MEXICO PEACE INDEX 2013

MEASURING THE STATE OF PEACE IN MEXICO OVER THE LAST DECADE

INSTITUTE FOR
ECONOMICS
& PEACE

Contents

EXECUTIVE SUMMARY

The Mexico Peace Index (MPI), produced by the Institute for Economics and Peace (IEP), provides a comprehensive measure of the levels of peacefulness within Mexico from 2003 to 2012. It includes an analysis of the measures that make up the Index, as well as other socio-economic factors that are normally associated with peaceful societies. It also estimates the economic impact of violence and the economic benefits that would flow from increases in peace. The report does not make policy recommendations nor moral judgments on the appropriateness of government responses, rather it gathers and analyses data relevant to peace and violence in Mexico to better understand the drivers and economic value of peace.

This is the inaugural edition of the Mexico Peace Index. The Index measures peacefulness in Mexico at the state level and provides an analysis of peace in all of the 32 Mexican states. It also compares Mexico to global measures of peace, including a regional comparison to other Latin American states.

The MPI is based on the work of the Global Peace Index, the leading global measure of peace that has been produced by IEP every year since 2007. The MPI is the third in a series of National Peace Indices and follows the United States Peace Index (USPI) and the United Kingdom Peace Index (UKPI). Defining peace as *'the absence of violence or fear of violence'*, the MPI is based on a similar methodology to the USPI and UKPI which enables comparability of the components of the three indices at both a national level and state level.

The last two years have shown a slight improvement in peace in Mexico, with the measure of peace improving by 1.4 percent in 2011 and six percent in 2012. This follows previous steep declines in peace experienced by the onset of the drug war. It is still too early to determine whether the recent improvement constitutes a new trend. organized crime has shown the biggest improvement, dropping 30 percent over the last three years, which may be indicative of some success against organized crime. Weapons crime has also improved, decreasing by 12 percent in two years.

However the last ten years have seen a substantial increase in direct violence in Mexico, with the MPI score declining by 27 percent over the period. The decline is largely related to the homicide rate, which increased by 37 percent since 2007. There were 32 homicides per 100,000 people in Mexico in 2012.

Measures of the efficiency of the justice system have shown a considerable deterioration, with as many as 90 percent of homicides going unpunished in some states. The national average deteriorated by 19 percent since 2007. These trends are discussed in detail in Section 1 of this report.

Public perception of corruption is one of the major challenges facing Mexico. Measures of corruption indicate particularly poor public perception of the police forces and public officials, with Transparency International's Corruption Perceptions Barometer ranking Mexico amongst the lowest. In this survey, 90 percent of respondents thought that the police were corrupt. Business, church and military institutions fare much better with notably lower levels of perceived corruption. Furthermore, survey results on the levels of trust in the police show a relationship with justice efficiency, indicating that public trust increases when there is a higher rate of sentencing.

The number of firearms being smuggled into Mexico has increased substantially over the last decade and was nearly three times higher in 2010-2012 than in 1997-1999. The weapons crime indicator that measures the number of crimes involving a firearm saw a significant increase, with the rate per 100,000 increasing by 117 percent over the past ten years.

Federal funding to state police, known as the Public Security Contribution Fund (*Fondo de Aportaciones para la Seguridad Publica* - FASP) has increased by 190 percent since 2003. An analysis of FASP funding finds that:

- There is a moderate statistical relationship between a drop in extortion rates and increases in state funding of police operations.
- Increases in police funding are related to increased crime reporting rates. This indicates that increased funding improves the public's relationship with the police.
- No apparent relationship can be drawn between deceases in crime and increases in police funding.

One of the more counter-intuitive findings is that the justice system efficiency indicator, which measures levels of unsolved murders, has kept deteriorating even while the indicators of organized crime and violent crime have registered improvements. The national rate of unpunished homicides has increased by almost 14 percent in the last ten

MEXICO IS WELL PLACED TO ADDRESS ITS CURRENT LEVELS OF VIOLENCE AND TO BUILD A MORE PEACEFUL SOCIETY ON ACCOUNT OF ITS RELATIVELY STRONG INSTITUTIONAL CAPACITY.

years. This is indicative of an overwhelmed justice system, inefficiency, or corruption. States with the highest levels of prison over-crowding have some of the poorest scores on the justice efficiency indicator which may reflect the inability to house new prisoners.

Mexico's ratings on positive peace are encouraging; its regulatory quality and government effectiveness as measured by the World Bank have improved notably over the past ten years. Compared to other nations with a similar level of conflict and development, Mexico is well placed to address its current levels of violence and to build a more peaceful society on account of its relatively strong institutional capacity. The country is unique in that its peace score is well below its institutional capacity which suggests that it should be experiencing much higher levels peace. Section 2 details Mexico's institutional capacity to improve levels of peacefulness showing the country scores better than world average on levels of human capital, levels of inequality and business environment.

The 2013 MPI results have been correlated against an extensive set of over 60 secondary datasets of economic, educational, health, demographic and social capital factors, in order to determine the attributes that are most closely associated with peace in Mexico. One of the most striking findings from this analysis is the lack of statistical relations with factors that are normally associated with violence in other countries. This can mainly be attributed to the distorting effect of the drug war, which is driven by external and regional drivers. When partially compensating for drug war violence, factors consistently related to lack of peace are levels of poverty and low levels of schooling.

The economic impact of violence to the Mexican economy is substantial, amounting to 4.392 trillion *pesos* (US$334 billion), equivalent to 27.7 percent of the Mexican economy. This is enough to either provide each Mexican citizen with 37,000 *pesos* (US$3,000), or to double the level of government funding provided to health and education. These economic costs have been categorized in three ways. The first is the expenditure borne by governments to maintain law and order through the police, justice and the prison system, as well as dealing with the direct consequences of violence, such as asset destruction. Secondly, the lost productivity from crime that can consist of time-off work due to injuries or lost earning capacity from an early death. The third category is the job creation effects that come from the stimulus related to improving the first and second categories. Redirecting this expenditure away from containing violence could help support industry investment, improve schools, or build national infrastructure as these types of investments would improve the nation's productivity and competitiveness.

In undertaking the research it became apparent that certain additional statistics, if available, would have provided the data for a more detailed report. Improved data collection and timely publication of data would greatly assist researchers in helping to further understand the drivers that are associated with peace.

This report also includes four essays from experts in the field of public security containing detailed analysis of relevant issues such as the link between high degree of impunity in Mexico and the rise of criminality, the relationship between public security and competitiveness, the rise of organized crime during the period of the drug war, and the relationship between crime and the availability of weapons.

In summary, the Mexico Peace Index highlights Mexico's unique opportunity to improve its peacefulness due to the high levels of institutional capacity compared to current levels of peace. However, there are major challenges including high levels of perceived corruption, an overwhelmed justice system and lack of capacity to house new prisoners. These issues are inhibiting Mexico from substantially improving its peace. This report clearly demonstrates the enormous social and economic benefits that Mexico has the potential to reap if it successfully addresses the drivers of violence and conflict.

RESULTS & FINDINGS

MEXICO HAS THE HIGHEST POTENTIAL TO IMPROVE ITS PEACE OF ANY COUNTRY IN THE WORLD WHEN ITS POSITIVE PEACE MEASURES ARE COMPARED TO ITS ACTUAL LEVELS OF VIOLENCE.

HIGHLIGHTS

CURRENT STATE OF PEACE

- Peace in Mexico has improved by 6 percent over the last twelve months as measured by the MPI score.
- The most peaceful state is Campeche, which has a level of peace roughly comparable to that of the US states of Mississippi, New Mexico and Delaware.
- The Eastern region is the most peaceful while the Northern region is the most violent.
- 90 percent of survey respondents feel that the police are corrupt or extremely corrupt, 50 percentage points higher than the military and 30 percentage points higher than the global average.
- There is a high level of under-reporting of crime in Mexico. According to the ENVIPE 2012 data, only 19 percent of robberies, 8 percent of fraud cases and 10 percent of extortion cases are reported.
- The number of firearms being smuggled into Mexico has tripled over the last decade.
- The justice efficiency indicator, which measures the yearly ratio of homicide convictions to total homicides, has kept deteriorating even while levels of organized crime and violent crime have been decreasing.
- Many of the standard socio-economic correlates with crime are not significant in Mexico. When the drug war is partially factored out, multi-dimensional poverty and education become statistically significant.
- Mexico has the highest potential to improve its peace of any country in the world when its positive peace measures are compared to its actual levels of violence.

THE ECONOMIC IMPACT OF **VIOLENCE REACHED 27.7%** OF MEXICO'S GDP IN 2012

TRENDS IN PEACE

- Over the last decade, the Mexico Peace Index score has deteriorated by 27 percent.
- The northern region saw the largest deterioration in peace, falling more than 40 percent from 2003 to 2012. The eastern region had the smallest deterioration, falling 11.4 percent.
- Since 2008, Mexico has fallen 45 ranks on the Global Peace Index and in 2013 is ranked second least peaceful country in Latin America. This is entirely due to deteriorations in its internal levels of peace, with external indicators of peace improving over the same period.
- Not every type of violence has increased at the same rate. For instance, since 2003 the organized crime rate has increased 73 percent and the homicide rate 17 percent, while violent crime has only increased by 7 percent.
- Bucking the national trend, some Mexican states improved their peacefulness over the last decade. Oaxaca improved its score by 22 percent and Chiapas by 14 percent. These states are relatively peaceful when compared to other regions of Latin and North America.
- When adjusted for under-reporting, Mexico's robbery rate is lower than that of many US States.
- The proportion of homicides that are sentenced in Mexico has decreased significantly since the start of the drug war, falling from 28 percent in 2007 to 18 percent in 2012.
- Violent crime has increased only slightly since 2006 suggesting that the drug war has not had the same impact it has had on homicides, on other forms of crime.
- Since 2006 the weapons crime rate has increased by 97 percent, homicide rate by 26 percent, justice in efficiency by 16 percent and the police funding per 100,000 people by 32 percent.
- There has been a divergence between the least and most peaceful states over the last decade. The least peaceful states in 2003 deteriorated 35 percent by 2012, while the most peaceful states in 2003 had a marginal decline of 1.4 percent by 2012.

ECONOMIC IMPACT OF VIOLENCE

- The total economic impact of violence in Mexico is conservatively estimated to be 4.4 trillion *pesos* (US$333.5 billion) per year, representing 27.7 percent of Mexico's GDP.
- The direct cost of violence is approximately 600 billion *pesos* (US$45.9 billion).
- The indirect cost of violence is 1.9 trillion *pesos* or US$143.8 billion as a consequence of lost productivity, destruction and suffering as a consequence of violence.
- The total economic impact of violence containment is equivalent to over 37,000 *pesos* (US$3,000) for every citizen in Mexico.
- If violence containment expenditure was kept at 2003 levels, Mexico would gain 682.3 billion pesos per annum (US$52 billion) enough to pay for modernizing Mexico's public transportation infrastructure, or repaying one sixth of Mexico's public debt.
- The most peaceful Mexican states in 2003 experienced the strongest economic performance in 2011. These states' GDP grew by an additional 5 percent when compared to the least peaceful states.
- If all the states in Mexico were as peaceful as Campeche, Mexico would benefit from 2.26 trillion *pesos*.

2013 MEXICO PEACE INDEX

A SNAPSHOT OF THE STATE OF PEACE IN MEXICO

STATE OF PEACE

Most peaceful ← → Least peaceful

BAJA CALIFORNIA

SONORA

CHIHUAHUA

COAHUILA

BAJA CALIFORNIA SUR

SINALOA

DURANGO

ZACATECAS

NAYARIT

AGUASCA-
LIENTES

JALISCO

GU

COLIMA

MICHOA

RANK		STATE	SCORE
1		Campeche	1.47
2		Querétaro	1.69
3		Hidalgo	1.87
4		Yucatán	1.87
5		Baja California Sur	2.12
6		Veracruz	2.15
7		Chiapas	2.16
8		Oaxaca	2.26
9		San Luis Potosí	2.32
10		Tlaxcala	2.33
11		Puebla	2.52
12		Tabasco	2.53
13		Zacatecas	2.56
14		Nayarit	2.70
15		México	2.71
16		Sonora	2.80
17		Jalisco	2.82
18		Aguascalientes	2.87
19		Tamaulipas	2.92
20		Colima	3.04
21		Distrito Federal	3.05
22		Coahuila	3.07
23		Michoacán	3.10
24		Guanajuato	3.16
25		Durango	3.26
26		Nuevo León	3.34
27		Baja California	3.36
28		Quintana Roo	3.44
29		Chihuahua	3.51
30		Sinaloa	3.70
31		Guerrero	3.82
32		Morelos	4.15

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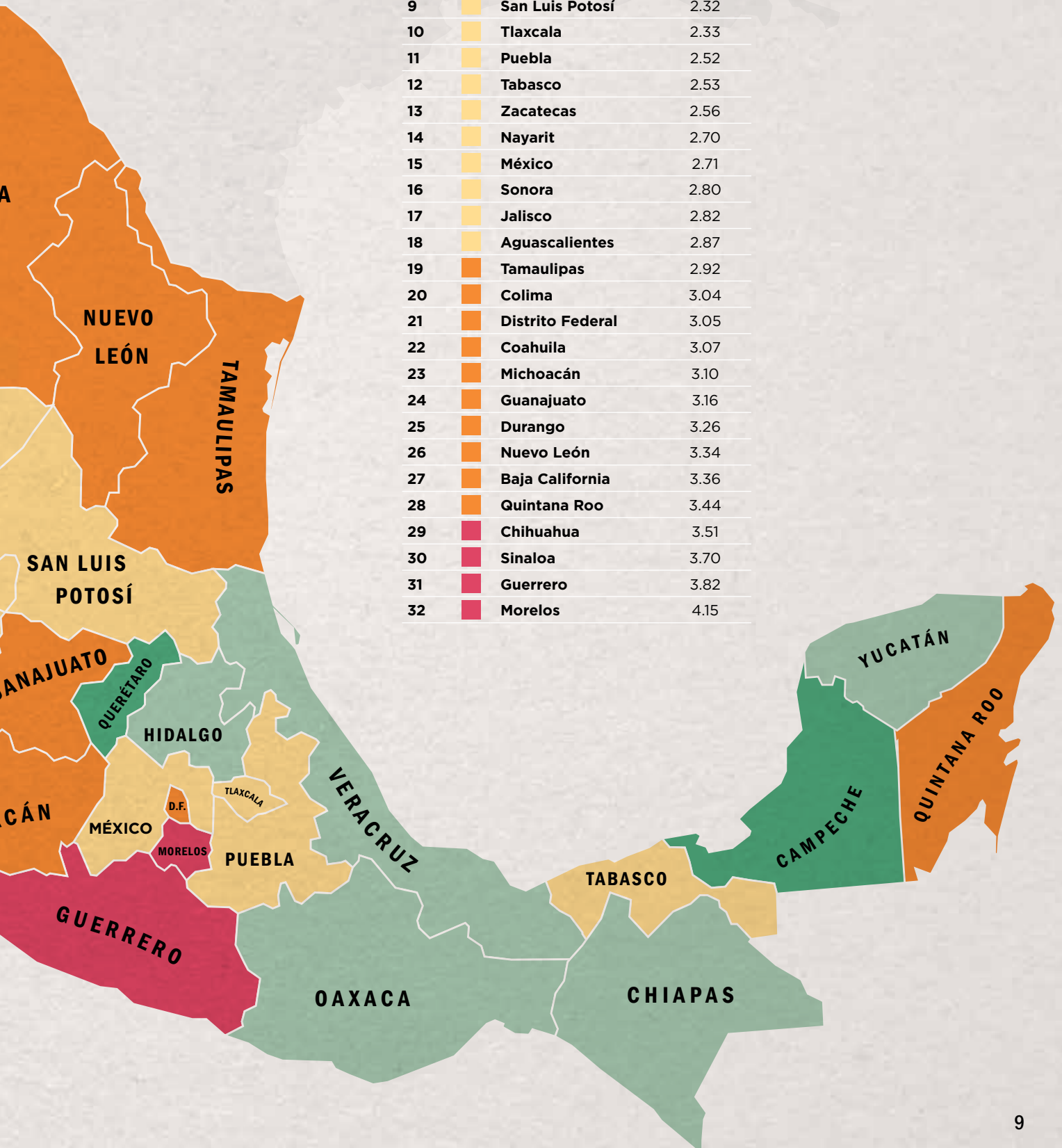
2013 MEXICO PEACE INDEX INDICATOR SCORES

As is clearly illustrated in Table 1.1, there are significant variations in peace between Mexican states. The results further indicate that more peaceful places tend to be located in the southeast of Mexico, with the exception of Quintana Roo, while the less peaceful places tend to be located in the northwestern states of Mexico, particularly along the US border.

