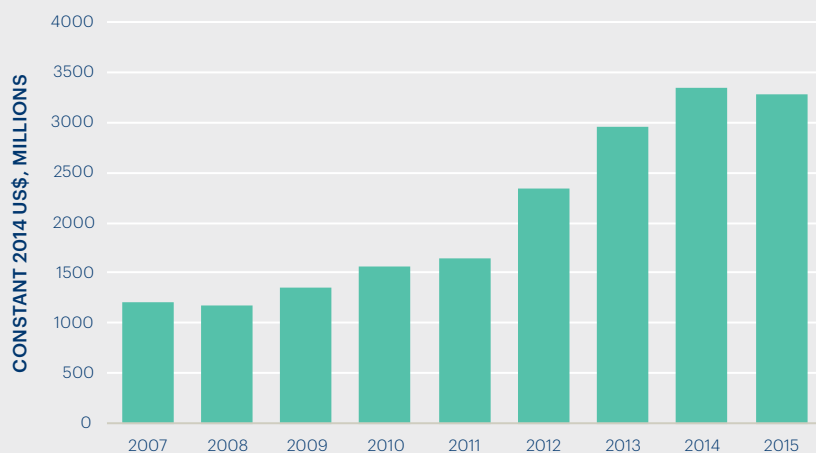
However, the model does not account for cost of refugees to the international community and destination countries. For instance, since the start of the Syrian crisis Turkey has spent US\$ 7 billion and the European commission has pledged €3 billion for 2016 and 2017 to help Turkey in responding to the refugee inflows from Syria and Iraq which are not counted in the model.²⁴ Therefore, the actual total cost of the refugee crisis is likely to be much higher.

Figure 23 shows the global trend in the direct economic costs for the UNHCR agency alone which has dealt with a significant majority of the direct humanitarian assistance for refugees and IDPs. Its direct costs have gone through a nearly three-fold increase since 2008, from less than US\$1.25 billion to almost US\$3.5 billion in 2014 and 2015.

The vast majority of the world's displaced people originate from the Middle East, Africa and South Asia. Syria, Afghanistan and Somalia account for 54 per cent of all refugees and displaced people in the world.²⁵ Moreover, the largest burden of population displacement falls on neighbouring countries, which host the largest proportion of refugees. For instance, Turkey, Lebanon and Pakistan are hosting 2.5, 1.1 and 1.6 million Syrian, Iraqi and Afghan refugees respectively.²⁶

FIGURE 23 TREND IN UNHCR BUDGET 2007 - 2015

The refugee crisis has led to a large increase in the direct costs of assisting refugees and displaced people.



Source: UNHCR

“ Syria, Afghanistan and Somalia account for 54 per cent of all refugees and displaced people in the world.

Terrorism

The economic impact of terrorism was \$113 billion PPP in 2015 and has increased 60 per cent since 2007. The cost of terrorism includes the cost of deaths and injuries due to terrorism incidents. IEP's model excludes property destruction and the larger macroeconomic impacts of terrorism. Therefore, the estimates of terrorism as calculated by this report are likely to be conservative. Figure 24 shows the trend in the economic impact of terrorism mirroring broader trends in terrorist activity and violence captured in IEP's *Global Terrorism Index* report.

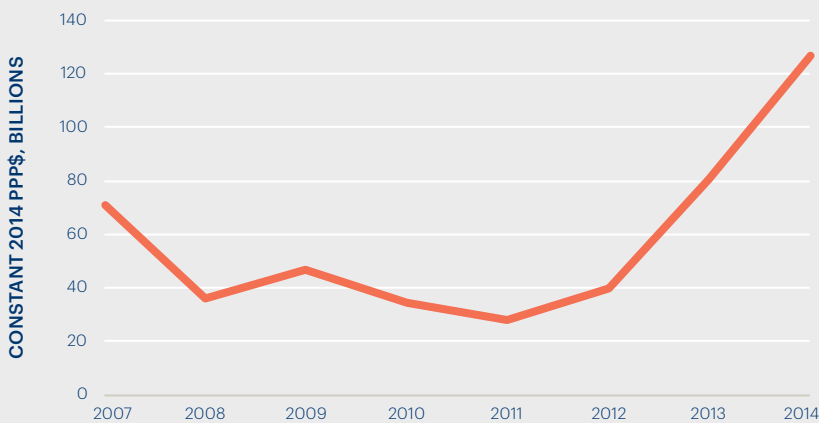
MENA is the worst affected region followed by sub-Saharan Africa and South Asia. Iraq, Nigeria, Pakistan and Afghanistan are the four worst affected countries with Syria, Egypt, Libya and Saudi Arabia also among

the ten most affected countries. However, the greatest year on year increase in the economic impact of terrorism occurred in Europe, with the total cost increasing over 1,600 per cent in a single year. North America also experienced a significant increase in the economic impact of terrorism from 2014 to 2015, as costs rose by over 100 per cent.

Outside of the direct cost of terrorism in terms of property damage and lives lost, the transnational nature of terrorist activity today and the ability of terrorist groups to undertake attacks beyond their areas of influence poses additional costs to the international community. For instance, the Pentagon estimates the daily average cost of US involvement in the war against ISIL is US\$11.7 million per day.²⁷

FIGURE 24 TREND IN THE ECONOMIC IMPACT OF TERRORISM, 2007 - 2014

The total economic impact of terrorism has increased by 60 per cent since 2007.



Source: IEP

“ MENA is the worst affected region followed by sub-Saharan Africa and South Asia. Iraq, Nigeria, Pakistan and Afghanistan are the four worst affected countries with Syria, Egypt, Libya and Saudi Arabia also among the ten most affected countries.

SECTION 3:

COMPARISONS OF CONTAINMENT & PREVENTION COSTS TO LOSSES FROM VIOLENCE

The economic impact of violence can be broadly divided into two categories: expenditure on services that aim to contain and prevent violence and costs that arise as the consequence of violence.

Prevention costs include spending on police and the criminal justice system and are primarily intended to prevent, contain and reduce violence in a society. Military costs are also included in the analysis as it is mostly intended to protect against external threats. By contrast, violence containment spending that accrues to a society because of crimes and conflict are categorised as costs from violence. This includes lost wages and productivity, lost economic activity, medical costs and psychological harm.

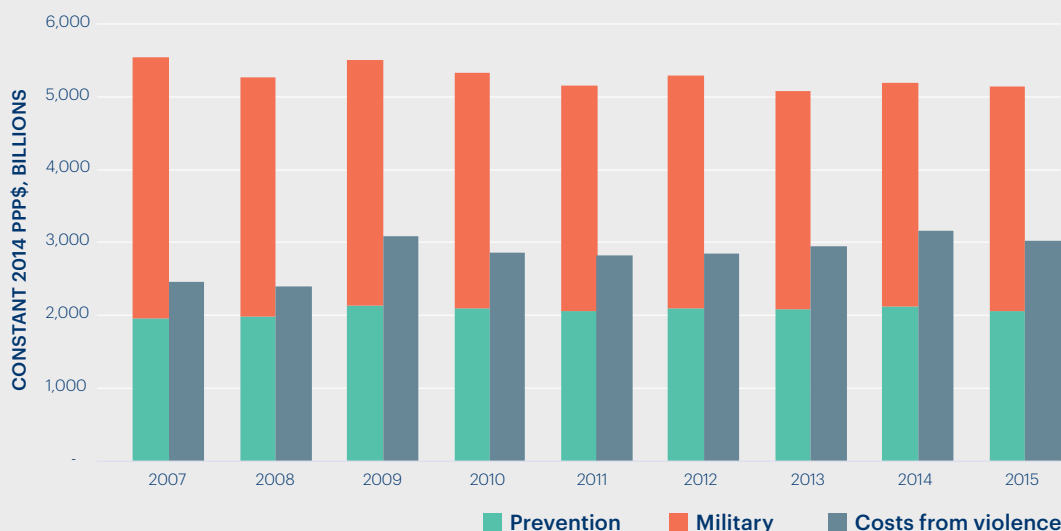
In a perfectly peaceful world, there would be no costs from violence and no need for prevention and military spending. However, in the absence of Positive Peace,

reduced spending on violence prevention will likely result in higher costs from violence and vice versa. Looking at the trade-off between prevention spending and costs from violence, can shed some light on the optimal level of containment spending and whether spending beyond this point continues to improve peacefulness, or in fact leads to a decrease in peacefulness.