Although there are a number of reasons for this growing disparity in peace, there is an undeniable tendency for the states with the least cartel activity to be more peaceful. Although this was expected, given the intensity of the drug war, the results suggest that violence is most acute where multiple cartels operate concurrently.

TABLE 1.1 2013 MEXICO PEACE INDEX INDICATOR SCORES
The 2013 Mexico Peace Index shows a wide-range of variation in peacefulness across Mexico.
The lower the score, the more peaceful the state.

RANK	STATE	OVERALL SCORE	HOMICIDE	INCARCERATION	VIOLENT CRIME	ORGANIZED CRIME	WEAPONS CRIME	POLICE FUNDING	JUSTICE EFFICIENCY
1	Campeche	1.47	1.15	1.37	1.00	1.23	1.44	4.88	1.39
2	Querétaro	1.69	1.33	2.08	2.11	1.05	5.00	2.63	2.90
3	Hidalgo	1.87	1.80	1.54	1.92	1.08	1.25	2.37	3.45
4	Yucatán	1.87	1.00	1.13	2.59	1.21	1.51	2.82	3.85
5	Baja California Sur	2.12	1.00	3.05	3.20	2.95	5.00	5.00	1.00
6	Veracruz	2.15	1.72	1.00	1.95	1.45	2.35	1.58	4.81
7	Chiapas	2.16	2.16	1.35	1.59	1.56	1.91	2.13	4.47
8	Oaxaca	2.26	1.44	1.00	2.74	1.69	5.00	2.11	3.82
9	San Luis Potosí	2.32	1.57	1.24	2.73	1.65	5.00	2.80	3.51
10	Tlaxcala	2.33	2.75	1.02	1.70	1.00	5.00	4.07	5.00
11	Puebla	2.52	1.65	1.17	3.78	2.21	3.53	1.64	4.33
12	Tabasco	2.53	1.63	1.47	4.81	2.09	5.00	2.65	3.63
13	Zacatecas	2.56	1.59	1.11	2.80	2.74	1.46	2.84	3.75
14	Nayarit	2.70	2.54	3.71	1.32	1.02	4.89	4.49	3.45
15	México	2.71	1.67	1.00	4.06	1.00	4.46	1.24	4.56
16	Sonora	2.80	2.44	4.65	2.19	1.74	3.07	3.77	3.38
17	Jalisco	2.82	1.77	2.29	3.32	2.55	5.00	1.50	2.85
18	Aguascalientes	2.87	1.19	2.11	5.00	3.67	4.47	3.40	4.23
19	Tamaulipas	2.92	2.88	1.49	3.20	3.02	5.00	2.85	4.77
20	Colima	3.04	3.57	3.63	2.78	1.27	2.93	5.00	4.30
21	Distrito Federal	3.05	1.27	3.34	4.54	3.72	2.37	1.82	1.60
22	Coahuila	3.07	2.46	1.00	3.37	1.36	1.00	2.62	4.97
23	Michoacán	3.10	3.28	1.23	2.16	3.62	2.33	2.11	4.80
24	Guanajuato	3.16	2.23	1.35	4.75	2.97	3.08	1.65	4.31
25	Durango	3.26	3.47	1.00	2.20	1.70	5.00	3.69	5.00
26	Nuevo León	3.34	2.69	1.32	2.73	3.28	3.53	2.06	5.00
27	Baja California	3.36	1.32	5.00	4.00	4.74	1.51	3.23	1.82
28	Quintana Roo	3.44	2.90	2.03	4.87	3.38	1.75	3.85	4.60
29	Chihuahua	3.51	4.34	1.00	2.41	2.10	1.51	2.58	5.00
30	Sinaloa	3.70	4.53	2.13	3.04	2.11	2.36	2.60	4.76
31	Guerrero	3.82	4.92	1.13	3.49	2.17	1.56	2.28	4.90
32	Morelos	4.15	4.82	1.00	5.00	2.41	3.16	3.08	5.00

CHANGES IN PEACE OVER THE LAST TEN YEARS

While the changes in peace in Mexico over last ten years have been significant, it is important to highlight that they are varied and are not all negative. Although the majority of states had a fall in peacefulness over the period, five states actually improved their score, with states like Oaxaca and Chiapas making very significant improvements, rising by 22 percent and 15 percent respectively.

It can be seen in Figure 1.1 below that the states in the

Central and North regions had significant deteriorations, with eight states experiencing deteriorations in the their MPI score of over 40 percent. This results in a greater spread in the distribution of peace scores, meaning violence is spread more unequally throughout the country. As a consequence, the difference between the most peaceful and the least peaceful state in 2012 is greater than it was in 2003. It is also important to note that during this period there has been much change with many states making year to year improvements showing positive change can occur as much as sudden deteriorations.

FIGURE 1.1 PERCENTAGE CHANGE IN MPI SCORES, 2003-2012
Despite the deterioration in peace in most states, some states have seen their peacefulness improve.

> 20% IMPROVEMENT
5% TO 20% IMPROVEMENT
5% TO -5% CHANGE
5% TO 20% DETERIORATION
20% TO 40% DETERIORATION
<40% DETERIORATION

STATE	SCORE CHANGE	STATE	SCORE CHANGE	STATE	SCORE CHANGE
Oaxaca	-22.24%	Veracruz	17.75%	Guerrero	37.31%
Chiapas	-14.52%	Zacatecas	23.62%	Guanajuato	39.68%
Yucatán	-9.74%	Distrito Federal	26.49%	Tabasco	41.09%
Querétaro	-5.17%	Jalisco	26.53%	Aguascalientes	47.72%
Campeche	-5.12%	Baja California	26.81%	Nayarit	49.80%
México	4.78%	Sonora	27.96%	Morelos	69.46%
Puebla	7.61%	Chihuahua	28.61%	Colima	70.56%
Baja California Sur	9.59%	Sinaloa	28.88%	Nuevo León	87.12%
Quintana Roo	10.80%	Michoacán	31.68%	Durango	91.45%
Tlaxcala	13.26%	Tamaulipas	33.36%	Coahuila	94.80%
Hidalgo	17.22%	San Luis Potosí	35.76%		

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METHODOLOGY AT A GLANCE

The Mexico Peace Index (MPI) derives from the work of the Global Peace Index, a leading global measure of peacefulness that has been produced by IEP annually since 2007. Based on a definition of peace as 'the absence of violence or fear of violence'; the Index follows a similar methodology to the United Kingdom Peace Index (UKPI) and the United States Peace Index (USPI).

The MPI measures peace at the state level in Mexico. A key reason for choosing this unit of analysis is that, similar to the United States, Mexico's state governments have wide-ranging powers allowing them to have a significant impact on the level of violence, therefore the response to violence may differ significantly from state to state.

The Index is composed of the following seven indicators:

1 HOMICIDE
■ *Homicide rate per 100,000 people*
Source: Executive Secretary of the National System for Public Security (SESNSP) - cases being investigated by the State Prosecution Authorities

2 VIOLENT CRIME
■ *Violent crime rate per 100,000 people*
Source: SESNSP

3 WEAPONS CRIME
■ *Weapons crime rate per 100,000 people*
Source: SESNSP

4 INCARCERATION
■ *Number of people sent to prison per year, per 100,000*
Source: National Institute of Statistics and Geography (INEGI)

5 POLICE FUNDING
■ *Federal Government funding to States for the Public Security Contribution Fund per 100,000*
Source: Secretaria de Hacienda y Crédito Publico (SHCP)

6 ORGANIZED CRIME
■ *The number of extortions, drug-related crimes, organized crime offenses, and kidnapping per 100,000*
Source: SESNSP

7 EFFICIENCY OF THE JUSTICE SYSTEM
■ *Proportion of homicide convictions to total homicides*
Source: INEGI

All indicators are scored between 1 and 5, with 1 being the most peaceful score, and 5 the least peaceful. After the score for each indicator has been calculated, weights are applied to each of the indicators in order to calculate the final score.

MEXICO PEACE INDEX EXPERT PANEL

An Expert Panel was established to provide independent advice and technical guidance to IEP researchers in developing the index methodology. The Panel is composed of experts from independent, non-partisan and academic organizations.

■ Edgar Guerrero Centeno, Director of Governmental Information Policies, Instituto Nacional de Estadística y Geografía (INEGI)
■ Edna Jaime, General Director, México Evalúa
■ Carlos J. Vilalta Perdomo, Professor, Centro de Investigación Y Docencia Económicas, A.C. (CIDE)
■ Eduardo Clark, Researcher, Instituto Mexicano para la Competitividad A.C. (IMCO)

MOST AND LEAST PEACEFUL STATES

Tables 1.2 and 1.3 show the scores and ranks of the five most peaceful and least peaceful states. There is a clear relationship between most of the indicators and their overall MPI score with the exception of incarceration and police funding. It should be noted that none of the five most peaceful states have high police funding scores.

TABLE 1.2 THE FIVE MOST PEACEFUL STATES

The most peaceful states have rates of homicide per 100,000 people significantly below the national rate of 32.5. Ranks indicated in parenthesis.

STATE	RANK	SCORE	HOMICIDE RATE PER 100,000	VIOLENT CRIME RATE PER 100,000	WEAPONS CRIME RATE PER 100,000	INCARCERATION RATE PER 100,000	POLICE FUNDING (PESOS) RATE PER 100,000	ORGANIZED CRIME RATE PER 100,000	JUSTICE SYSTEM EFFICIENCY
Campeche	1	1.47	15 (3)	280 (1)	3.12 (6)	107 (18)	13,308,323	26 (7)	0.45 (2)
Querétaro	2	1.69	18 (7)	2,087 (7)	0.37 (1)	168 (23)	7,345,243 (16)	13 (4)	0.64 (6)
Hidalgo	3	1.87	26 (16)	1,783 (5)	2.89 (4)	121 (21)	6,652,285 (12)	15 (5)	0.71 (9)
Yucatán	4	1.87	11 (1)	2,823 (12)	3.34 (8)	86 (11)	7,850,957 (19)	24 (6)	0.76 (14)
Baja California Sur	5	2.12	12 (2)	3,769 (19)	2.01 (2)	251 (27)	20,865,420 (32)	145 (24)	0.28 (1)

TABLE 1.3 THE FIVE LEAST PEACEFUL STATES

Ranks indicated in parenthesis.

STATE	RANK	SCORE	HOMICIDE RATE PER 100,000	VIOLENT CRIME RATE PER 100,000	WEAPONS CRIME RATE PER 100,000	INCARCERATION RATE PER 100,000	POLICE FUNDING (PESOS), RATE PER 100,000	ORGANIZED CRIME RATE PER 100,000	JUSTICE SYSTEM EFFICIENCY
Quintana Roo	28	3.44	44 (25)	6,368 (30)	7 (11)	164 (22)	10,589,433 (27)	175 (28)	0.86 (21)
Chihuahua	29	3.51	69 (29)	2,541 (11)	33 (30)	38 (2)	7,199,638 (13)	86 (17)	0.93 (30)
Sinaloa	30	3.70	72 (30)	3,526 (18)	55 (31)	172 (25)	7,251,140 (14)	87 (18)	0.88 (22)
Guerrero	31	3.82	79 (32)	4,220 (23)	56 (32)	87 (10)	6,392,330 (11)	91 (19)	0.90 (26)
Morelos	32	4.15	77 (31)	8,119 (32)	24 (28)	37 (1)	8,536,795 (22)	108 (21)	0.94 (32)

There is a strong relationship between lack of peacefulness and high homicide, weapons crime and violent crime rates. Moreover, the least peaceful states have high levels of justice system inefficiency, which represents the percentage of homicides that go unpunished.

Incarceration rates are also low in these states, highlighting an overwhelmed justice system with higher levels of unsolved crime and lower levels of incarceration. For instance, Morelos and Chihuahua, both in the bottom five of the Index, have very low incarceration rates as opposed to Sinaloa and Quintana Roo, where incarceration is relatively high.

THE 5 MOST PEACEFUL STATES

CAMPECHE: 1ST

DESCRIPTION	VALUE
Overall score	1.47
Homicide rate per 100,000 people	15
Violent crime rate per 100,000 people	280
Organized crime rate per 100,000 people	26
Incarceration rate per 100,000 people	107
Police funding (pesos) per 100,000 people	13,308,322
Efficiency of the justice system	45%
Weapons crime rate per 100,000 people	3

Campeche is the most peaceful state in Mexico in the 2013 MPI. Campeche is a relatively small state in the southeast of Mexico, with an estimated population of just over 850,000 people, making it the third least populated state. Campeche has the lowest violent crime rate in Mexico, the third lowest homicide rate, the second lowest impunity ratio, and the sixth lowest level of weapons crime.

Campeche has been the most peaceful state in Mexico for six of the last ten years and has never been ranked lower than second (see Appendix C for state rankings 2003-2012). Over the past decade it has bucked the national trend and become slightly more peaceful, moving from a score of 1.55 in 2003 to 1.47 in 2012. This was due to the incarceration rate decreasing by 50 percent, the homicide rate declining by 25 percent, a 31 percent lower violent crime rate, and an improvement in the justice system efficiency indicator of 21 percent. Although these indicators have improved significantly, the overall level of peace has not moved as much as expected because the improvements have been counteracted by deteriorations in the organized crime and police funding indicators.

Campeche has remained relatively free of the drug war violence that has plagued many other parts of the country since 2006. According to the *Reforma* database, Campeche had only four drug violence-related homicides in 2011, with a cumulative total of 16 since 2006. This highlights the dramatic differences between states. By contrast, Chihuahua had over a 1,000 drug related deaths in a single week during November 2011.

Part of Campeche's success in remaining relatively violence-free in contrast to some of its neighbouring states, most notably Quintana Roo, has stemmed from its economic performance. Campeche accounts for almost 40 percent of Mexico's oil and gas production, and the state also has a flourishing tourism industry. It has the highest GDP per capita of any Mexican state by a considerable margin, an unemployment rate under 2.5 percent. It also has relatively low levels of multidimensional poverty as measured by the Oxford Poverty and Human Development Initiative's (OPHI) Multidimensional Poverty Index. Low levels of poverty, high employment rates and high per capita income are generally associated with more peaceful states .
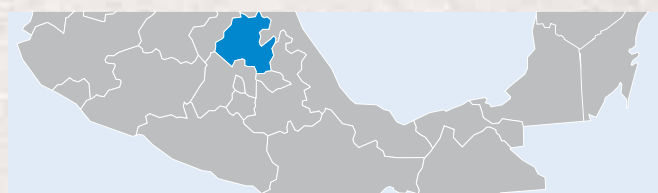
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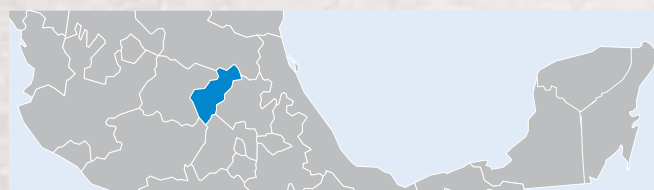
DESCRIPTION	VALUE
Overall score	1.69
Homicide rate per 100,000 people	18
Violent crime rate per 100,000 people	2087
Organized crime rate per 100,000 people	13
Incarceration rate per 100,000 people	168
Police funding (pesos) per 100,000 people	7,345,242
Efficiency of the justice system	64%
Weapons crime rate per 100,000	0.37

Querétaro, located in central Mexico, is one of the smallest states but also one of the most densely populated, with a population of just under two million people. It is the second most peaceful state in Mexico, and is one of the largest improvers in the Mexico Peace Index, having been ranked 6th in 2003 (refer to Appendix C for state rankings 2003-2012). It has become more peaceful over the last decade, with its overall score moving from 1.78 a decade ago to 1.69 in 2012. It was the most peaceful state in Mexico in 2008 and 2010. Its improvement in peace is due to organized crime decreasing by 63 percent and the incarceration rate declining by 40 percent. It also saw a 26 percent decline in the homicide rate and a 29 percent decline in weapons crime. The overall improvement in peace has not been as large as one would have expected due to a 22 percent increase in the violent crime rate and no change in the efficiency of the justice system, partially counteracting the positive movement of other indicators.