Prevention costs are 68 per cent of costs arising from violence. However, when military and containment costs are aggregated they are higher than the costs resulting from violence. Figure 25 shows trends in prevention and military spending and costs from violence from 2007 to 2015.

FIGURE 25 TREND IN VIOLENCE PREVENTION AND MILITARY SPENDING AND THE COST FROM VIOLENCE

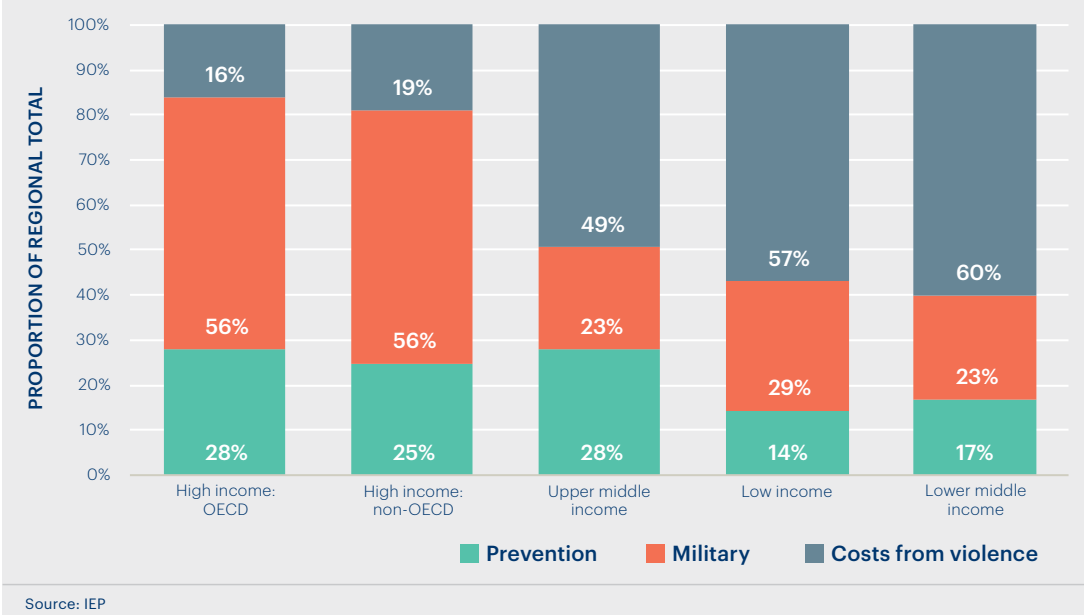
The costs as a consequence of violence have increased since 2007 while prevention expenditure has remained the same and military expenditure has fallen.



Source: IEP

FIGURE 26 PREVENTION AND COSTS FROM VIOLENCE AS PERCENTAGE OF TOTAL COSTS BY INCOME GROUP, 2015

There is a stark trend, low and lower middle income countries' costs are much more biased toward the consequential costs from violence.



Costs arising from violence have increased 23 per cent since 2007. The increase in the cost from violence has been driven by increased conflicts in the MENA region as well as in the Ukraine. Conversely, containment costs which includes military and prevention spending have decreased seven per cent since 2007, with reductions in military expenditure in North America and Europe being the main factor driving the decrease.

The composition of cost varies greatly across countries based on their income group, as shown in figure 26. Higher income countries spend far more on prevention and military compared to low and middle income countries. In contrast, the costs from violence are proportionately much higher in low and lower middle income countries. The analysis shows low and lower middle income countries lack the capabilities to allocate sufficient resources to the security sector.

“ Looking at the trade-off between prevention spending and costs from violence, can shed some light on the optimal level of containment spending and whether spending beyond this point continues to improve peacefulness, or in fact leads to a decrease in peacefulness.

OPTIMAL SECURITY SPENDING

Internal security expenditure is a key part of violence containment spending and is primarily focused on upholding and maintaining internal peace. Expanding on the comparison of violence prevention spending and costs from violence, this section provides analysis on law enforcement, internal peace and security sector reform (SSR).²⁸

Internal security is the second highest category after the military at 26 per cent of the total violence containment spending, as calculated by IEP cost of violence model. The model includes data on public order and safety spending as percentage of GDP sourced from the IMF and OECD. In addition, IEP estimates the cost of police officers using adjusted unit costs in purchasing power parity terms and police officer numbers from UNODC survey of crime trend and operations of criminal justice systems. The data allows comparative analysis on a per capita basis for the global model.

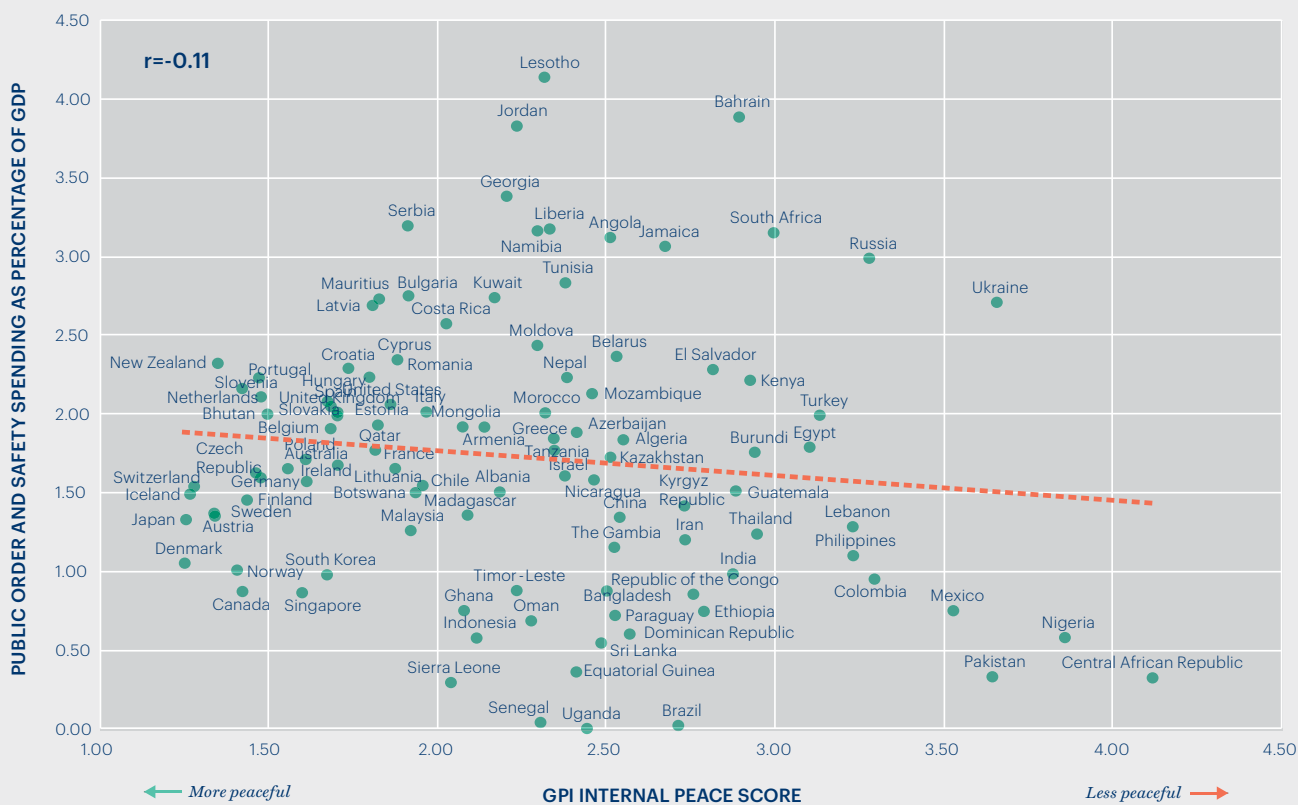
Figure 27 shows that there is a no correlation between internal security spending and internal peace. Further analysis of the data show a complex link between internal security spending and peacefulness.