Querétaro scores particularly well on the weapons crime indicator, with the lowest level of weapons crime of any state in Mexico. It is also placed in the top seven states on every indicator other than police funding and incarceration, and has a low score on the organized crime indicator.

Querétaro has been relatively untouched by drug related violence, with less than one drug related homicide per 100,000 people in 2009. There has been a slight upsurge in drug related killings over the past two years, with 23 recorded deaths in 2010, and 16 in 2011, according to the *Reforma* database.

HIDALGO: 3RD

DESCRIPTION	VALUE
Overall score	1.87
Homicide rate per 100,000 people	26
Violent crime rate per 100,000 people	1783
Organized crime rate per 100,000 people	15
Incarceration rate per 100,000 people	122
Police funding (pesos) per 100,000 people	6,652,284
Efficiency of the justice system	71%
Weapons crime rate per 100,000 people	3

Hidalgo is a mid-sized state in central Mexico and is the third most peaceful state in the 2013 MPI. Hidalgo has a relatively high population density with a total population of over 2.7 million people. Hidalgo's economy has grown solidly since 2003, averaging five percent growth over this period.

The state has relatively low levels of multidimensional poverty, as measured by OPHI's Multidimensional Poverty Index, with less than four percent of the population living in poverty, although its GDP per capita is lower than the national average, and the unemployment rate is now 4.5 percent.

Despite being ranked third on the MPI, Hidalgo has become less peaceful over the last decade, moving from a score of 1.59 in 2003 to 1.87 in 2012. However, this score change of 0.27 was still well below the state average change of 0.6 over the same period. Hidalgo performs well on the violent crime, organized crime, and weapons crime indicators, being ranked in the top five for each, although its homicide rate, at 25.8 per 100,000 people, is higher than the other five most peaceful states.

Although Hidalgo has been affected by the drug war in Mexico, with a drug related homicide rate of 8 per 100,000 in 2010, it is still well below the national average of 17 drug related homicides per 100,000 people in the same year.

YUCATÁN: 4TH

DESCRIPTION	VALUE
Overall score	1.87
Overall rank	4
Homicide rate per 100,000 people	11
Violent crime rate per 100,000 people	2823
Organized crime rate per 100,000 people	24
Incarceration rate per 100,000 people	87
Police funding (pesos) per 100,000 people	7,850,957
Efficiency of the justice system	76%
Weapons crime rate per 100,000 people	3

Yucatán, the fourth most peaceful state in Mexico, is located in the far southeastern corner of Mexico, bordering Quintana Roo and Campeche, with a coastline on the Gulf of Mexico. Merida, the capital city of Yucatán, was declared a City of Peace in 2011, and the state has been one of the most peaceful in Mexico over the last decade. Although Yucatán's distance from more violent regions of Mexico may be partially responsible for its relative stability in terms of peace, it also has experienced strong economic growth since 2003 which has assisted in maintaining relatively high levels of prosperity.

Yucatán not only had the lowest homicide rate in Mexico in 2012 (10.7) but also low levels of organized and weapons crime. However, the level of violent crime, ranked 12th in the

country, and the poorest justice efficiency rate of the five most peaceful states at 76 percent, keeps Yucatán from being ranked in the top three most peaceful states.

Yucatán has been one of the biggest improvers on the MPI over the last decade. It has experienced the third largest increase in peace of any Mexican state; only Chiapas and Oaxaca had larger increases. This meant that Yucatán moved from 16th on the MPI in 2003 to 4th in 2012. The state's improvement in peace is mainly due to a drop in the homicide rate by 34 percent, in the incarceration rate by 60 percent and in the violent crime rate by 23 percent, since 2003. The overall improvement in peace in Yucatán was only 10 percent due to the deterioration in both the organized crime and the weapons crime indicators during the same period.

Yucatán has low levels of multidimensional poverty with less than 4 percent of the population being deprived in more than one domain and an unemployment rate of just over 2.5 percent, compared to the national rate of just over 4.5 percent. Most strikingly, Yucatán has been almost unaffected by the drug war related violence, with no drug related homicides in 2011 and 2012.

BAJA CALIFORNIA SUR: 5TH

DESCRIPTION	VALUE
Overall score	2.12
Homicide rate per 100,000 people	12
Violent crime rate per 100,000 people	3769
Organized crime rate per 100,000 people	145
Incarceration rate per 100,000 people	252
Police funding (pesos) per 100,000 people	20,865,419
Efficiency of the justice system	28%
Weapons crime rate per 100,000 people	2

Baja California Sur is the only northern state amongst the five most peaceful states on the MPI. Baja California Sur is the least densely populated of any of the Mexican states, as well as having the second smallest population overall. Baja California Sur has experienced a high degree of volatility over the last decade, having been ranked 12th in 2003, 30th in 2007, and 5th in 2012.

Unlike other states, Baja California Sur had its biggest declines in peace prior to 2006 and its biggest improvements after 2007. The large deterioration in peace between 2003 and 2007 was mainly caused by a 290

percent increase in the number of drug-related crimes including production, transport, traffic or provision of drugs. These offenses have been included in the organized crime indicator. During the same period there was also a 40 percent increase in the number of homicides per 100,000 people and in the rate of violent crimes, which went up by 39 percent.
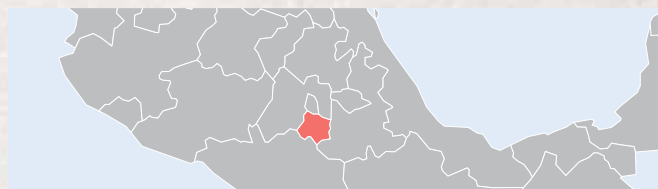
Baja California Sur experienced a negative trend until 2007, which has since dramatically reversed with a significant decrease in the number of drug-related crimes and a homicide rate that dropped from 18 per 100,000 in 2007 to 12 in 2012. This significant improvement can be partially explained by a more efficient judicial system reflected in a much lower rate of unpunished homicides. The indicator that measures the efficiency of the judicial system has improved by 60 percent since 2003, the highest improvement for this indicator in Mexico.

Baja California Sur has the highest level of police funding per capita of any state in Mexico, as well as one of the highest incarceration rates. However, it also ranks the best on the justice efficiency indicator of any state in Mexico, has the second lowest homicide rate, and the second lowest weapons crime rate. It has not felt the impact of the drug war to the same extent as its northern neighbor Baja California, with only three drug related homicides from 2006 to 2009. However, there has been an increase in violence over the last two years, with significant increases in the number of extortions, robberies and assaults.

Baja California Sur has very low levels of multidimensional poverty; less than 1 percent of the population is deprived on more than one dimension, according to OPHI's Multidimensional Poverty Index, and it also has the lowest levels of fear of crime of any state according to the 2012 ENVIPE survey, with only 28.6 percent of residents feeling that their state is unsafe, compared to the national average of 60 percent.

THE 5 LEAST PEACEFUL STATES

although in this instance this is almost certainly a reflection of an overwhelmed judicial system, given the high impunity rate.

Morelos has experienced the single largest deterioration in peace of any Mexican state, with its MPI score moving 1.7 points from 2003 to 2012. Its homicide rate increased from just over 30 to 77 homicides per 100,000, the rate of unpunished homicide increased from 77 percent to 94 percent, and the violent crime rate nearly doubled. Morelos also has the most 'robust' MPI score, meaning that it scored poorly across a broader range of indicators than any other state. The majority of the violence is located in the state capital Cuernavaca.

GUERRERO: 31ST
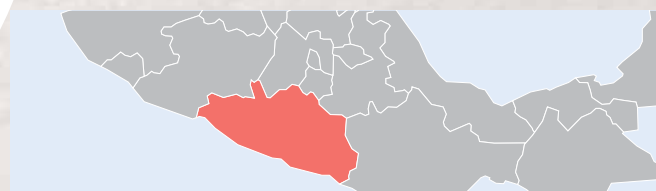
DESCRIPTION	VALUE
Overall score	3.82
Homicide rate per 100,000 people	79
Violent crime rate per 100,000 people	4220
Organized crime rate per 100,000 people	91
Incarceration rate per 100,000 people	87
Police funding (pesos) per 100,000 people	6,392,329
Efficiency of the justice system	90%
Weapons crime rate per 100,000 people	56

Guerrero is the only southern state in the five least peaceful states in Mexico. Like many other states in Mexico, the economy in Guerrero is heavily based around tourism, and a lack of other economic opportunities has meant that many workers emigrate from Guerrero to the US. Guerrero is the most socio-economically deprived state of the five least peaceful states, and has the highest level of multidimensional poverty in the country. Over 12 percent of residents in Guerrero are deprived in more than one dimension and over 15 percent of the adult population is illiterate.

Guerrero performs poorly on most MPI indicators. In 2012 it had the highest homicide rate in the country, with over 78 homicides per 100,000 people. It also had the highest weapons crime rate and one of the highest impunity ratios. There were only 10 sentences for every 100 homicides in Guerrero in 2012. Guerrero had the sixth highest overall deterioration in peace over the last decade, with a fall in its MPI score of over one point, more than 25 percent of the potential range of the entire Index.

Guerrero has been ranked as low as 24th in the last five

MORELOS: 32ND

DESCRIPTION	VALUE
Overall score	4.15
Homicide rate per 100,000 people	77
Violent crime rate per 100,000 people	8119
Organized crime rate per 100,000 people	107
Incarceration rate per 100,000 people	37
Police funding (pesos) per 100,000 people	8,536,795
Efficiency of the justice system	94%
Weapons crime rate per 100,000 people	24

Morelos is ranked the least peaceful state on the 2013 MPI. Morelos has the second highest homicide rate in Mexico, the worst violent crime rate, one of the worst weapons crimes rates, and the worst value for justice efficiency in the country with 94 percent of homicides not being sentenced. Interestingly, it actually has the lowest year-on-year incarceration rate of any Mexican state,

years (see Appendix C for movements in state rankings over time), but the level of violence has greatly increased in the last two years. This is reflected in the number of drug related homicides, which increased over 400 percent from 2008 to 2011 . Almost 5,000 people have died in Guerrero from drug related violence since 2006. Moreover, one of the cities in Guerrero that is internationally well known as a tourist destination, Acapulco, has been ranked as the second most violent city in the world with a record of 143 homicides per 100,000 people (*Consejo Ciudadano para la Seguridad Publica y Justicia Penal A.C.,* 2012) .
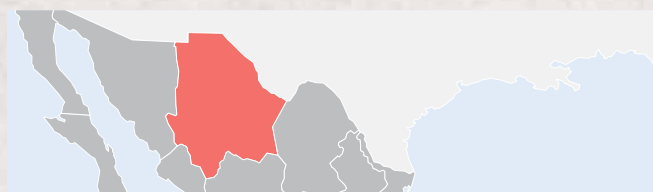
SINALOA: 30TH

DESCRIPTION	VALUE
Overall score	3.7
Homicide rate per 100,000 people	72
Violent crime rate per 100,000 people	3526
Organized crime rate per 100,000 people	87
Incarceration rate per 100,000 people	172
Police funding (pesos) per 100,000 people	7,251,140
Efficiency of the justice system	88%
Weapons crime rate per 100,000 people	55

Sinaloa has been considered a hotbed of organized crime activity for many years. Sinaloa is home to the Sinaloa Cartel, also known as the Pacific Cartel, which is considered to be one of the most powerful criminal organizations in the entire world. Sinaloa, along with Chihuahua and Durango, is part of the 'Golden Triangle,' an area where most of Mexico's marijuana and heroin is produced. Sinaloa is one of the poorest regions in Mexico except for the southern agricultural states, although the unemployment rate is slightly under the national average.

Sinaloa has been heavily affected by violence related to the drug war. There have been over 6,600 homicides related to the drug war in Sinaloa since 2006. The violence peaked in 2010 when over 2,000 people were killed. Sinaloa has the third highest homicide rate, the second highest weapons crime rate, and the eighth highest incarceration rate in Mexico. It has also experienced one of the worst deteriorations in peace in the country over the last decade, with a shift in score of 0.83 points which is well above the national average. However, because the level of violence in Sinaloa was already remarkably high 10 years ago, this deterioration had little effect on Sinaloa's ranking. It has

never been ranked better than 30th, and has been the least peaceful state in Mexico for half of the last decade (see Appendix C).

CHIHUAHUA: 29TH

DESCRIPTION	VALUE
Overall score	3.51
Homicide rate per 100,000 people	69
Violent crime rate per 100,000 people	2541
Organized crime rate per 100,000 people	86
Incarceration rate per 100,000 people	38
Police funding (pesos) per 100,000 people	7,199,638
Efficiency of the justice system	93%
Weapons crime rate per 100,000 people	33

Chihuahua, a border state in the north of Mexico, has experienced some of the most serious drug war-related violence in the country, owing to its location next to the US border, and the high levels of cartel activity within its boundaries. One of the most prominent cities in Chihuahua is Ciudad Juarez, which has the unfortunate distinction of being in the top 15 cities with the highest homicide rate of any city in Mexico at over 49 deaths per 100,000 people (*Consejo Ciudadano para la Seguridad Publica y Justicia Penal A.C.,* 2012).

Chihuahua has the fourth highest homicide rate and the third highest weapons crime rate in Mexico, while the number of recorded kidnapping and extortion cases is slightly better than the Mexican state average. There were only eight homicide prosecutions for every 100 homicides in 2012. The fear of violence in Chihuahua is also higher than in any other state with 88.5 percent of residents surveyed feeling that their state is unsafe.

The level of violence in Chihuahua has greatly increased over the last decade. The homicide rate has almost tripled, from 28.45 to 68.88 per 100,000 people and its overall peacefulness decreased more than the average for Mexico. In 2003 the level of violence was high, with Chihuahua being ranked 29th. Chihuahua was also the least peaceful state in Mexico in 2008 and 2009.

QUINTANA ROO: 28TH

DESCRIPTION	VALUE
Overall score	3.44
Homicide rate per 100,000 people	44
Violent crime rate per 100,000 people	6368
Organized crime rate per 100,000 people	175
Incarceration rate per 100,000 people	164
Police funding (pesos) per 100,000 people	10,589,433
Efficiency of the justice system	86%
Weapons crime rate per 100,000 people	7

Quintana Roo is Mexico's easternmost state, located in the southeastern corner, bordered by Yucatán, Campeche, and the Gulf of Mexico. It is the fifth least peaceful state in the 2013 MPI despite having a prominent tourism industry, including Cancun, which is one of the most popular tourist destinations in Mexico, a higher than average GDP per capita, and a low unemployment rate.