Countries in the lower left quadrant are mostly developed OECD countries. This group of countries have higher levels of internal peace, while internal security spending ranges between one and two percentage of GDP. Bearing in mind that the level of GDP is higher and GDP growth is more stable for this group of countries, it enables consistent and sufficient allocation of resources to law enforcement.

In contrast, countries in the lower right quadrant are fragile conflict-affected countries. This group of countries spend a smaller proportion of their GDP, and thus law enforcement is likely underfunded. Therefore, improvements in the level of internal peace seems to be achievable, at least in some of these countries, by investing appropriate levels of resources in internal security and

FIGURE 27 INTERNAL SECURITY SPENDING AND INTERNAL PEACE

Most of the countries that spend less than 0.8 per cent on internal security have low and medium peace scores on the GPI, ranking well outside the most peaceful countries.



Source: IEP

judiciary systems. For instance, countries such as Mexico and Nigeria where impunity is more commonplace, will probably gain from investing in law enforcement. However, the level of peacefulness in these countries is also dependent on many other country specific factors.

Countries in the two top quadrants spend considerably more as proportion of GDP on internal security. Apart from Russia and Ukraine, most of these countries have high or medium levels of internal peace. Again, higher levels of spending is not the only factor in achieving better levels of peacefulness. Countries such as Lesotho, South Africa, Nicaragua and Namibia have higher levels of spending as a response mechanism to the higher level of violent crime. These countries are among the countries with the highest homicide rates in the world.

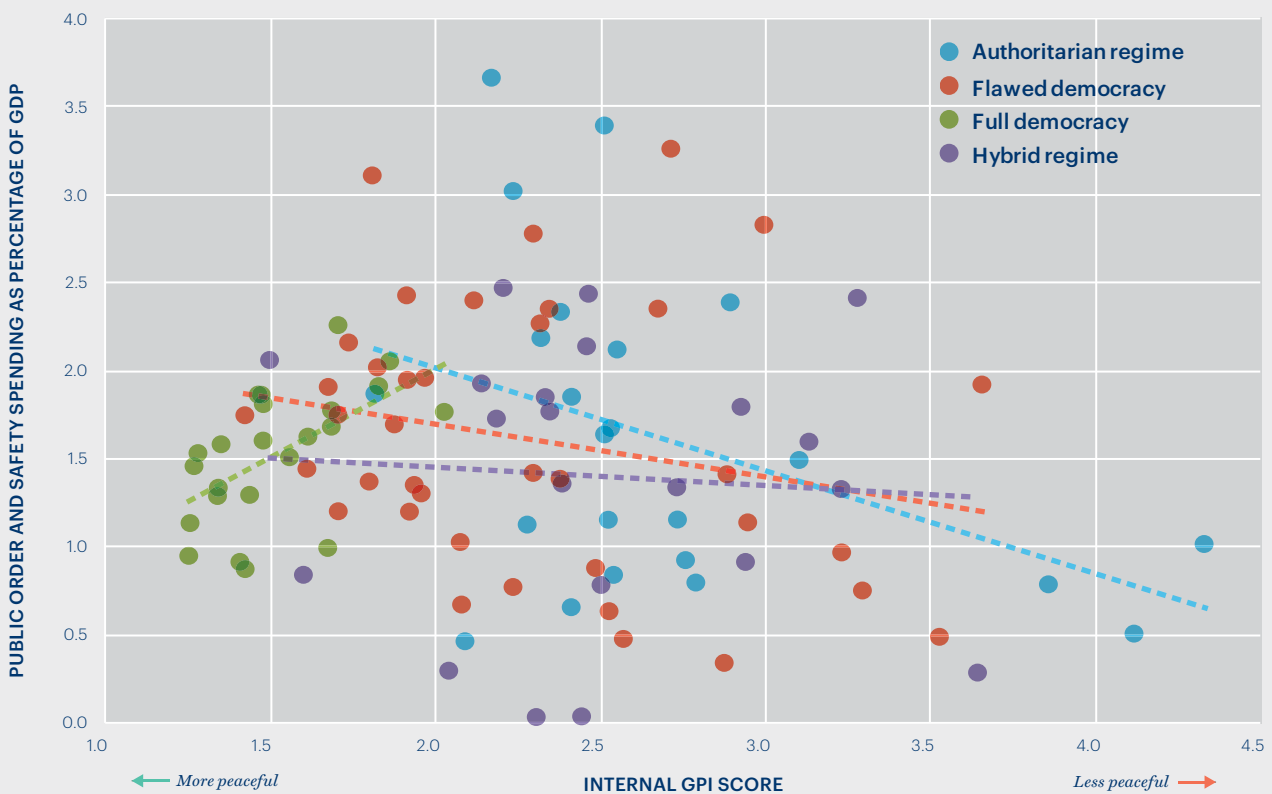
Only four high peace countries spend less than one per cent of GDP on law enforcement. In contrast, a large number of countries with medium and low levels of peace

spend less than one per cent of GDP on internal security and the judicial system. As such, countries that invest insufficient resources in law enforcement institutions will in theory gain from increased resource allocation to security.

Most interestingly, it is in full democracies where greater expenditures on public order and internal security spending do not seem to ‘purchase’ greater peacefulness. Conversely, authoritarian regimes appear to achieve higher levels of peacefulness by purchasing more internal security and public violence containment.

FIGURE 28 INTERNAL SECURITY SPENDING AS PERCENTAGE OF GDP AND INTERNAL PEACE BY REGIME TYPE

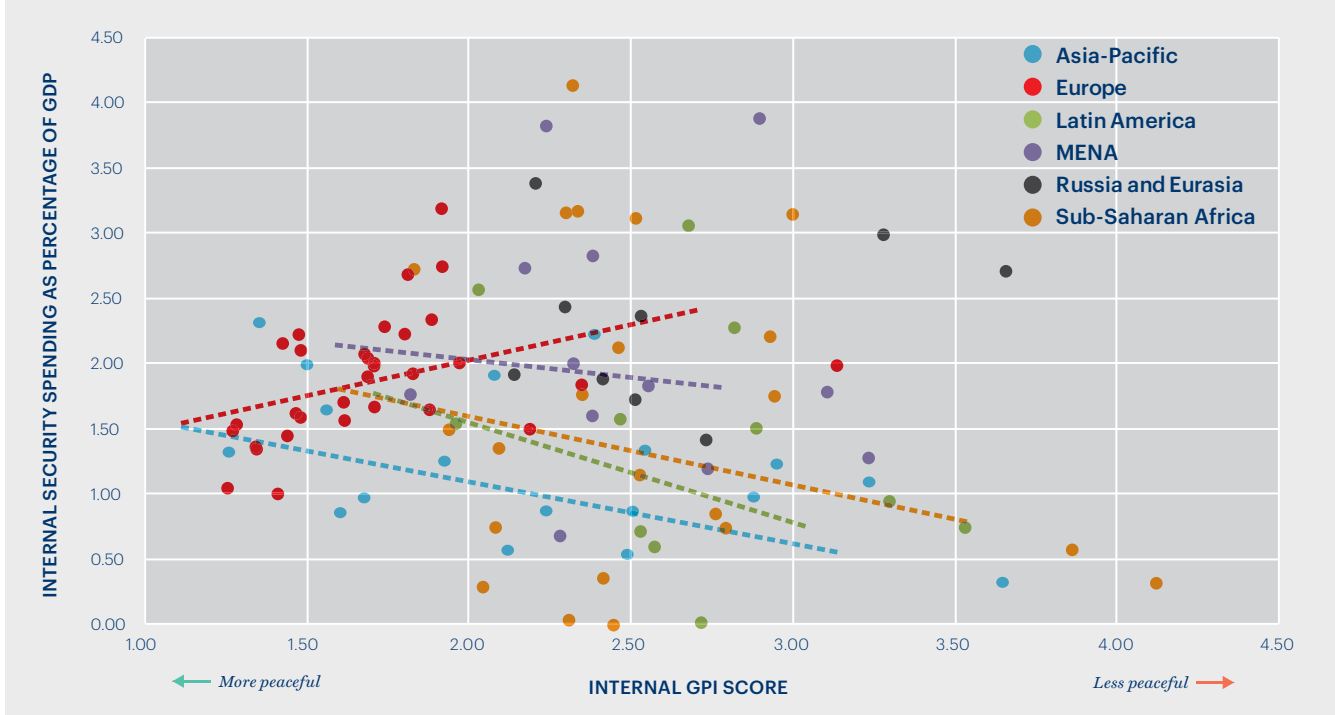
Internal peace deteriorates the most in authoritarian regimes as result of decreases in internal security spending. Conversely, internal peace is higher in full democracies when internal security spending as a proportion of GDP is lower.



Source: IEP

FIGURE 29 INTERNAL SECURITY SPENDING AS PERCENTAGE OF GDP AND INTERNAL PEACE BY REGION

Internal peace improves the most from increases in internal security spending in sub-Saharan Africa and deteriorates the most in Europe.



Source: IEP

To further illustrate the relationship between internal security spending and internal peace, figure 29 shows the correlation with each country grouped by government type. It clearly shows that on average, authoritarian regimes have higher internal peace in the presence of higher internal security expenditure. In other words, internal peace deteriorates as the level of spending on internal security as proportion of GDP decreases in authoritarian regimes. However, the correlation does not provide any insight on how the expenditures directly influence a higher level of peace. If authoritarian regimes are divided by region, it becomes clear that most high spending authoritarian regimes are in high capacity countries in the Middle East and North Africa, while the majority of authoritarian regimes with low levels of internal security spending are in sub-Saharan Africa.

In contrast, the correlation between internal security spending and internal peace is reversed in fully democratic countries, meaning that as internal security spending increases, peacefulness actually decreases. One fact that can help explain this discrepancy is that full democracies have higher levels of Positive Peace on average than any other government type. As fully democratic societies have better governance, better economic opportunities, higher levels of education and less corruption, there is no need for additional internal security spending beyond the optimal point.

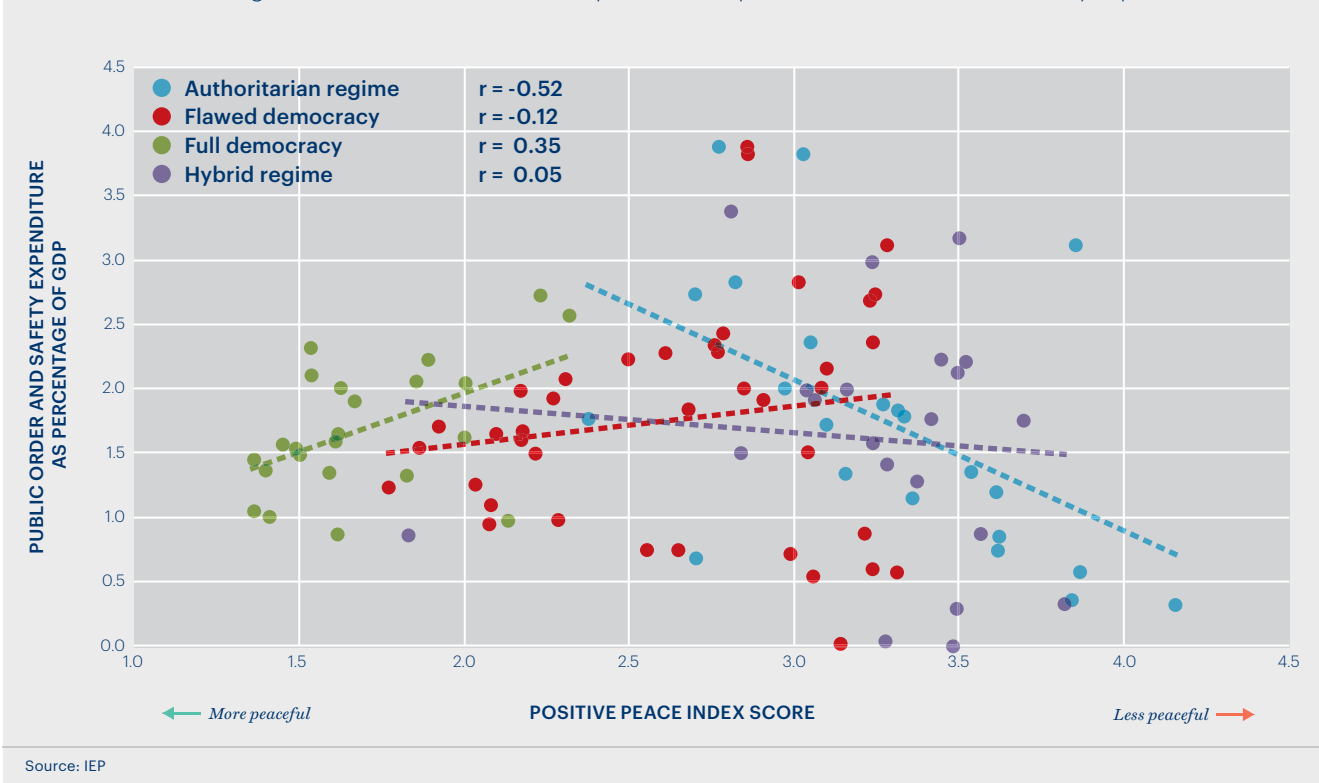
Positive Peace is defined as the attitudes, institutions and structures which build and sustain peaceful societies. Figure 30 shows the correlation between internal security spending and the Positive Peace Index (PPI) similar to the preceding figure.

The relationship between internal spending and the PPI is very similar to the relationship between internal spending and the internal GPI. The countries with the lowest levels of Positive Peace spend the least on internal security as a percentage of GDP. Countries with average levels of Positive Peace spend the most on internal security, but the countries with the highest levels of positive have lower levels of internal security spending compared to countries with average levels of Positive Peace.

The correlation becomes more apparent when examined by government type. Amongst full democracies, those with the highest levels of Positive Peace have the lowest spending on internal security. Conversely, amongst authoritarian regimes, high security spending is correlated with higher levels of Positive Peace, but only up to a certain level. Only one authoritarian regime has a PPI score of less than 2.5. Once a certain threshold of security spending has been reached, increasing it further will not strengthen the attitudes, institutions and structures that lead to peaceful societies.

FIGURE 30 INTERNAL SECURITY SPENDING AS PERCENTAGE OF GDP AND POSITIVE PEACE INDEX, BY REGIME TYPE

Positive Peace is higher in full democracies which spend less on public order and internal security expenditure.