Quintana Roo fares poorly on all seven MPI indicators except weapons crime. It has a particularly high violent crime rate being the third worst in the country, despite the high levels of per capita federal funding for police. It also has a homicide rate of over 40 per 100,000, and kidnapping and extortion offenses are also high. The number of homicides has increased markedly over the last three years, rising from 24 per 100,000 people in 2006 to over 50 per 100,000 in 2010. While the level of peacefulness has decreased in Quintana Roo over the last decade, the change in score of 0.33 is still below the national average of 0.60. The state has been ranked in the bottom five least peaceful states for half of the last decade, and has never been ranked higher than 19th.

RISERS AND FALLERS 2003-2012

Perhaps one of the most intriguing insights from the 2013 Mexico Peace Index is how unevenly the drug war has impacted the states of Mexico. Some of the most peaceful states in 2003 are now the least peaceful, while the most peaceful state in the 2013 MPI, Campeche, has always been highly peaceful. Although the causes of the changes vary from state-to-state, examining these movements in greater detail can be insightful to identify the factors associated with changes in peace.

BIGGEST IMPROVEMENT IN PEACE, OAXACA

Oaxaca is a southeastern state of Mexico that borders Guerrero, Puebla, Veracruz and Chiapas. It improved 23 places on the MPI since 2003 reaching rank 8 in 2012. The state experienced a remarkable reduction in homicides, decreasing 64 percent between 2003 and 2012. This was accompanied by a reduction in the number of people sentenced and an increase in police funding of 160 percent.

TABLE 1.4: STATES WITH THE BIGGEST IMPROVEMENTS IN PEACE
Oaxaca, Chiapas and Yucatán have experienced significant increases in levels of peacefulness over the last decade.

	CHANGE IN MPI SCORE	2003 SCORE	2012 SCORE	2003 RANK	2012 RANK
Oaxaca	- 0.65	2.90	2.26	31	8
Chiapas	- 0.37	2.52	2.16	25	7
Yucatán	- 0.20	2.07	1.87	16	4
Querétaro	- 0.09	1.78	1.69	6	2
Campeche	- 0.08	1.55	1.47	1	1

Although the homicide rate dropped substantially in Oaxaca this was not accompanied by a simultaneous drop in violent crimes, in fact there was a marginal increase of nine percent in violent crime over the decade. Oaxaca is also a state that has experienced political violence in 2006 with protests against the state government. Despite this, the overall trend has been highly positive, showing an increase in peacefulness since 2003.

TABLE 1.5: OAXACA HAS EXPERIENCED IMPROVEMENTS IN THE MAJORITY OF ITS PEACE INDICATORS

Oaxaca homicide rate per 100,000 people has decreased significantly (64 percent) since 2003.

	2003	2012	% CHANGE
Overall Score	2.9	2.3	-22%
Overall Rank	31.0	8.0	-74%
Homicide Rate per 100,000	55.0	19.7	-64%
Violent Crime Rate per 100,000'	2,821.9	3,063.9	9%
Weapons Crime Rate per 100,000	10.2	9.2	-10%
Incarceration rate per 100,000	173.0	58.5	-66%
Police Funding, expenditure per 100,000 (pesos)	2,295,691	5,963,113	160%
Organized Crime (kidnapping, extortion and crimes against public health) per 100,000	62.9	57.7	-8%
Justice System Efficiency (proportion of homicides not sentenced)	0.86	0.76	-12%

BIGGEST DETERIORATION IN PEACE, MORELOS

Morelos is a state in the southeast of Mexico, bordering Mexico City, the State of Mexico, Guerrero and Puebla. As described, it has experienced the single largest deterioration in peace of any state, with its MPI score deteriorating 1.7 points from 2003 to 2012. The homicide rate in Morelos more than doubled, moving from just over 30 to just under 77 homicides per 100,000 people. Along with the increase in homicides, justice inefficiency has also increased with the proportion of non-convicted homicides rising from 77 to 94 percent between 2003 and 2012.

TABLE 1.6: STATES WITH THE BIGGEST FALLS IN PEACE

Morelos, Durango and Nuevo León have experienced substantial falls in levels of peacefulness over the last decade.

	CHANGE IN MPI SCORE	2003 SCORE	2012 SCORE	2003 RANK	2012 RANK
Morelos	1.70	2.45	4.15	24	32
Durango	1.55	1.70	3.26	4	25
Nuevo León	1.55	1.78	3.34	8	26
Coahuila de Zaragoza	1.50	1.58	3.07	2	22
Colima	1.26	1.78	3.04	7	20

Morelos is ranked the least peaceful state on the 2013 MPI. Although Morelos has not been as strongly affected by drug-related violence as some other states in Mexico, it has still performed poorly across all seven indicators. Morelos has the second highest homicide rate in Mexico, the worst violent crime rate, one of the worst weapons crimes rates, and the single worst impunity ratio in the country. Interestingly, it actually has the lowest year-on-year incarceration rate of any Mexican state, although in this instance this is almost certainly a reflection of an overwhelmed judicial system, given the high level of unpunished crimes. Morelos also has the most 'robust' MPI score, meaning that it scored poorly across a broader range of indicators than every other state. The majority of this violence is located in the state capital Cuernavaca.

TABLE 1.7: MORELOS HAS EXPERIENCED DETERIORATIONS IN THE MAJORITY OF ITS INDICATORS

The weapons crime and homicide rates per 100,000 people have experienced significant increases since 2003.

	2003	2012	% CHANGE
Overall Score	2.4	4.1	69%
Overall Rank	24.0	32.0	33%
Homicide Rate per 100,000	30.6	77.0	152%
Violent Crime Rate per 100,000	4,496.0	8,119.5	81%
Weapons Crime Rate per 100,000	2.6	24.0	810%
Incarceration rate per 100,000	104.9	37.4	-64%
Police Funding, expenditure per 100,000 (pesos)	3,196,558	8,536,795	167%
Organized Crime (kidnapping, extortion and crimes against public health) per 100,000	123.5	107.5	-13%
Justice System Efficiency (proportion of homicides sentenced)	0.77	0.94	23%

TRENDS IN PEACE: 2003 – 2012

The level of peacefulness in Mexico as measured by the MPI score declined 27.5 percent over the last ten years. However, as can be seen in Figure 1.2, the last two years have seen a change in the MPI trend showing a 7.4 percent improvement in peace.

In the three-year period preceding 2007, there was a six percent deterioration in the level of peace. There was a significant deterioration after 2007 when the level of peace decreased by 15.4 percent. This rapid decline in peace since 2007 can be partially explained by a noticeable increase of 88 percent in the rate of weapon crimes per 100,000 people and by the homicide rate, which increased by 37 percent during the same period.

While there is no doubt that the drug war has been the source of a massive increase in violence in Mexico, there are a number of states that have actually become more peaceful over the last decade. Furthermore, not every type of violence has increased at the same rate, and not every region has exhibited the same trend. Additionally, there is a divergence between the most and least peaceful states in Mexico.

There is also some good news as the last two years have shown a slight improvement in peace in Mexico, with the measure of peace improving by 1.4 percent in 2011 and six percent in 2012. A a number of indicators are showing signs of improvement, with weapons crime and violent crime decreasing in the last year. The most striking improvement is in the level of organized crime, which has fallen by approximately 30 percent over the last three years.

 Figure 1.3 shows the trend in the homicide rate in Mexico from 2003 to 2012. The homicide rate did not begin to increase dramatically until after operation *"Michoacan"*, which was initiated on

FIGURE 1.2 MEXICO PEACE INDEX - OVERALL SCORE, 2003-2012

The level of peace in Mexico has decreased by 27.5 percent since 2003.

MPI - OVERALL SCORE

LESS PEACEFUL

The level of peace in Mexico has decreased by 27.5 percent since 2003.
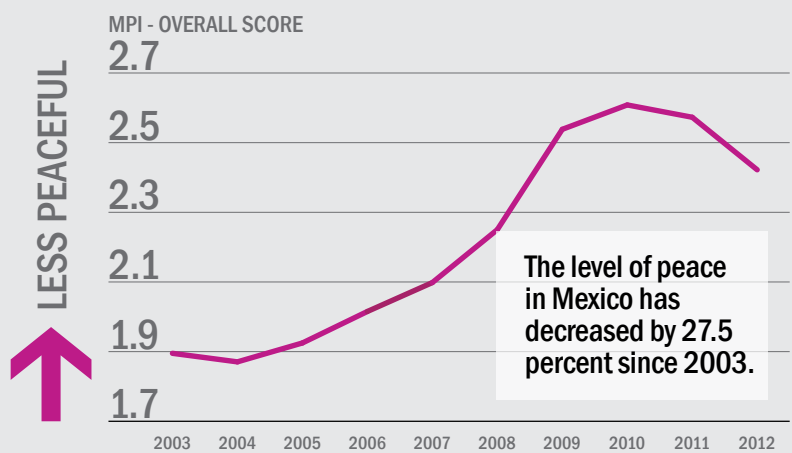
Source: IEP

FIGURE 1.3 HOMICIDE RATE, MEXICO (2003-2012)

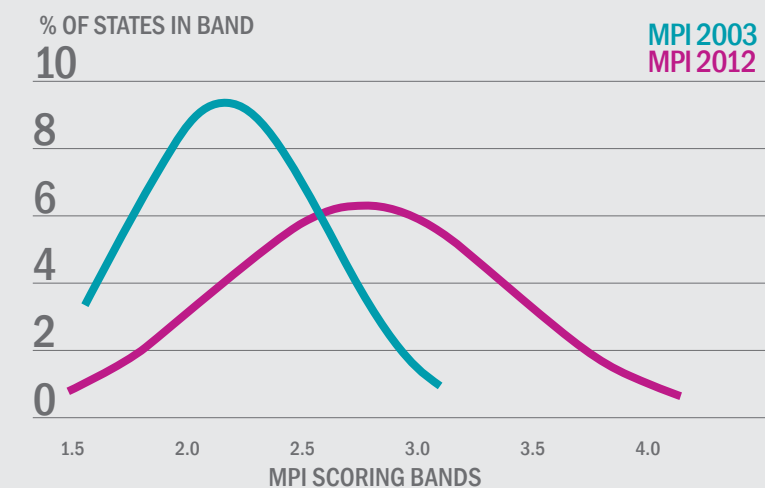The homicide rate increased rapidly after 2007.

HOMICIDE RATE (INCIDENTS PER 100,000 PEOPLE)

Source: IEP

FIGURE 1.4 DISTRIBUTION OF MPI SCORE 2003 TO 2012

The distribution of MPI scores has tended towards greater levels of violence. Violence is more unequally distributed today.

% OF STATES IN BAND

MPI 2003
MPI 2012

MPI SCORING BANDS

Source: IEP

December 11, 2006. Prior to the start of the drug war the homicide rate had been steadily decreasing since 1995, before increasing rapidly from 2007 onwards.

Figure 1.4 shows the distribution of MPI scores in 2003 and again in 2012. In 2003 average scores on the MPI were both more peaceful and more tightly distributed, with no state having a score higher than 3.2, and the majority of states being clustered in the 2 to 2.5 range.

In 2012 there is a lower average level of peace, as well as far more variance in state scores. The range now stretches from just below 1.5 to over 4, with an average score of over 2.5 and almost 50% of states having scores greater than 3. This shows that the increase in violence has affected almost all states, but not all in equal proportion. There seems to have been a divergence between more and less peaceful states, rather than an equal shift

FIGURE 1.5 MPI INDICATOR RATE MOVEMENTS (2003-2012)

Movements at the national level paint a clear picture: increasing levels of violence began to overwhelm the justice system after 2006.

POLICE FUNDING
(MILLIONS OF PESOS PER 100,000 PEOPLE)

VIOLENT CRIME
(INCIDENTS PER 100,000 PEOPLE)

WEAPONS CRIME
(INCIDENTS PER 100,000 PEOPLE)

INCARCERATION
(INCIDENTS PER 100,000 PEOPLE)

ORGANIZED CRIME
(INCIDENTS PER 100,000 PEOPLE)

JUSTICE EFFICIENCY
(PERCENTAGE OF HOMICIDES NOT SENTENCED)

Source: IEP

While the trend in the homicide rate is clear, the trends for the remaining MPI indicators are not quite so clear-cut. Figure 1.5 shows the movements in the six remaining MPI indicators from 2003 to 2012. After homicides, the justice efficiency indicator is one of the poorest performers. This indicator measures the percentage of homicides that get sentenced. It is a proxy measure for the efficiency of the justice system and whether there is a high level of impunity and the system is overwhelmed. The greatest proportional increases since 2003 were in police funding and weapons crime, both of which are now more than twice as large as they were a decade ago.

Both organized crime and weapons crime increased dramatically after 2006, which is in keeping with the general expected trend. However, there has been a turnaround in these indicators with a sharp improvement in both. The organized crime indicator has improved by 30 percent since 2009 and the weapons crime and violent crime indicators have improved by 15 percent and 7 percent respectively in 2012. This has led to some speculation that drug war violence is beginning to plateau and stabilize, although it is

far too early to know.

Both federally allocated police spending and the organized crime rate (kidnapping, extortion, organized crime offenses and drug-related crimes) were sharply increasing before 2007, which suggests that the dynamics of the drug war were taking shape earlier.

Figure 1.6 shows a comparison of the proportional changes in each of the seven MPI indicators. The greatest increases have been in police funding, weapons crime and organized crime with relatively smaller changes in homicide, justice efficiency and violent crime. The relatively small changes in violent crime and justice efficiency are somewhat masked by the very large percentage changes in weapons crime and police funding, with both increasing their score by over 100 percent over the last decade. organized crime increased 73 percent while violent crime was only 6 percent higher over the decade and peaked in 2009.

The conviction rate measured by the incarceration indicator is notably down on 2003 levels. The significant increase in police funding shows the government has responded to the increases in homicide, weapons crime, and organized crime but has been unable to keep the efficiency

FIGURE 1.6 – INDEX OF INDICATOR MOVEMENTS (2003-2012, 2003 = 100)
The greatest proportional increase has been in homicide, police, organized crime, and weapons crime.