BOX 2 THE POSITIVE PEACE INDEX (PPI) MEASURES THE LEVEL OF POSITIVE PEACE IN 162 COUNTRIES, COVERING 99 PER CENT OF THE WORLD'S POPULATION.

Positive Peace is defined as the presence of the attitudes, institutions and structures that create and sustain peaceful societies. Positive Peace is the counterpart to Negative Peace, which is defined as the absence of violence and is measured by the Global Peace Index.

The PPI is composed of 24 indicators to capture the eight domains of Positive Peace, which are well-functioning government, sound business environment, low levels of corruption, high levels of human capital, good relations with neighbours, equitable distribution of resources and acceptance of the rights of others. Each of the domains is measured by three indicators, selected based on the strength of its statistically significant relationship to the absence of violence.

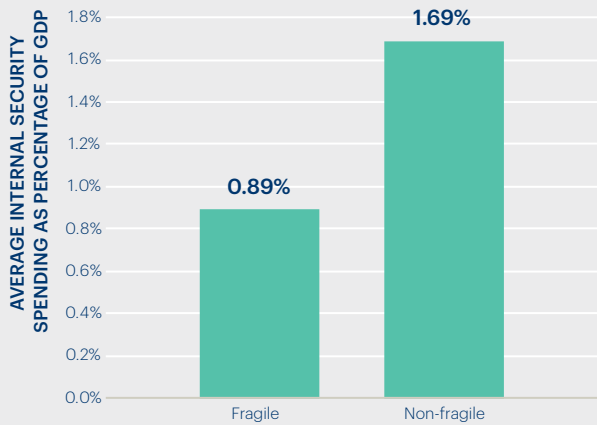
To read the latest Positive Peace report, including the results of the PPI and the full methodology, visit www.economicsandpeace.org

In per capita terms using purchasing power parity, high income non-OECD countries spend the most on internal security, at \$1,435 PPP, followed by high income OECD countries at \$555 PPP. In contrast, low income countries spend \$28 per person on internal security. This illustrates that internal security spending is likely under-resourced in low and lower middle income countries. Considering the presence of measurably higher levels of violence in many (but not all) low and lower middle income countries, investments in peace and security spending such as security sector reform potentially has large returns in terms of achieving higher levels of peace. Figure 32 shows average per capita spending on internal security by national income levels in purchasing power parity terms.

The issues around optimal security spending can be further analysed by looking at fragile and conflict-affected states. Fragile countries spend less on internal security, both as a percentage of GDP and per capita, compared to non-fragile countries. As a percentage of GDP, fragile countries on average spend approximately half as much as non-fragile countries. Likewise, average per capita spending in fragile states is only 18 per cent of non-fragile countries. Figure 31 illustrates average internal security spending as percentage of GDP for fragile and non-fragile states.

FIGURE 31 INTERNAL SECURITY SPENDING AS PERCENTAGE OF GDP FOR FRAGILE AND NON-FRAGILE COUNTRIES

Non-fragile countries spend nearly twice as much as fragile states on internal security.

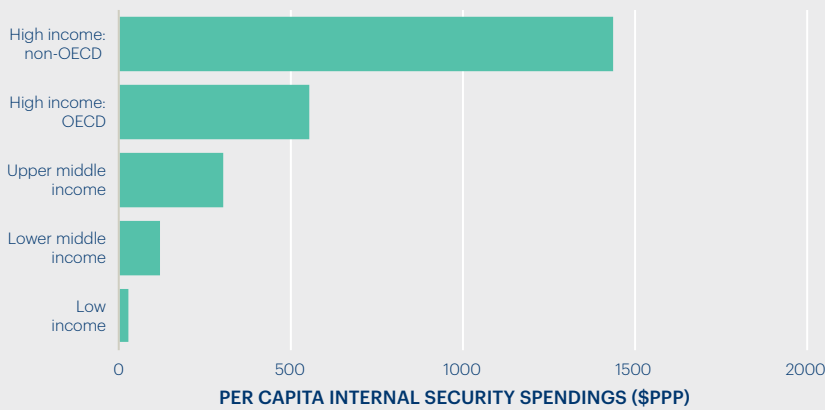


Source: IEP

“ Fragile countries spend less on internal security, both as a percentage of GDP and per capita, compared to non-fragile countries. As a percentage of GDP, fragile countries on average spend approximately half as much as non-fragile countries. Likewise, average per capita spending in fragile states is only 18 per cent of non-fragile countries.

FIGURE 32 AVERAGE PER CAPITA SPENDING ON INTERNAL SECURITY IN PURCHASING POWER PARITY TERMS BY NATIONAL INCOME

Low income countries spend less than five per cent of what OECD countries spend on internal security on a per capita basis.



Source: IEP

PEACEKEEPING & PEACEBUILDING

Peacekeeping operations and peacebuilding are extremely important in preventing and dealing with violent conflict. Peacekeeping operations are measures aimed at responding to a conflict, whereas peacebuilding expenditures are aimed at developing and maintaining the capacities for resilience to conflict. Thus peacebuilding seeks to enable a country to sustain and develop peace over the long term.

This is done through building the core functions of government, ensuring basic levels of safety and security and increasing the internal capacity for dispute resolution by supporting inclusive political processes, among other measures. These measures can be seen as a core subset of IEP's Positive Peace framework. Peacebuilding is more targeted than peacekeeping in creating the attitudes, institutions and structures that create and sustain peace in a conflict-affected country.

Peacebuilding expenditure aims to reduce the risk of lapsing or relapsing into violent conflict by strengthening

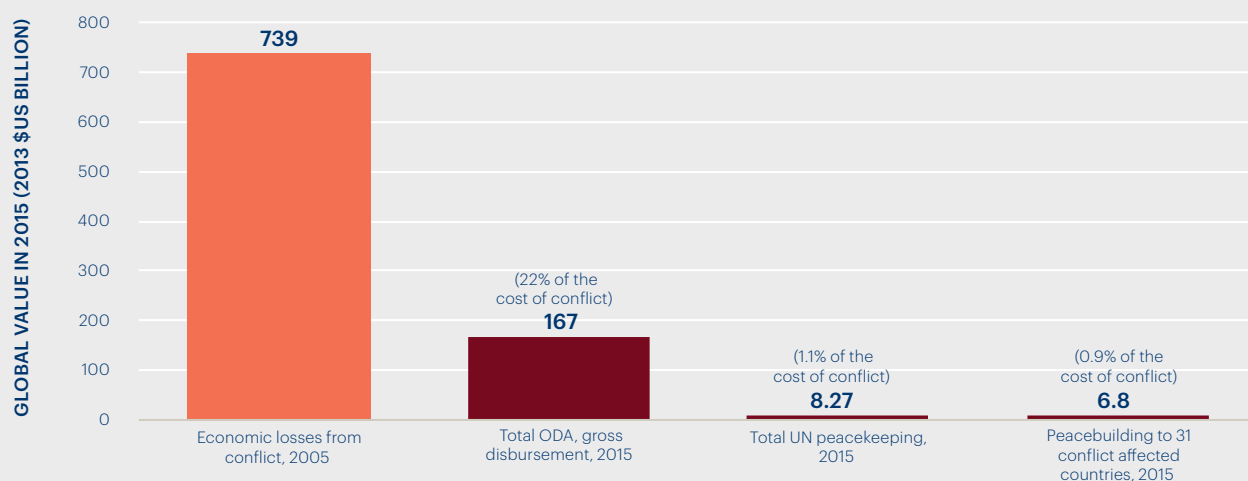
national capacities and institutions for conflict management and laying the foundations of sustainable peace and development. These activities are distinct from peacekeeping activities, which are broadly aimed at responding to a conflict and establishing security.