HOMICIDE
ORGANISED CRIME
JUSTICE EFFICIENCY
INCARCERATION
FIREARMS
VIOLENT CRIME
POLICE FUNDING
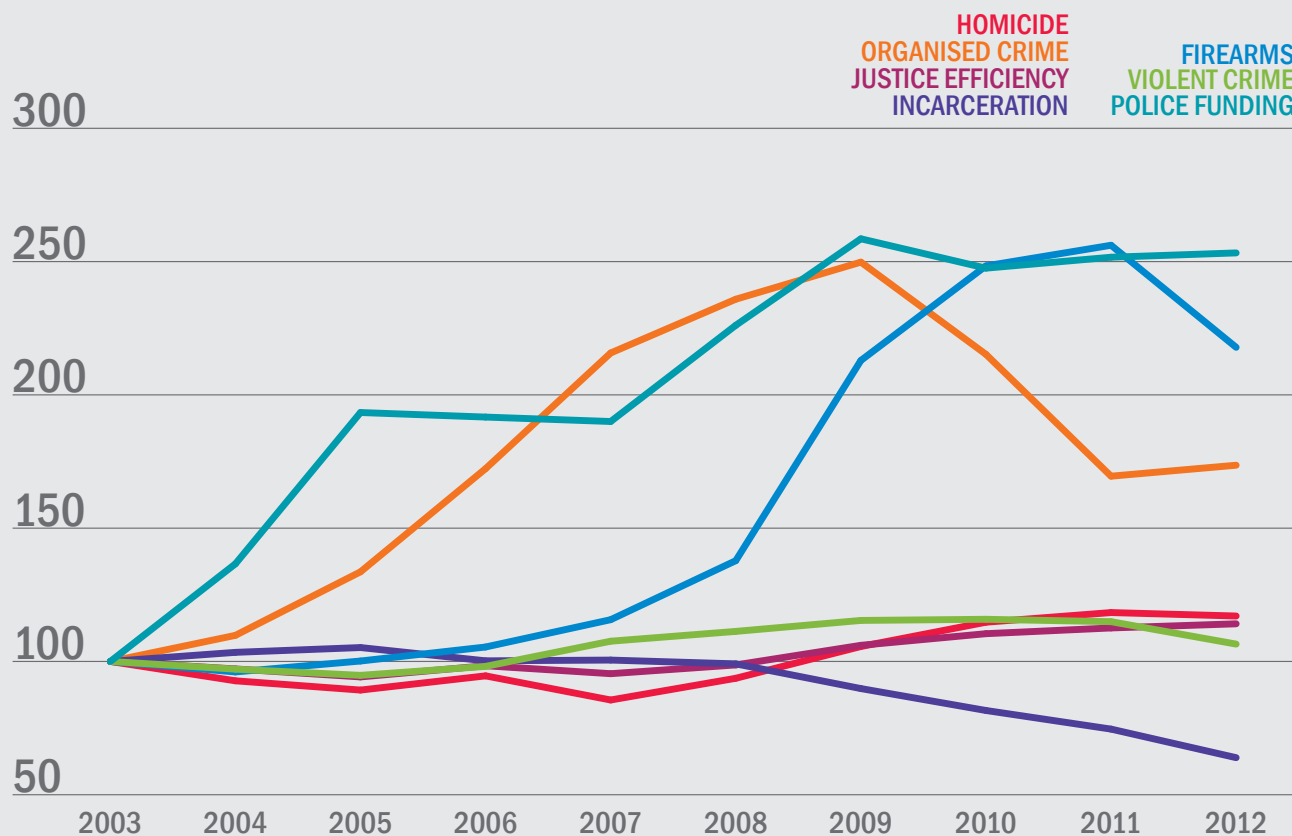
Source: IEP

of the justice system from deteriorating when compared to 2003.

In terms of international comparisons, comparable data from other countries on homicide sentences as a percentage of total homicides, commonly known as the 'clearance rate' in the US, is difficult to find. However, most estimates for the US indicate that around 65 percent of homicides go to trial. The figure in the UK is just over 80 percent. The equivalent figure in Mexico is approximately 18 percent.

REGIONAL TRENDS WITHIN MEXICO

Every region in Mexico experienced deteriorations in peace over the last decade, with the greatest increase in violence coming in the northern border states. Somewhat surprisingly, there did not seem to be a spill-over effect into the southern border states of the US where peacefulness has actually improved over the last decade according to the USPI. The smallest decrease in peace was recorded in the eastern states of Mexico, which remains the most peaceful region in Mexico by a clear margin. The South is the second most peaceful region, despite its high levels of poverty and socio-economic deprivation.

Figure 1.7 shows the divergence in regional scores over the last decade. In 2003, every region other than the East had scores clustered around 2, with the South being the least peaceful region. However, over the last decade the least peaceful regions began to diverge from the most peaceful regions, with the change being most notable in the northern states, particularly those along the US-Mexico border. The location of these states makes them obvious choices for organized crime syndicates seeking to smuggle drugs into the US and weapons back into Mexico. While the southern region was the least peaceful in 2003, it is now the second most peaceful after the East although some southern states have been affected by violence related to the drug war, most notably Guerrero. The position of the southern region is also surprising given that the South has

FIGURE 1.7 – MPI REGIONAL TRENDS
Every region saw a deterioration in peace over the last decade.

WEST
EAST
SOUTH
NORTH
CENTRAL
OVERALL

MPI - OVERALL SCORE

LESS PEACEFUL

Source: IEP

24
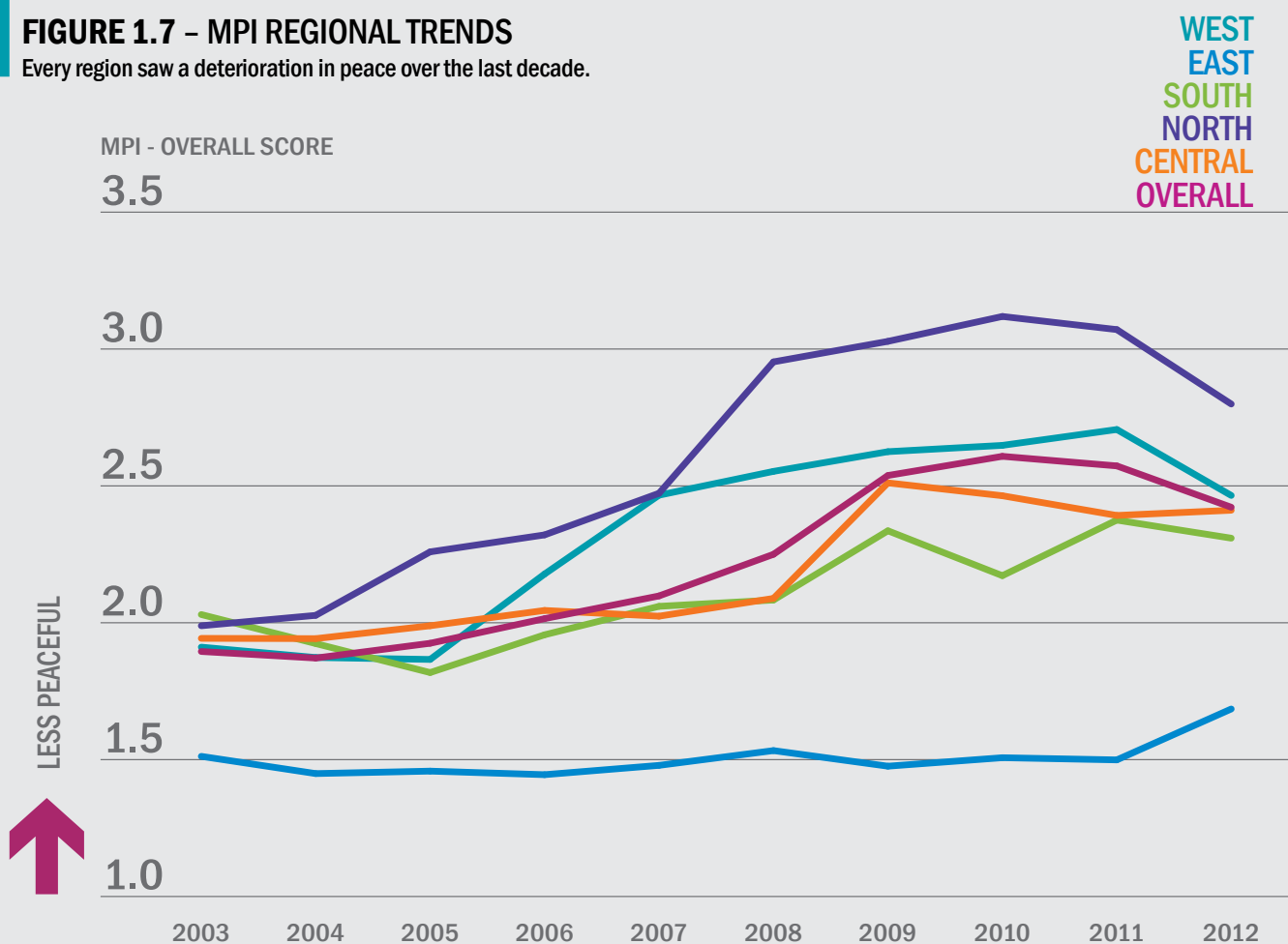
higher average levels of poverty and deprivation than the other regions in Mexico.

Since 2003 it was found that Mexico has experienced a decline in peacefulness of 27.5 percent, with the biggest deteriorations recorded in the northern and western regions of Mexico. Although there were large geographic variations in the levels of peacefulness across states, no regional grouping experienced an improvement in its levels of peace. This has been illustrated in more detail in Table 1.8.

TABLE 1.8: CHANGE IN THE REGIONAL AVERAGES, 2003-2012

The northern region deteriorated most significantly, over 40 percent deterioration in peace from 2003 to 2012.

	CHANGE IN MPI SCORE	% CHANGE IN MPI SCORE
Northern region	1.99 to 2.80	40.7% decline
Western region	1.91 to 2.47	29.0% decline
Central region	1.94 to 2.41	24.1% decline
Southern region	2.03 to 2.31	13.7% decline
Eastern region	1.51 to 1.69	11.4% decline
Overall	2.17 to 2.77	27.5% decline

Although there was a decrease in peace across all regions, a number of states did actually increase in peace over the last ten years. Five states experienced increases with the biggest increase occurring in the southern state of Oaxaca.

The surge in the homicide rate has been the most salient indicator of the increased violence in Mexico. However, at the regional level, several regions actually saw their homicide rates drop over the last decade, as shown in Figure 1.8. As expected, there was a large increase in the homicide rate in the North, followed by a smaller increase in the West. The other three regions experienced a small drop in their homicide rate over the last decade, although the trend has been upward in all three since 2008.

In Mexico the drug war has caused an uneven impact on levels of violence across the country. Figure 1.9 overleaf shows the divergence between the seven most peaceful states and the seven least peaceful states over the last decade. As mentioned, while the two most peaceful states saw small increases or no change in their peace levels, the other five states experienced a small decrease in their peace.

Conversely, the least peaceful states experienced substantial decreases in peace all registering more than a ten percent drop. This resulted in a clear divergence between the most and least peaceful states.

FIGURE 1.8 REGIONAL HOMICIDE TRENDS

The North has seen the greatest change in homicide while the Central and South regions have actually seen a decrease and the East has remained almost unchanged.

HOMICIDE RATE (INCIDENTS PER 100,000 PEOPLE)

WEST
EAST
SOUTH
NORTH
CENTRAL
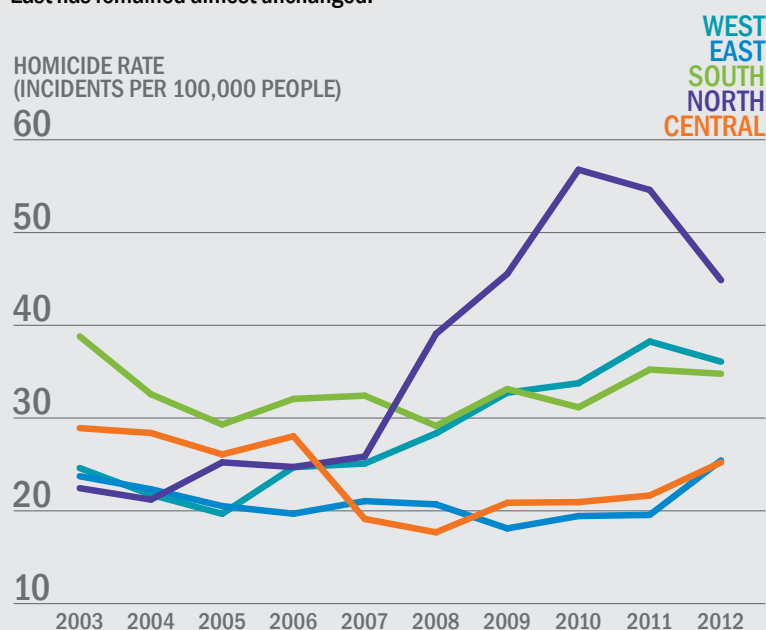
Source: IEP

FIGURE 1.9 SEVEN MOST PEACEFUL VS. SEVEN LEAST PEACEFUL STATES
There has been a divergence between the most and least peaceful states over the last decade.

MPI - OVERALL SCORE

SEVEN LEAST PEACEFUL
SEVEN MOST PEACEFUL

LESS PEACEFUL
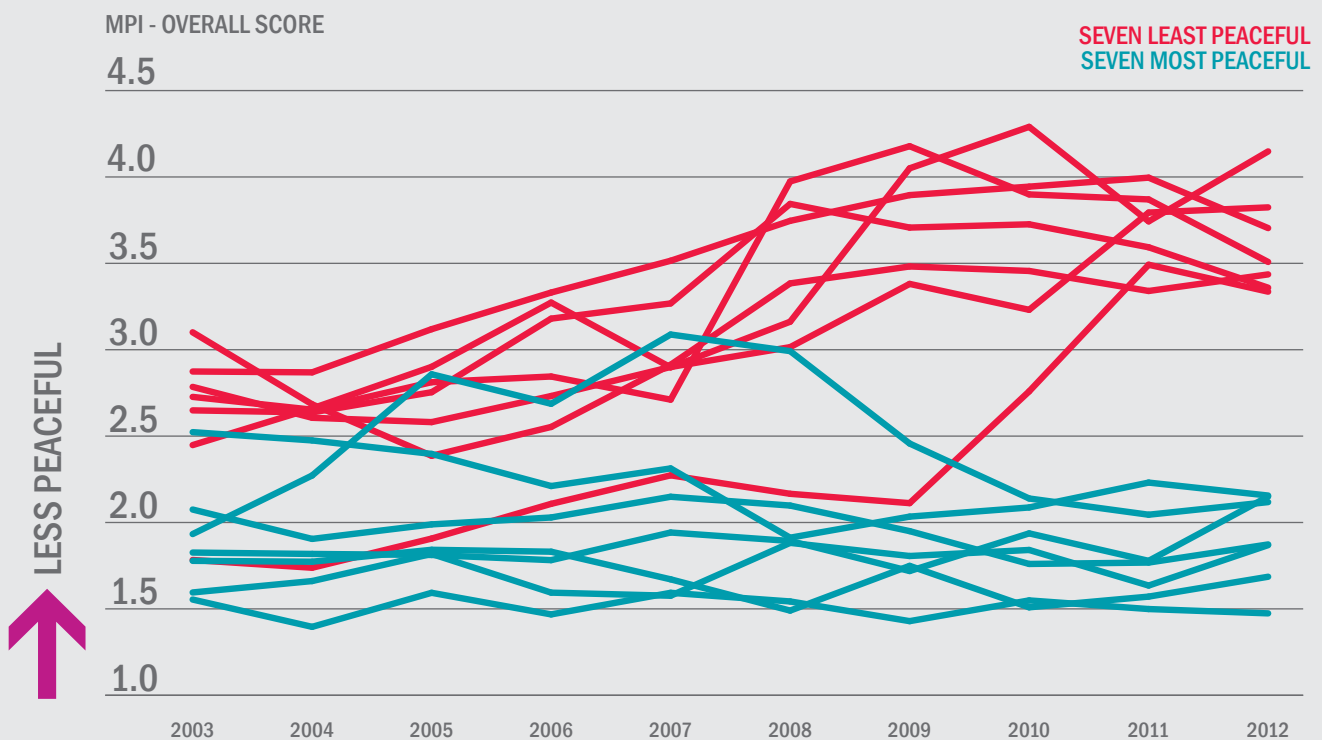
Source: IEP

CORRELATES OF PEACE IN MEXICO

The escalation of violence in Mexico during the last six years has posed an important question not only for Mexican policy makers but also for society as a whole: *what are the structural factors associated with the increase in violence?* To attempt to answer this question, an analysis was undertaken by correlating the MPI against over 60 different datasets and socio-economic indicators.

Identifying consistent socio-economic relationships to violence has proven particularly challenging in Mexico as the drug war has played a distorting effect. This has resulted in many of the factors commonly associated with violence in other countries not being as statistically related in Mexico.

While many arguments have been presented in the academic literature about the causes of violence in Mexico, there is no consensus on the specific factors clearly explaining the escalation in violence during the last six years. For instance, Aguilar et al. (2012) has linked violence and crime to the benefits and costs associated to it, highlighting

the fact that high levels of poverty have increased the likelihood of participating in criminal activities.

However, it is important to note that contrary to general intuition, the relationship between peace, economic opportunities, and education in Mexico is not always positive; meaning that more affluent states are not necessarily the most peaceful. This suggests poverty and deprivations do not appear as significant in explaining the increased violence in Mexico as in other countries.