Peacebuilding and peacekeeping related activities in conflict-affected countries are a small proportion of ODA. Fragile and conflict-affected countries are in greater need of investment in peacebuilding to ensure they do not fall back into conflict. Spending on peacebuilding and peacekeeping is small compared to total economic losses from conflict. \$8.27 billion was spent on peacekeeping in 2013, only 1.1 per cent of the estimated losses from conflict in 2015 which were estimated at \$739 billion.

Figure 33 highlights that the spending on peacebuilding and peacekeeping is small compared to the economic losses caused by conflict, representing 0.9 per cent 1.1 per cent respectively in 2015.

FIGURE 33 COST OF CONFLICT COMPARED TO OFFICIAL DEVELOPMENT ASSISTANCE, UN PEACEKEEPING AND PEACEBUILDING SPENDING, 2015

Peacebuilding expenditure is proportionally small compared to the economic losses from conflict.



Source: IEP calculations, OECD

APPENDICES

APPENDIX A: METHODOLOGY

While there have been many studies that look at the cost of violence to society, there is no universally agreed method to aggregate the current and future financial effects of violence and conflict. IEP takes a holistic approach to counting the costs of violence. This methodology looks at both the costs of containing violence and of dealing with its consequences, in both the short and long term, where violence is directed against people or property. The sum total of these costs is labelled the **total economic impact of violence**.

There are two main approaches to measuring the economic cost of violence: cost accounting and economic modelling methods. The accounting method uses incidents of violence and spending on responding to and containing violence. The economic modelling method measures the impact of violence on consumption, investment, production, trade and overall GDP growth. IEP uses the cost accounting method, which aggregates costs arising from incidents of violence and expenditure on containing violence.

The main benefits of the accounting method is that costs can be disaggregated by category. For example, the cost of violence could be disaggregated to public and private spending. It could also be separated to direct and indirect costs depending on how the incident of violence impacts the victim, perpetrator and government. Further, the cost of violence could be broken down by whether it accrues in the short or long term. The flexibility of the accounting methods also allows sufficient flexibility for inclusion and exclusion of variables based on availability of reliable data.

The total global economic impact of violence is defined as expenditure related to “*containing, preventing and dealing with the consequences of violence*”. IEP’s model includes both direct and indirect costs of the violence as well as a peace multiplier. The multiplier effect calculates the additional economic activity that would have been accrued if the direct costs of violence had been avoided. Examples of direct costs include medical costs for victims of violent crime, capital destruction from violent conflict

and costs associated with the security and judicial systems. Indirect costs include lost wages or productivity from crime due to physical and emotional trauma. There is also a measure of the impact of fear on the economy, as people who fear that they may become a victim of violent crime alter their behaviour.²⁹

An important aspect of the model is the ability to compare the economic impact of violence across countries. Therefore, the methodology presents the final numbers in 2015 constant purchasing power parity (PPP) international dollars, which makes the cost comparable between countries and over time.

TYOLOGY OF COST OF VIOLENCE

IEP estimates the economic impact of violence using a comprehensive aggregation of costs related to violence, conflict and violence containment spending. The GPI is used as the initial point of reference for developing the costing model, by matching unit costs of different types of violence with the GPI indicators, where possible. The 2016 version of the economic impact of violence includes 16 variables across three domains.

The model outputs a conservative estimate of the global impact of violence, as it only includes variables of violence for which reliable data could be obtained. The following indicators are not counted in the economic impact of violence:

- domestic violence
- household out-of-pocket spending on safety and security
- the cost of crime to business
- spill over effects from conflict and violence
- self-directed violence
- the cost of intelligence agencies.

TABLE A.1 VARIABLES INCLUDED IN THE ECONOMIC IMPACT OF VIOLENCE MODEL, 2015

The cost of violence containment model includes both costs aimed at preventing violence and the consequential costs of violence.

SECURITY SERVICES AND PREVENTION ORIENTED COSTS	ARMED CONFLICT-RELATED COSTS	INTERPERSONAL VIOLENCE
Military expenditure	Direct costs of deaths from internal violent conflict	Homicide
Internal security expenditure	Direct costs of deaths from external violent conflict	Violent assault
Private security	Indirect costs of violent conflict (GDP losses due to conflict)	Sexual assault
UN peacekeeping	Losses from status as refugees and IDPs	Fear of crime
ODA peacebuilding expenditure	Small arms imports	Indirect costs of incarceration
	Terrorism	

The economic impact of violence includes the following components:

- Direct costs are the cost of violence to the victim, the perpetrator, and the government. These included direct expenditure such as the cost of policing.
- Indirect costs accrue after the violent event and include indirect economic losses, physical and physiological trauma to the victim as well as the lost productivity.
- The multiplier represents the flow-on effects of direct costs, such as additional economic benefits that would come from investment in business development or education instead of containing or dealing with violence. Box 3 provides a details explanation of the peace multiplier used.

BOX 3 THE MULTIPLIER EFFECT

The multiplier effect is a commonly used economic concept, which describes the extent to which additional expenditure improves the wider economy. Every time there is an injection of new income into the economy this will lead to more spending which will, in turn, create employment, further income and additional spending. This mutually reinforcing economic cycle is known as the ‘multiplier effect’ and is the reason that a dollar of expenditure can create more than a dollar of economic activity.

Although the exact magnitude of this effect is difficult to measure, it is likely to be particularly high in the case of expenditure related to containing violence. For instance, if a community were to become more peaceful, the society would spend less time and resources protecting themselves against violence. Because of this decrease in violence there are likely to be substantial flow-on effects for the wider economy, as money is diverted towards more productive areas such as health, business investment, education and infrastructure.

When a homicide is avoided, the direct costs, such as the money spent on medical treatment and a funeral, can be spent elsewhere. The economy also benefits from the lifetime income of the victim. The economic benefits from greater peace can therefore be significant. This was also noted by Brauer and Tepper-Marlin (2009) who argued that violence or the fear of violence may result in some economic activities not occurring at all. More generally, there is strong evidence to suggest that violence and the fear of violence can fundamentally alter the incentives for business. For instance, analysis of 730 business ventures in Colombia from 1997 to 2001 found that with higher levels of violence, new ventures were less likely to survive and profit. Consequently, with greater levels of violence it is likely that we might expect lower levels of employment and economic productivity over the long-term, as the incentives faced discourage new employment creation and longer-term investment.

This study assumes that the multiplier is one, signifying that for every dollar saved on violence containment, there will be an additional dollar of economic activity. This is a relatively conservative multiplier and broadly in line with similar studies.

ESTIMATION METHODS

A combination of approaches is used to estimate the economic cost violence at the country level. The economic costing of violence involves three main approaches:

1. **Financial information detailing expenditure on items associated with violence and included in this year's costing exercise were used. These expenditures were either obtained as actual expenditure or as per cent of GDP of a country. When sourced as percentage of GDP, GDP data from the IMF was used to get the actual expenditure.**
2. **A unit cost approach was used to cost variables included in this year's GPI costing and for which detailed expenditure were not available. The unit costs were obtained from a literature review and appropriately adjusted for all countries included in the 2016 GPI. The study uses unit costs from McCollister et al. (2010) for homicides, violent and sexual crimes.³⁰ The cost of homicides is also used for battle deaths and deaths due to terrorism. The unit cost for fear of crime is sourced from Dolan & Peasgood (2006).³¹**
3. **Where both expenditure and incidence data was missing for an item, it was either calculated using an appropriate proxy or was excluded from the study.**

SCALING UNIT COSTS

Unit cost were used to estimates the cost of incidents of violence such as homicide, violent and sexual crimes. However, unit costs are not available for most of the countries that are included in the costing model. Therefore, to estimate the cost of violence for these countries, the unit costs are adjusted using the ratio of GDP per capita in PPP terms. For example, a country with a GDP per capita PPP that was 26% of US GDP per capita would have a homicide unit cost equal to 26% of the US homicide unit cost.