RELATIONSHIPS BETWEEN MPI INDICATORS

Because peace is a multidimensional phenomenon, it is necessary to analyse all seven of the MPI indicators to enable the most comprehensive understanding of peace. By examining the relationship between the indicators we can

TABLE 1.9 CORRELATION MATRIX BETWEEN THE MPI AND ITS INDICATORS

There is a high correlation between the MPI overall score and five of the indicators.

	OVERALL SCORE	HOMICIDE RATE	VIOLENT CRIME RATE	WEAPONS CRIME RATE	INCARCERATION RATE	POLICE FUNDING	ORGANIZED CRIME RATE	JUSTICE EFFICIENCY
Overall Score	1.000	0.764	0.538	0.725	0.048	-0.137	0.487	0.459
Homicide Rate	0.764	1.000	0.065	0.708	-0.202	-0.010	-0.018	0.639
Violent Crime Rate	0.538	0.065	1.000	0.118	0.016	-0.166	0.556	0.072
Weapons Crime Rate	0.725	0.708	0.118	1.000	-0.047	-0.219	0.127	0.299
Incarceration Rate	0.048	-0.202	0.016	-0.047	1.000	0.420	0.309	-0.573
Police Funding	-0.137	-0.010	-0.166	-0.219	0.420	1.000	-0.059	-0.429
Organized Crime Rate	0.487	-0.018	0.556	0.127	0.309	-0.059	1.000	-0.194
Justice Efficiency	0.459	0.639	0.072	0.299	-0.573	-0.429	-0.194	1.000

Source: IEP

broaden our understanding of the recent trends in peace and violence in Mexico and determine whether or not the resources allocated towards violence containment have been utilized in an effective manner.

We would expect each of the MPI indicators to have a positive correlation with the overall MPI score by construction, and that is indeed the case for five of the seven MPI indicators. However, both the incarceration rate and the amount of federal police funding per capita have a weak or non-existent relationship with peacefulness. Federal police funding even has a weak negative correlation with the overall MPI score as shown in Table 1.9.

This suggests that the level of police funding from the federal government is either not sufficient, or not being appropriately allocated. The weak relationship between the year-on-year incarceration rate and the overall MPI score is unusual as we would normally expect to see higher sentencing rates in states with higher levels of violence.

Additionally there is a weak relationship between the number of people sentenced in a year and the number of homicides and violent crimes; again there would normally be an expectation of higher sentencing rates where there is higher crime. This finding reinforces the notion that Mexico's judicial system is overstretched, inefficient or facing corruption challenges in the states with the highest levels of violence.

A combination of an extremely high case load, prison overcrowding, lack of resources and corruption can allow organized criminal syndicates to operate with varying levels of impunity.

The correlation between two of the indicators; the homicide rate and the violent crime rate, is lower than might be expected. In other National Peace Indices they are collinear and the two have moved together. In the case of Mexico the two indicators do not appear to be as strongly correlated at the state level (r=.065), as shown in Figure 1.10.

FIGURE 1.10 HOMICIDE RATE VS VIOLENT CRIME RATE

There is no correlation between the homicide rate and the violent crime rate in Mexico.

VIOLENT CRIME RATE (INCIDENTS PER 100,000 PEOPLE)
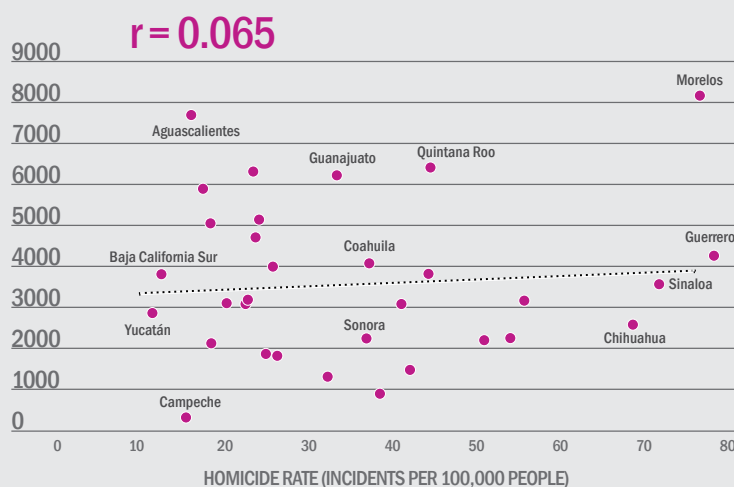
Source: IEP

The weakness of this correlation may partly be the result of the strain put on police resources in the more violence affected states, where the actual violent crime rate is almost certainly higher than reported. It is notable that even after accounting for this discrepancy, the homicide to violent crime ratio has been strongly skewed by the intensity and severity of the drug war violence. This can be confirmed by looking at the correlat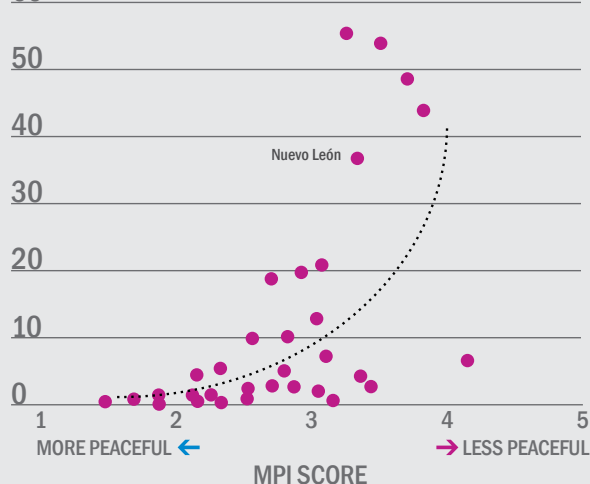ion between the overall MPI score and REFORMA's database of drug related homicides. There is a strong relationship between the overall MPI score and the log of drug affected homicide rate, as shown in Figure 1.11 (r x 0.71).

The close correlation between the MPI and the drug related homicide rate suggests that the overall MPI score has accurately reflected the impact of the drug war on Mexico at the state level.
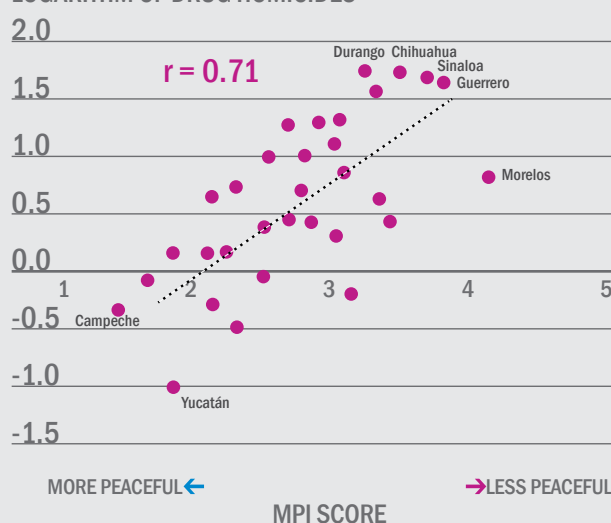
FIGURE 1.11 MPI VS DRUG RELATED HOMICIDE RATE, MPI VS. LOG. DRUG RELATED HOMICIDE RATE (2012)

The MPI captures the impact of the drug war on Mexico as shown by its high correlation with the drug related homicide rate.

Source: IEP – data from Justice in Mexico Project

The accuracy of the MPI in capturing the true level of violence at the state level is reinforced by the correlation between peacefulness (the overall MPI score) and the fear of violence at the state level, as shown in Figure 1.12.

The correlation between the percentage of respondents who feel that their state is unsafe and the overall MPI score is very strong (r=.766), and is in fact the strongest correlation between the MPI and any of the socio-economic factors analysed in this report. Given this result and the correlation between the MPI and drug related violence, we can be confident that the MPI is an accurate reflection of the true level of peace in Mexico at the state level.

FIGURE 1.12 MPI VS % OF RESPONDENTS WHO FEEL THAT THEIR STATE IS UNSAFE

There is a strong correlation between respondents who say their state is unsafe and the MPI score.
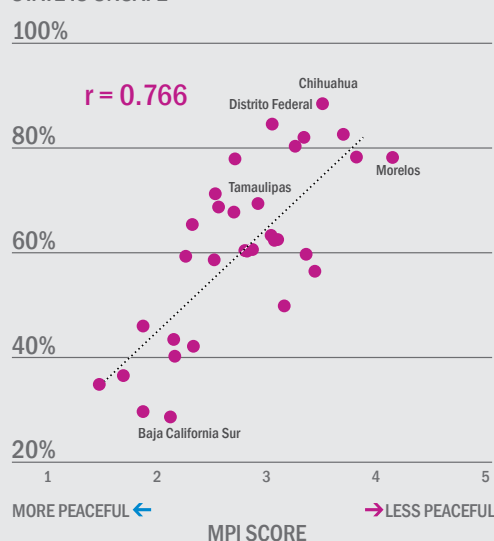
Source: IEP based on data from INEGI: ENVIPE 2012 Survey

PEACE AND KEY SOCIO-ECONOMIC FACTORS

The MPI has been analysed against over 60 socio-economic indicators to better understand which conditions are associated with peace in Mexico.

The analysis did not find the types of statistical associations that would normally be expected. This is mainly due to the nature of the drug war which has accounted for a significant portion of the increase in recorded violence since 2006. The activity of cartels follows a pattern dictated by the needs of their drug businesses, which is independent of the normal socio-economic factors associated with peace. This factor has distorted the distribution of violence and has muted correlations that otherwise would likely have been stronger.

When the increase in violence since 2006 is factored out, much stronger relationships appear. The two which have been highlighted in this study are multi-dimensional poverty and high school graduation. The analysis indicates that the combination of poverty, lack of opportunity, and proximity to major drug smuggling routes are the preconditions for low levels of peacefulness.

When these socio-economic factors were analysed against the levels of peace before 2007, the associations were found to be stronger. However, they were still lower than what would be expected. The conclusion from the analysis is that the normal socio-economic drivers of peace are unlikely to become significant until the drug related violence is depleted. A full list of the socio-economic indicators that were analysed and their statistical significance to the MPI is contained in Appendix A.

One of the factors commonly found to be associated with the levels of peace is population density. In Mexico, it was found that there was a moderate statistically significant association between peace and the proportion of people living in smaller communities. This has been explored in greater detail in Figure 1.13.

## FIGURE 1.13 MPI VS PERCENTAGE OF POPULATION LIVING IN TOWNS WITH POPULATIONS SMALLER THAN 2500 PEOPLE

Less urbanized states tend to be more peaceful.

POPULATION LIVING IN TOWNS SMALLER THAN 2500 PEOPLE

$r = -0.360$

MORE PEACEFUL ← → LESS PEACEFUL

MPI SCORE
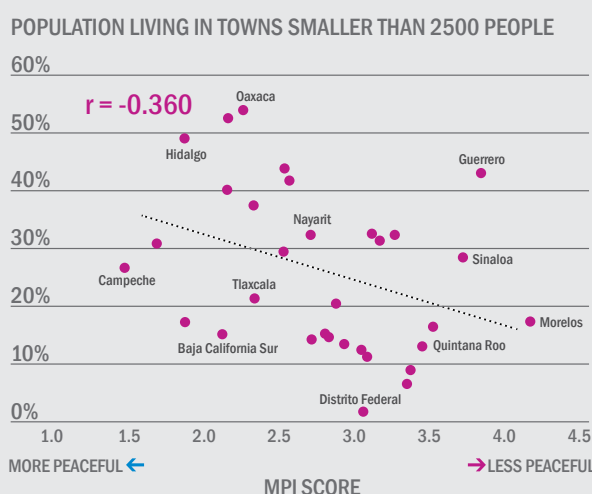
Source: IEP – data from INEGI: Mexico Population and Housing Census 2010

FIGURE 1.14 MPI VS MULTIDIMENSIONAL POVERTY INDEX

Northern Mexican states are highlighted in blue.

MULTIDIMENSIONAL POVERTY INDEX

$r = -0.164$

MORE POVERTY

MORE PEACEFUL ← → LESS PEACEFUL

MPI SCORE
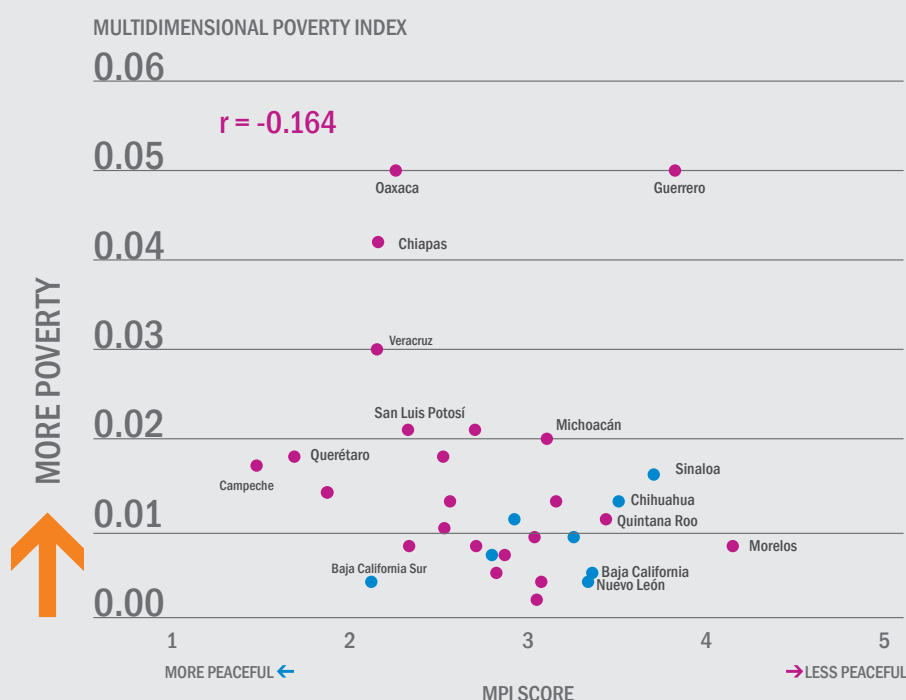
Source: IEP, based on data from OPHI

FIGURE 1.15 VIOLENT CRIME RATE VS LIFE EXPECTANCY AT BIRTH

Higher violent crime is correlated with lower life expectancy at birth.

LIFE EXPECTANCY (YEARS)

r = 0.358

VIOLENT CRIME RATE (INCIDENTS PER 100 PEOPLE)
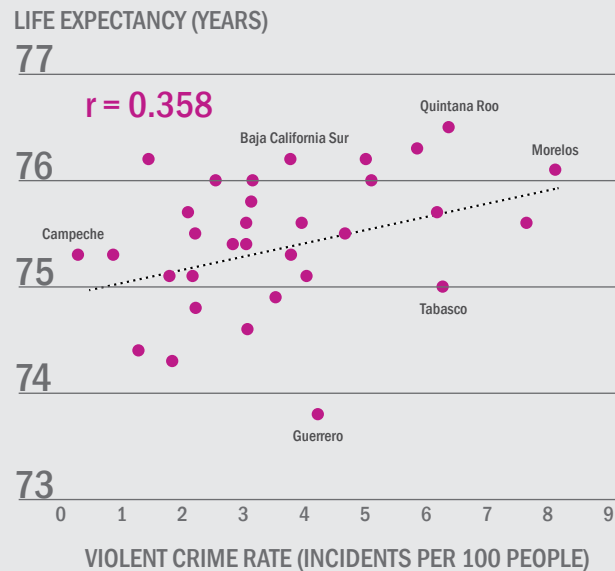
Source: IEP – data from INEGI: Mexico Population and Housing Census 2010

FIGURE 1.16 MPI VS. TEENAGE PREGNANCY RATE

There is a moderately strong relationship between the MPI and teenage pregnancy.