CONVERTING COSTS TO CONSTANT AND PURCHASING POWER PARITY

The cost of violence is presented in constant purchasing power parity terms to enable direct comparison between countries. Initially, the cost of violence was converted from current to constant using consumer price index (CPI). CPI data is sourced from the World Bank's world development indicators. In the second phase, the costs are converted to PPP using a PPP conversion factor.

INDICATORS OF VIOLENCE CONTAINMENT COST

Military expenditure

Data from the Economist Intelligence Unit (EIU), the International Institute for Strategic Studies (IISS) and the Stockholm International Peace Research Institute (SIPRI) was used to provide the level of military expenditure as per cent of GDP. This was then combined with GDP data from the International Monetary Fund (IMF) and converted to PPP international dollars using a PPP converter obtained from World Development Indicators database. The military expenditure estimate for the United States military includes additional categories related to Veteran Affairs, the maintenance cost of its nuclear arsenal, and interest payments on military related debt.

Internal security expenditure

Internal security expenditure was taken from the OECD, IMF and the United Nations for 80 countries. The data on public order and safety includes spending on police services, law courts, prisons, fire services and public safety R&D. For countries without data, estimates were based on the number of police personnel multiplied by an adjusted unit cost. Police officer statistics were obtained from UNODC Survey of Crime Trends and Operations of Criminal Justice Systems.

UN peacekeeping

Country contributions to peacekeeping missions were included as UN peacekeeping expenditure. The data on contribution was sourced from UN Committee on Contributions.

Peacebuilding

IEP with assistance from the UN Peacebuilding Support Office (UN-PBSO) undertook a stocktaking exercise to ascertain the amount of ODA spent on programs related to peacebuilding. The data for peacebuilding expenditure was obtained from the OECD Development Assistance Committee (DAC) Creditor Reporting System (CRS).

Homicide

Data on homicide comes from the United Nations Survey of Crime Trend and Operations of Criminal justice system (CTS). Where country data was unavailable, estimates taken from the GPI were used. The adjusted unit cost from McCollister et al. (2010) is applied to the total number of homicides for each country to obtain the final cost.

Violent and sexual assault

Data on violent and sexual assaults is obtained from UNODC. The adjusted unit cost from McCollister et al. (2010) is applied to both violent assault and sexual assault to calculate the total cost.

Fear of crime

The data for fear of crime comes from the Gallup World Poll which surveys the proportion of the population who expresses fear of being a victim of crime in their own neighbourhood. This is then multiplied by adjusted costs from Dolan & Peasgood (2006) to obtain the final cost.

Incarceration

IEP calculated the annual lost wages of prisoners as the indirect cost lost due to incarceration. The lost wages are assumed to be equivalent to the minimum wage for the period of incarceration adjusted by the labour force participation rate for incarcerated individuals. This unit cost is then adjusted base on purchasing power parity income per capita compared to US income per capita. The incarceration rate data comes from the World Prison Brief, compiled by the International Centre for Prison Studies at the University of Essex. Judicial costs and the direct cost of prisons are included in internal security expenditure.

Battle deaths

The unit cost for battle deaths is the same as for homicides. The data for battle deaths from internal conflict is sourced from UCDP Armed Conflict dataset. Battle deaths from external conflict are obtained from the IISS Armed Conflict Database (ACD).

Terrorism

The cost of terrorism related deaths is calculated in the same way as homicides. The impact of injuries is calculated using the unit cost from McCollister et al (2010). Data for deaths and injuries due to terrorism is taken from the Global Terrorism Database, maintained by START at the University of Maryland.

Indirect cost of conflict

The indirect cost of conflict is calculated for countries which have experienced an active conflict during the years of the study and only for years for which the country had the conflict. The assumption is an attempt to capture the loss of formal economic activity including capital flight. IEP assumes a GDP loss of 2.2 per cent for each year of conflict based on Collier (1999).

Small arms imports

Accounts for the total imports value of small arms, with data taken from the Small Arms Survey.

Population displacement

UNHCR annual expenditure is assumed as the direct cost of refugees and IDPs. In addition, it is assumed that the indirect cost of refugees and IDPs to the economy of the origin country is equivalent to the lost production and consumption for each displaced person who was part of the labour market. However, IEP costing model does not capture some of the adverse implications of forced displacement such as asset losses, expenditure by the displace people as well as the physical and psychological distress that is inflicted on the displace population. Therefore, the total indirect cost is a conservative estimate.

Data on the number of refugees and IDPs is sourced from UNHCR and the Internal Displacement Monitoring Centre (IDMC). Data on UNHCR contribution is also sourced from UNHCR.

APPENDIX B: ECONOMIC IMPACT OF VIOLENCE, SUMMARY RESULTS

ECONOMIC IMPACT OF VIOLENCE AND CONFLICT RANK BY % OF GDP	COUNTRY	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT (MILLION 2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT PER PERSON (2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT AS PERCENTAGE OF GDP
1	Syria	\$23,593	\$1,065	54.1%
2	Iraq	\$206,444	\$5,930	53.5%
3	Afghanistan	\$27,050	\$855	45.3%
4	Venezuela	\$79,613	\$2,594	42.8%
5	South Sudan	\$8,213	\$689	35.2%
6	Honduras	\$13,702	\$1,721	34.1%
7	Colombia	\$139,481	\$2,919	30.1%
8	Central African Republic	\$781	\$163	29.0%
9	North Korea	\$4,949	\$198	28.4%
10	Lesotho	\$1,455	\$690	28.0%
11	Libya	\$17,766	\$2,839	24.9%
12	Mauritania	\$2,999	\$756	20.9%
13	Somalia	\$1,170	\$111	20.3%
14	Saudi Arabia	\$274,470	\$8,886	20.2%
15	Oman	\$24,218	\$5,717	20.1%
16	South Africa	\$124,336	\$2,302	19.5%
17	El Salvador	\$9,950	\$1,629	19.1%
18	Yemen	\$17,867	\$682	19.0%
19	Botswana	\$5,512	\$2,483	18.6%
20	Cyprus	\$4,055	\$3,515	18.4%
21	Sudan	\$33,413	\$849	18.3%
22	Jamaica	\$4,315	\$1,586	18.0%
23	Ukraine	\$44,430	\$979	17.5%
24	Bahrain	\$9,617	\$7,061	17.0%
25	Guatemala	\$19,591	\$1,223	15.3%
26	Mali	\$3,694	\$216	14.8%
27	Namibia	\$3,466	\$1,443	14.6%
28	Mexico	\$272,924	\$2,177	14.2%
29	Russia	\$342,665	\$2,383	13.8%
30	Palestine	\$2,673	\$622	13.7%
31	Trinidad and Tobago	\$5,692	\$4,202	13.7%
32	Brazil	\$338,075	\$1,641	13.5%
33	Dominican Republic	\$19,328	\$1,857	13.5%
34	Swaziland	\$1,372	\$1,081	13.4%
35	Republic of the Congo	\$2,233	\$496	12.6%
36	Pakistan	\$124,922	\$675	12.6%
37	Georgia	\$3,522	\$782	12.4%
38	Guyana	\$692	\$907	12.3%
39	The Gambia	\$318	\$165	12.3%
40	Cuba	\$28,395	\$2,495	12.1%

ECONOMIC IMPACT OF VIOLENCE AND CONFLICT RANK BY % OF GDP	COUNTRY	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT (MILLION 2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT PER PERSON (2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT AS PERCENTAGE OF GDP
41	Algeria	\$54,372	\$1,397	12.0%
42	United States	\$2,130,344	\$6,681	11.8%
43	Chad	\$2,918	\$215	11.7%
44	Cote d'Ivoire	\$7,503	\$339	11.3%
45	Democratic Republic of the Congo	\$7,307	\$98	11.1%
46	Nigeria	\$104,378	\$588	11.1%
47	Zimbabwe	\$2,903	\$190	10.9%
48	Azerbaijan	\$15,181	\$1,592	10.7%
49	Gabon	\$2,506	\$1,485	10.1%
50	Turkey	\$129,104	\$1,700	9.7%
51	Israel	\$25,897	\$3,152	9.7%
52	Guinea-Bissau	\$240	\$134	9.5%
53	Uganda	\$5,840	\$155	9.4%
54	Angola	\$13,186	\$544	9.4%
55	Serbia	\$7,057	\$990	9.4%
56	Iran	\$117,695	\$1,506	9.3%
57	Nicaragua	\$2,869	\$477	9.3%
58	Ecuador	\$16,362	\$1,029	9.2%
59	Panama	\$7,582	\$1,961	9.1%
60	Burundi	\$718	\$66	8.9%
61	Kuwait	\$18,470	\$4,921	8.9%
62	Eritrea	\$979	\$192	8.9%
63	Egypt	\$83,051	\$927	8.8%
64	Mongolia	\$3,124	\$1,074	8.7%
65	India	\$679,803	\$525	8.6%
66	Bolivia	\$6,085	\$576	8.6%
67	Myanmar	\$19,396	\$363	8.5%
68	Montenegro	\$652	\$1,048	8.4%
69	Philippines	\$60,979	\$615	8.4%
70	Uzbekistan	\$14,549	\$473	8.1%
71	Benin	\$1,389	\$131	8.0%
72	Lebanon	\$7,476	\$1,644	7.9%
73	Macedonia	\$1,870	\$901	7.7%
74	Jordan	\$6,491	\$983	7.6%
75	Togo	\$708	\$100	7.6%
76	Tanzania	\$9,153	\$177	7.5%
77	Bulgaria	\$7,327	\$1,014	7.3%
78	Cambodia	\$3,874	\$253	7.3%
79	Peru	\$24,017	\$775	7.3%
80	Moldova	\$1,002	\$282	7.3%
81	Armenia	\$1,602	\$533	7.3%
82	Bosnia and Herzegovina	\$2,312	\$606	7.2%
83	Thailand	\$69,940	\$1,033	7.1%
84	Lithuania	\$4,818	\$1,645	7.1%
85	Sri Lanka	\$16,467	\$798	7.1%
86	Vietnam	\$38,425	\$424	7.0%
87	Haiti	\$1,295	\$122	7.0%

ECONOMIC IMPACT OF VIOLENCE AND CONFLICT RANK BY % OF GDP	COUNTRY	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT (MILLION 2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT PER PERSON (2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT AS PERCENTAGE OF GDP
88	Albania	\$1,829	\$632	7.0%
89	Rwanda	\$1,403	\$124	6.9%
90	Tunisia	\$8,181	\$744	6.9%
91	Morocco	\$16,659	\$491	6.9%
92	Paraguay	\$3,735	\$570	6.8%
93	Qatar	\$18,239	\$8,397	6.5%
94	Zambia	\$3,598	\$229	6.5%
95	Laos	\$2,415	\$361	6.5%
96	Nepal	\$4,676	\$166	6.5%
97	Mauritius	\$1,384	\$1,098	6.5%
98	Senegal	\$1,962	\$134	6.4%
99	Ethiopia	\$10,554	\$109	6.4%
100	Kosovo	\$903	\$496	6.4%
101	Estonia	\$1,948	\$1,483	6.4%
102	Turkmenistan	\$4,754	\$896	6.3%
103	Kenya	\$8,573	\$191	6.2%
104	Kazakhstan	\$23,365	\$1,351	6.2%
105	Djibouti	\$191	\$218	6.1%
106	Hungary	\$12,506	\$1,268	6.0%
107	Niger	\$939	\$49	6.0%
108	Greece	\$13,848	\$1,264	6.0%
109	Costa Rica	\$4,370	\$918	5.9%
110	United Arab Emirates	\$29,806	\$3,280	5.7%
111	Belarus	\$7,953	\$840	5.7%
112	United Kingdom	\$139,886	\$2,168	5.6%
113	Romania	\$19,071	\$958	5.6%
114	South Korea	\$95,630	\$1,897	5.6%
115	Argentina	\$32,123	\$747	5.6%
116	Uruguay	\$3,793	\$1,109	5.5%
117	Burkina Faso	\$1,453	\$83	5.5%
118	Latvia	\$2,237	\$1,124	5.5%
119	Poland	\$45,781	\$1,205	5.5%
120	Croatia	\$4,228	\$998	5.5%
121	Portugal	\$13,572	\$1,305	5.4%
122	Liberia	\$194	\$44	5.2%
123	Belgium	\$21,782	\$1,940	5.2%
124	France	\$114,597	\$1,731	5.2%
125	Tajikistan	\$1,008	\$122	5.2%
126	Chile	\$18,991	\$1,069	5.1%
127	Bhutan	\$343	\$448	5.1%
128	Sweden	\$19,523	\$2,015	5.1%
129	Guinea	\$764	\$62	5.0%
130	Taiwan	\$25,751	\$1,099	5.0%
131	Slovakia	\$6,411	\$1,183	5.0%
132	Germany	\$159,833	\$1,976	4.9%
133	Australia	\$43,108	\$1,835	4.8%
134	Kyrgyz Republic	\$903	\$155	4.8%

ECONOMIC IMPACT OF VIOLENCE AND CONFLICT RANK BY % OF GDP	COUNTRY	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT (MILLION 2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT PER PERSON (2015 PPP)	ECONOMIC IMPACT OF VIOLENCE AND CONFLICT AS PERCENTAGE OF GDP
135	Sierra Leone	\$523	\$83	4.8%
136	Czech Republic	\$13,577	\$1,292	4.8%
137	Singapore	\$19,776	\$3,616	4.6%
138	Italy	\$82,361	\$1,343	4.6%
139	Finland	\$8,518	\$1,559	4.5%
140	Netherlands	\$32,034	\$1,901	4.5%
141	Ghana	\$4,714	\$176	4.4%
142	Malaysia	\$30,285	\$1,013	4.3%
143	Equatorial Guinea	\$767	\$935	4.2%
144	Cameroon	\$2,543	\$112	4.1%
145	New Zealand	\$5,719	\$1,268	4.1%
146	Spain	\$55,165	\$1,189	4.0%
147	Slovenia	\$2,021	\$980	3.8%
148	Bangladesh	\$21,815	\$137	3.8%
149	Papua New Guinea	\$835	\$112	3.7%
150	Timor-Leste	\$293	\$242	3.6%
151	China	\$700,632	\$514	3.5%
152	Malawi	\$678	\$41	3.3%
153	Ireland	\$6,625	\$1,436	3.2%
154	Norway	\$8,514	\$1,658	3.0%
155	Denmark	\$6,665	\$1,182	3.0%
156	Japan	\$121,616	\$957	2.9%
157	Madagascar	\$885	\$38	2.9%
158	Switzerland	\$13,184	\$1,610	2.9%
159	Mozambique	\$914	\$34	2.8%
160	Austria	\$8,772	\$1,028	2.6%
161	Iceland	\$334	\$1,021	2.4%
162	Canada	\$32,431	\$913	2.3%
163	Indonesia	\$52,275	\$205	2.0%

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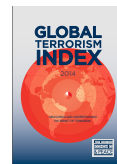
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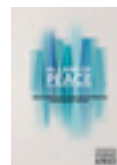
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