TEEN PREGNANCY (BIRTHS PER 1,000)

r = 0.392

MORE PEACEFUL ← MPI SCORE → LESS PEACEFUL
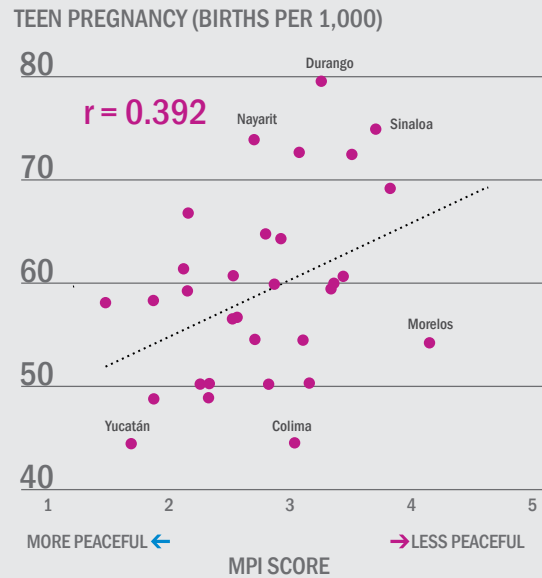
Source: IEP – data from INEGI: Mexico Population and Housing Census 2010

Figure 1.14 highlights the relationship between the Multidimensional Poverty Index and the MPI. We would expect to see a positive correlation between peacefulness and multidimensional poverty as was found in the UK Peace Index, however, there is surprisingly a slight negative correlation. A number of rural southern states with low levels of urbanization (Oaxaca, Chiapas) have relatively high levels of peace despite having high levels of multidimensional poverty. On the other hand, if we look at the states within the Northern region, which is the least peaceful region, we find that multi-dimensional poverty is significantly correlated to peace.

In other National Peace Indices, IEP found life expectancy at birth to be statistically related to peace. In the case of Mexico, there is a moderate correlation at r=0.35; the relationship is more statistically significant globally, as measured by the Global Peace Index, and also within the US and the UK. Low life expectancy is generally a by-product of poverty. The relationship between violence and life expectancy has been illustrated in Figure 1.15.

Similarly, Figure 1.16 shows a moderately significant relationship between teenage pregnancies and peace with a correlation of r=0.392. High rates of teenage pregnancies are generally related to poverty, lower female school attendance rates, and lack of economic opportunities.

SOCIO-ECONOMIC DISCREPANCIES

Why don't the key socio-economic factors correlate with peacefulness in Mexico like they do in the US and the UK?

As outlined above a number of socio-economic factors that are usually associated with peaceful environments do not correlate with peace in Mexico. Apart from the violence associated with the drug war, there are other factors which can partly explain this phenomenon. For example, there are low levels of urbanization and industrialization in the poorer southern states which are more rural. Rural environments tend to be more peaceful than urban environments.

The violence related to the drug war has acted as a distorting factor. One way to test this assumption is to factor out the drug related violence from the overall MPI score by looking at the data prior to the escalation of the drug violence. Correlations were run against the same socio-economic measures and the MPI for 2003 and 2012 to test whether the observed relationships changed.

FIGURE 1.17 2012 AND 2003 MPI VS MULTIDIMENSIONAL POVERTY

Before the start of the drug war there was a stronger association between poverty and peacefulness.

MULTIDIMENSIONAL POVERTY INDEX

r = -0.163

r = 0.313

MORE POVERTY

MORE PEACEFUL ← MPI SCORE → LESS PEACEFUL
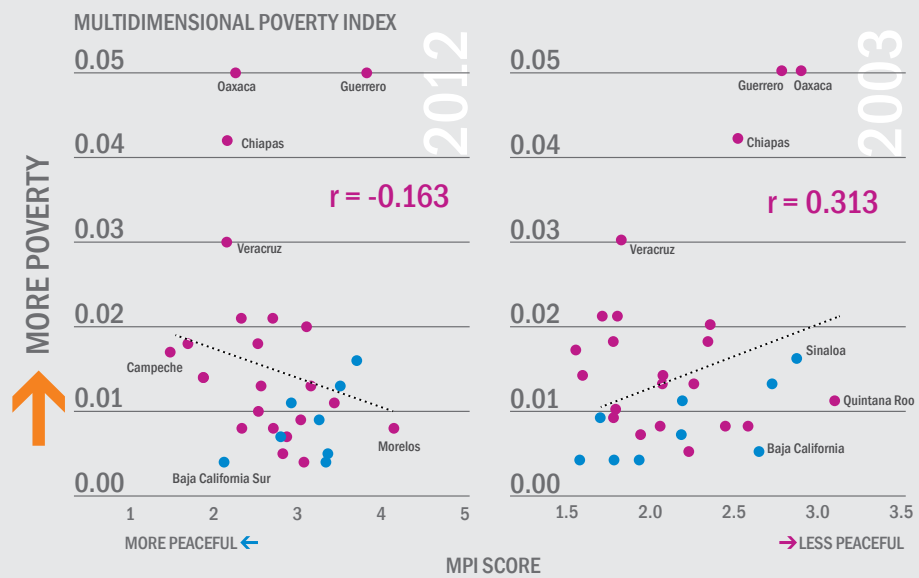
Source: IEP based on data from OPHI

Figure 1.17 shows the impact of this adjustment on the strength of the correlation between peace and multidimensional poverty. What was a statistically insignificant negative correlation is now a statistically significant positive correlation. When drug related violence is partially factored out, there is an association between more peaceful environments having less poverty, although still not as strong as the association found globally or in countries like the US and the UK.

Figure 1.18 shows a similar story for education, specifically, the high school completion rate. Whilst the data from

2012 would suggest that there is no relationship between high school completion and peacefulness, data from 2003 suggests that there is a mildly significant correlation between the two.

Thus, over a longer period of time, peace at the state level in Mexico is closely associated with those socio-economic factors which would be expected, suggesting that drug-related violence has fundamentally altered the normal associations observed between violence and factors such as poverty, inequality, and corruption.

FIGURE 1.18 2012 AND 2003 MPI VS PERCENTAGE WITH HIGH SCHOOL COMPLETION AS HIGHEST EDUCATIONAL ATTAINMENT

High school completion rate was statistically related to peace prior to the start of the drug war.

HIGH SCHOOL COMPLETION RATE

r = 0.081

r = -0.353

MORE PEACEFUL ← MPI SCORE → LESS PEACEFUL

Source: IEP - data from INEGI: Mexico Population and Housing Census 2010

MEXICO IN THE INTERNATIONAL CONTEXT

The presence of peace has positive consequences for the wellbeing of society as well as for the wider economy. Peaceful environments are positively associated with strong economic performance and social cohesion, leading to environments that are more sustainable and resilient.

Although there has been some improvement in peace within Mexico over the last two years, the negative impact of violence is severe according to SENSNSP. There have been over 110,000 homicides recorded in the last three years. This spike in violence has led to negative coverage of Mexico in the global media, impacting tourism and depressing economic activity.

For instance, according to the National Institute of Statistics and Geography (INEGI), since 2003 the number of international tourists has dropped by 41 percent in Guerrero, 66 percent in Chihuahua and 51 percent in Nuevo León, three of the least peaceful Mexican states.

This has had a notable negative impact on the Mexican economy, with IEP's analysis estimating that in 2012 the economic impact of violence was equivalent to 27.7 percent of Mexico's GDP, estimated to be 4.4 trillion *pesos* (US$333 billion). This included around 600 billion *pesos* (US$45.9 billion) in direct costs, representing the immediate financial impacts of violence on the government and its citizens and 1.9 trillion *pesos* (US$143.8 billion) as a consequence of lost productivity, destruction and suffering from violence.

However, the violence experienced in Mexico has not been felt equally across regions, with some areas of Mexico remaining relatively peaceful. Despite this, tourism data released by the Mexico Ministry of Tourism in October 2012 showed that tourist arrivals to Mexico have continued to decline (Mexico Tourism Report, 2013). Although these declines are due in part to economic conditions north of the border, they are thought largely to be a result of the fear of violence from unfavourable global media coverage.

The intensity of the violence also challenges the government's ability to keep order in the eyes of many citizens, in turn undermining the government's legitimacy. Additionally, given that over 80 percent of homicides stay unsolved in some states this further undermines public faith in criminal justice institutions. On a more positive note, Mexico is considered economically successful and is an emerging economic and political power in the world.

Mexico has a population of 117 million people and as of 2012, a GDP of 15.5 trillion *pesos* (US$1.2 trillion), making it the second largest economy in Latin America after Brazil (World Bank -WDI). It also sits adjacent to the world's largest economy, the United States, which when combined with Mexico's high level of literacy and low labour costs, provides the country with a significant competitive advantage. Given this, the achievement of greater levels of peace would

FIGURE 1.19
AVERAGE REAL GDP GROWTH IN MEXICO (2004 TO 2011)
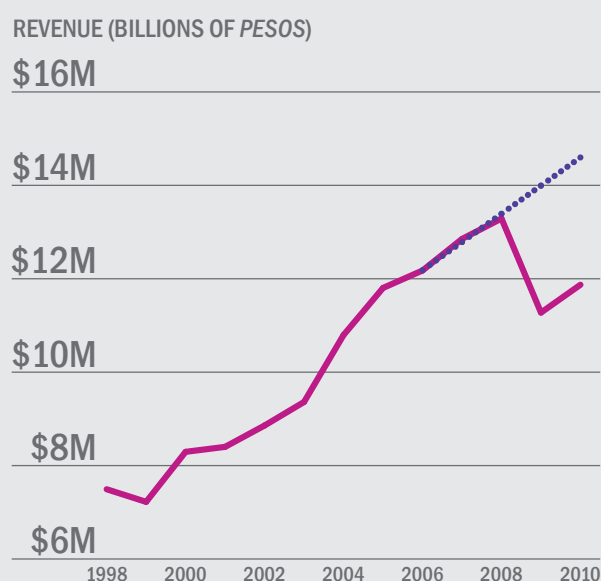Mexico has experienced unstable economic growth since the beginning of the drug war.

Source: INEGI - Banco de Informacion Económica
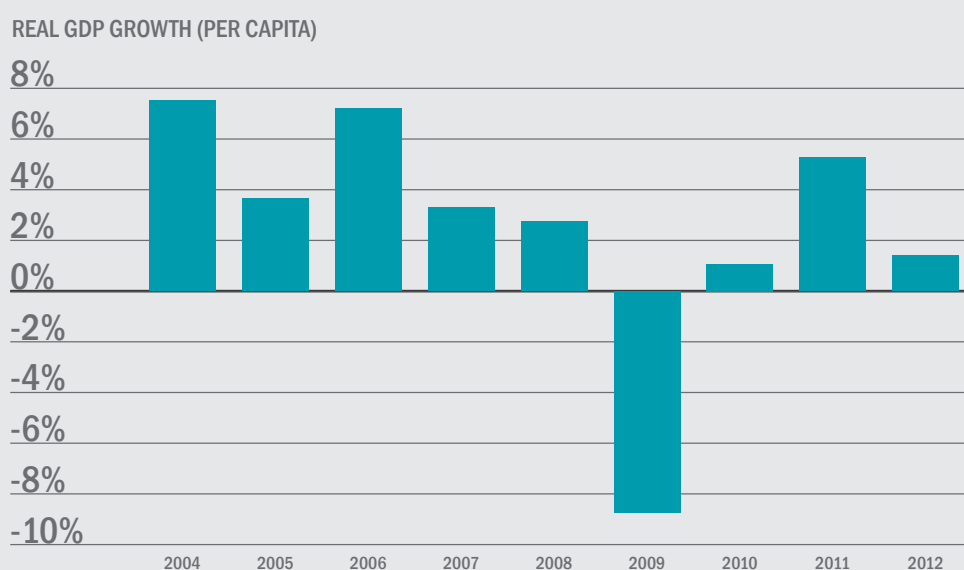
REAL GDP GROWTH (PER CAPITA)

contribute to a more stable and less uncertain environment where entrepreneurs and business could be more willing to take risks and engage in new investment projects. It would also lead to substantial increases in tourism and inbound investment which would help propel Mexico into a virtuous cycle of enhanced prosperity and peace.

FIGURE 1.20 INTERNATIONAL TOURISM REVENUES 1998-2010

Tourism revenues experienced a significant decline in 2008.

REVENUE (BILLIONS OF *PESOS*)

Source: INEGI: Banco de Informacion Económica

HOW PEACEFUL IS MEXICO COMPARED TO THE REST OF THE WORLD?

The deterioration of Mexico's score in the Global Peace Index (GPI) is one of the most significant in the world in the past six years. Although this trend has been caused by a range of factors, the move can predominantly be explained by a deterioration in a number of internal measures of peace, particularly in indicators related to the level of societal safety and security. Interestingly this has occurred in a period during which Mexico has actually improved its external peace scores, mainly as a result of enhanced regional relationships.

In 2013, Mexico was ranked 133 out of 162 countries on the GPI, placing it in the bottom quarter of the world in terms of peace. Since 2008 the country has experienced a notable decline in both its score and ranking, not only globally, but also in relation to the Latin America region (see Table 1.10). In spite of this overall deterioration, Mexico is still more peaceful than the global average on several indicators.

MOST OF MEXICO'S GPI 2013 EXTERNAL INDICATORS SCORES ARE MORE PEACEFUL THAN THE GLOBAL AND REGIONAL AVERAGE

The Mexico GPI rank is primarily dragged down by very poor scores on homicide, violent crime and the number of deaths from organized conflict where it scores amongst the most violent of the 162 countries in the GPI.

The homicide rate in Mexico is above the global average according to the GPI indicator, which is based on data from the United Nations Office for Drugs and Crime (UNODC). Mexico also rates significantly above the global average on the indicator measuring the number of deaths from organized internal conflict.

MEXICO COMPARED TO LATIN AMERICA

Mexico has fallen significantly in its GPI rank since 2008, now standing at 22 out of 23 countries in Latin America.

TABLE 1.10 GLOBAL PEACE INDEX - MEXICO GLOBAL AND REGIONAL RANKS

Mexico global and regional ranks in the GPI have fallen significantly since 2008.

YEAR	MEXICO GPI SCORE	MEXICO GPI RANK	REGIONAL RANK (OUT OF 23 COUNTRIES IN LATIN AMERICA)
2008	2.06	88	14
2009	2.15	98	17
2010	2.16	100	18
2011	2.28	115	20
2012	2.44	134	22
2013	2.43	133	22

33

TABLE 1.11 COMPARISON OF MEXICO TO THE GLOBAL AND REGIONAL AVERAGES ON THE 2013 GLOBAL PEACE INDEX

Most of Mexico's GPI 2013 external indicators scores are more peaceful than the global and regional average.

INDICATORS - GPI 2013	MEXICO SCORE	GLOBAL AVERAGE SCORE	LATIN AMERICAN AVERAGE SCORE	% DIFFERENCE WITH GLOBAL	% DIFFERENCE WITH LATIN AMERICA
INDICATORS WHERE MEXICO IS LESS PEACEFUL THAN GLOBAL AND REGIONAL AVERAGES					
Number of deaths from organized conflict (internal)	5	1.31	1.30	280%	283%
Number of homicides per 100,000 people	5	2.78	4.04	80%	24%
Level of violent crime	5	2.78	3.52	80%	42%
Political terror	4	2.57	2.59	56%	55%
Number of jailed population per 100,000 people	2	1.54	1.84	30%	9%
Ease of access to small arms and light weapons	4	3.12	3.52	28%	14%
Level of perceived criminality in society	4	3.18	3.69	26%	8%
Likelihood of violent demonstrations	3	2.90	3.13	3%	4%
INDICATORS WHERE MEXICO IS MORE PEACEFUL THAN GLOBAL AND REGIONAL AVERAGES					
Relations with neighbouring countries	1	2.28	1.91	56%	48%
Number of external and internal conflicts fought	1	1.84	1.17	46%	15%
Military expenditure as a percentage of GDP	1.10	1.62	1.32	32%	16%
Political instability	2	2.56	2.27	22%	12%
Number of refugees and displaced people per 100,000	1	1.26	1.11	21%	10%
Exports of major conventional weapons per 100,000	1	1.21	1.00	17%	0.0%
Imports of major conventional weapons per 100,000	1	1.17	1.04	14%	4%
Terrorist activity	1.50	1.75	1.37	14%	10%
Number of armed services personnel per 100,000 people	1	1.15	1.02	13%	2%
Number of internal security officers and police per 100,000	2	2.27	2.21	12%	9%
Estimated number of deaths from organized conflict (external)	1	1.04	1.00	4%	0.0%
Financial contribution to UN peacekeeping missions	2.43	2.48	2.52	2%	4%
Nuclear and heavy weapons capabilities	1.19	1.51	1.16	21%	3%

Since 2007 the rate of homicide in Mexico has increased by 37 percent to 32 homicides per 100,000 people, which is now well above the Latin American average at 26 per 100,000 people. However, many countries in the Latin American region have much higher rates of homicide, such as Honduras, Colombia, El Salvador, Guatemala and Jamaica. For instance, Honduras has the highest in the region with 92 homicides per 100,000 people.

The decline in peacefulness since 2008 has been predominately due to the decline in a number of internal measures of peace such as the number of homicides, the level of violent crime, the number of deaths from organized conflict and the level of perception of criminality in society.

In particular, the GPI score for internal peace in Mexico has deteriorated by 26.3 percent between 2008 and 2013, resulting in the biggest fall in the region and one of the biggest falls of the 162 countries included in the GPI. On the other hand, external peace has improved by 8.8 percent; somewhat avoiding what would have been a still steeper overall decline. This improvement in external peace is mostly explained by improved relationships with neighbouring countries and improvements in Mexico's score for nuclear and heavy weapons capabilities.

## FIGURE 1.21 MEXICO GPI INTERNAL PEACE SCORE 2008 - 2013

Mexico's levels of internal peace significantly deteriorated from 2008 to 2013.

INTERNAL PEACE

MEXICO
CENTRAL AMERICA
SOUTH AMERICA

LESS PEACEFUL
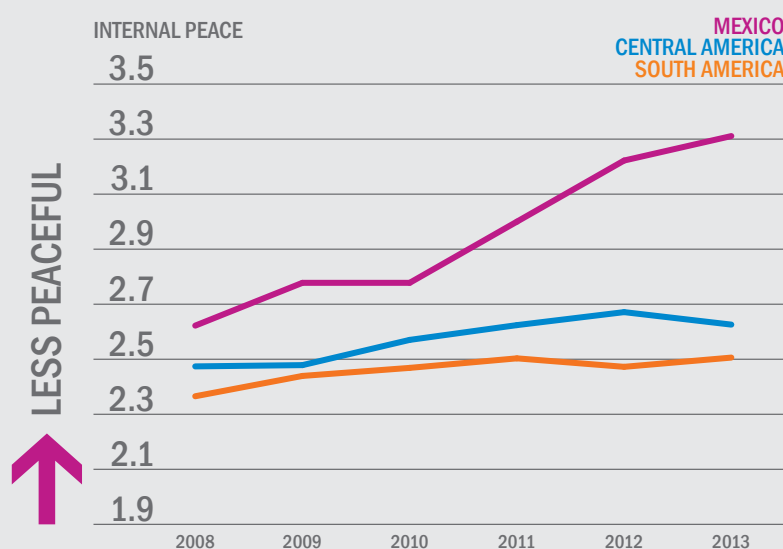
Source: Global Peace Index - IEP

FIGURE 1.22 MEXICO GPI EXTERNAL PEACE SCORE 2008 - 2013

Mexico's level of external peace has improved since 2008 and particularly in the last year.   to 2013.

EXTERNAL PEACE

MEXICO
CENTRAL AMERICA
SOUTH AMERICA

LESS PEACEFUL
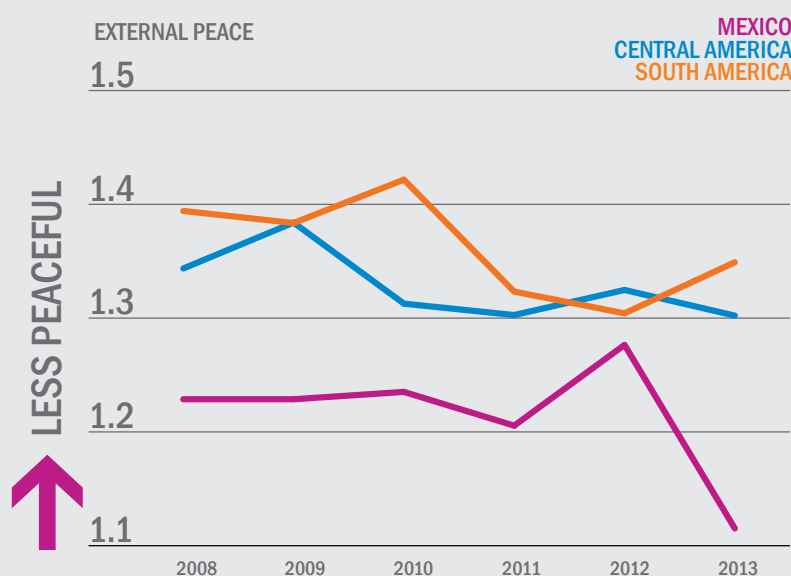
Source: Global Peace Index - IEP

The GPI uses the following indicators to measure internal peace:

- Level of perceived criminality in society
- Political instability
- Political terror
- Terrorist activity
- Number of homicides per 100,000 people
- Level of violent crime
- Ease of access to small arms and light weapons
- Level of organized conflict (internal)
- Number of deaths from organized conflict (internal)
- Likelihood of violent demonstrations
- Number of jailed population per 100,000 people
- Number of internal security officers per 100,000 people.

Mexico's external peacefulness has increased, especially in the last year with an improvement of 14 percent in score between 2012 and 2013. The indicator that explains most of this change is relations with neighbouring countries, a qualitative assessment by the Economist Intelligence Unit's country analysts of the diplomatic and commercial relations with neighbouring countries. This improvement in external relations is mostly the result of new trade agreements initiatives such as the one announced by US President Barack Obama in July 2012 extending an invitation to Mexico and Canada to join negotiations for the proposed Trans-Pacific Partnership (TPP) multilateral free trade agreement. The proposed TPP is expected to enhance the economic links Mexico already has with the United States and Canada under NAFTA. The United States, Mexico and Canada have made efforts since 2005 to increase cooperation on economic and security issues through various endeavours, most notably by participating in the North American Leaders Summits.

MEXICO COMPARED TO THE UNITED STATES

While recent trends show violence is an increasingly serious issue in Mexico, it is important to recognize that in many instances violence is extremely unevenly distributed both between states and within states. Therefore comparing individual states within Mexico with states in the US provides a mechanism to better understand the fabric of peace in Mexico.

In order to make accurate comparisons between the two countries, a few issues were considered. Firstly, different authorities can classify crimes differently or have different definitions for various crimes. Additionally, cultural contexts may affect comparisons. For instance, where the level of trust in the local police is low the extent of crime that is recorded may be significantly less than what occurs, due to under-reporting.

Recognizing these issues, a number of approaches were adopted in order to aid comparisons. Firstly, to account for significant under-reporting of crime in Mexico, all crime data for Mexico was adjusted using the 2012 ENVIPE survey's question related to the under-reporting of particular crimes, such violent crimes. Secondly, in the comparisons below, Mexico's crime statistics were, wherever possible, adjusted to match the US Federal Bureau of Investigation's (FBI) definition for a particular crime.

Homicide rates are usually one of the most reliable statistics, as due to the seriousness of the crime, non-reporting is difficult. On the other hand, other forms of crimes such as violent assaults are more difficult to measure.

HOMICIDE

According to the United Nations Office on Drugs and Crime (UNODC, 2013), in 2011 Mexico had an overall rate of homicide of 23.7 per 100,000 people, almost five times that of the United States which was recorded at 4.7 homicides per 100,000 people.

Under the FBI's definition, homicide is the wilful killing of one human being by another. Although the level of under-reporting of homicides is subject to some debate, in our analysis the numbers have not been adjusted for either Mexico or the United States. Deaths caused by negligence, attempts to kill, assaults to kill, suicides and accidental deaths have also been excluded.

Mexico's homicide rate compares poorly with the US. As shown in Table 1.12, generally, Mexico's most peaceful states have higher rates of homicides than some of the less peaceful US states, with Distrito Federal, Aguascalientes and Campeche having the three highest homicide rates within the comparison group. In contrast to this, the District of Columbia and Louisiana appear to have comparable rates of homicide to the states of Baja California Sur and Yucatán.

TABLE 1.12 COMPARISONS OF MEXICO'S RATE OF HOMICIDE WITH THE UNITED STATES.

Mexico's most peaceful states tend to have higher homicide rates than the most violent US states.

STATE	COUNTRY	HOMICIDE RATE
Michigan	United States	7.0
Alabama	United States	7.1
Mississippi	United States	7.4
Yucatán	Mexico	10.7
Louisiana	United States	10.8
Baja California Sur	Mexico	11.8
District of Columbia	United States	13.9
Campeche	Mexico	14.8
Aguascalientes	Mexico	15.4
Distrito Federal	Mexico	16.8

ROBBERY

The FBI defines robbery as the taking or attempt to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear.

The figures between the two countries are somewhat similar; in 2012 Mexico recorded 3,083 robberies per 100,000 people (SESNP), only 10 percent more than the United States, which recorded 2,742 per 100,000 people (FBI).

Additionally, there appears to be a high level of variation in the number of robberies between states, with a number of US states having rates of robbery well above those of Mexico. More detailed summaries of the relative incidence of robbery are provided in Table 1.13.

TABLE 1.13 COMPARISONS OF MEXICO'S RATE OF ROBBERIES WITH THE UNITED STATES

The rate of robberies in some of Mexico's more peaceful states are well below the most violent US states.

STATE	COUNTRY	ROBBERY RATE
District of Columbia	United States	4920.1
South Carolina	United States	3637.8
Arkansas	United States	3544.7
Louisiana	United States	3488.4
New Mexico	United States	3427.3
Veracruz	Mexico	1467.7
Tlaxcala	Mexico	1195.7
Chiapas	Mexico	831.5
Nayarit	Mexico	671.8
Campeche	Mexico	152.7

CAMPECHE COMPARED TO THE US

As the MPI and the USPI use a number of different indicators, a direct comparison of the scores is difficult; however it is possible to undertake a rough comparison on the basis of the measures of violence and crime that are common to both indices. The score of the most peaceful Mexican state, Campeche, was recalculated to determine where it may have been placed within the USPI. To undertake these comparisons the 2012 USPI rankings were recalculated with Mexico's most peaceful state, Campeche, included. It is important to recognize that the following ranks are only suggestive.

TABLE 1.14 CAMPECHE SIMULATED INTO THE US PEACE INDEX

Campeche's level of peace compares favorably with some states in the US. It was found to have a higher homicide rate than other states in the US, but much lower levels of incarceration.

STATE	OVERALL RANK	HOMICIDE RANK	VIOLENT CRIME RANK	POLICE OFFICERS RANK	INCARCERATION RANK	SMALL ARMS RANK
Illinois	34	37	36	45	24	9
Mississippi	35	45	17	2	50	51
Campeche	36	51	40	9	6	1
New Mexico	37	46	48	25	17	22
Delaware	38	22	46	40	33	11

Based on this comparison it was found that Campeche has a lower level of small arms availability than any US state. Campeche is also relatively peaceful in terms of rates of incarceration and number of police officers (See Table 1.14). The level of violent crime in Campeche was found to be comparable to states such as Oklahoma and Missouri, being ranked number 40. Despite this, Campeche would have been ranked 36th out of 50 in the USPI. More detailed results of the analysis have been provided in Table 1.15.

TABLE 1.15 CAMPECHE'S LEVEL OF PEACE COMPARES FAVORABLY WITH SOME STATES IN THE UNITED STATES

Campeche's violent crime rate was found to be lower than the US states of New Mexico and Delaware.

STATE	HOMICIDE RATE	VIOLENT CRIME RATE	POLICE OFFICERS RATE	INCARCERATION RATE	SMALL ARMS SCORE
Illinois	8.13	424.23	361	377	1.79
Mississippi	10.66	261.99	209	692	4.31
Campeche	14.35	450.06	244	207	1.00
New Mexico	10.98	562.69	298	331	2.82
Delaware	4.85	554.70	346	441	2.18

BOX 1 // **PEACE IN THE UNITED STATES**

The United States Peace Index (USPI), released in 2012, provides a comprehensive measure of US peacefulness dating back to 1991 for 50 states and 61 metropolitan statistical areas. In addition to being one of the first national peace indexes produced on the states of the US, it also provides a comprehensive analysis of the socio-economic measures that are associated with peace in America. The USPI uses five indicators to gauge the levels of peacefulness in the US: the number of homicides, violent crimes, incarceration, police and the availability of small arms.

POSITIVE PEACE IN MEXICO

WHILE THE MPI MEASURES WHAT IS TERMED NEGATIVE PEACE, DEFINED AS 'THE ABSENCE OF VIOLENCE AND FEAR OF VIOLENCE, IT DOES NOT IN ITSELF INFORM US ABOUT THE KEY LONG-TERM ATTRIBUTES ASSOCIATED WITH CREATING A MORE PEACEFUL SOCIETY. TO BETTER UNDERSTAND THE LONG-TERM STRUCTURAL ASPECTS THAT BUILD PEACE, IEP HAS EXPLORED THE CONCEPT OF POSITIVE PEACE IN THE MEXICAN CONTEXT BY ANALYSING THE STRENGTH OF THE ATTITUDES, INSTITUTIONS AND STRUCTURES THAT HELP BUILD AND SUSTAIN A MORE PEACEFUL SOCIETY.

THE PILLARS OF PEACE IN MEXICO

The *Pillars of Peace* developed by the Institute for Economics and Peace, is a comprehensive taxonomy of the attitudes, institutions and structures associated with peaceful environments. Viewing violence in Mexico through the lens of the Pillars of Peace allows for a better understanding of the structural issues associated with building an environment that would support higher levels of peace.

The Pillars of Peace is an eight part taxonomy that identifies the attitudes, institutions and structures that are associated with more peaceful societies. The Pillars were derived by IEP from a rigorous analysis of over 4,700 variables against the Global Peace Index. As such, the Pillars represent a uniquely holistic study based on empirical techniques, to arrive at a framework for describing the aspects of positive peace. The Pillars of Peace provides a frame from which to view Mexican society and governmental policies to ascertain the current potential for maintaining peace and security.

Positive peace factors can also be used to assess how supportive the underlying conditions are towards development, as they are positively associated with developmental outcomes. Thus the Pillars also form the basis to understand and develop other aspects of human potential. The Pillars of Peace provides a benchmark against which to measure the performance of the country's overall resilience and the broader aspects of its social development. The stronger a country's Pillars, the more likely it is to recover from major shocks and be resilient against both internal and external stresses.

Based on the Pillars of Peace framework, IEP developed a Positive Peace Index (PPI) that measures the strength of the attitudes, institutions and structures of 126 countries to determine their capacity to create and maintain a peaceful society. The Positive Peace Index is composed of 24 indicators using three sub-indicators to measure   each of the eight Pillars of Peace.

Figure 2.2 shows the difference between Mexico's positive peace scores for each indicator compared to the global average. Mexico's level of positive peace is slightly lower than the average of the 126 countries in the Positive Peace Index, although Mexico has higher than average levels of human capital, lower levels of inequality and a better business environment than the Positive Peace Index average.
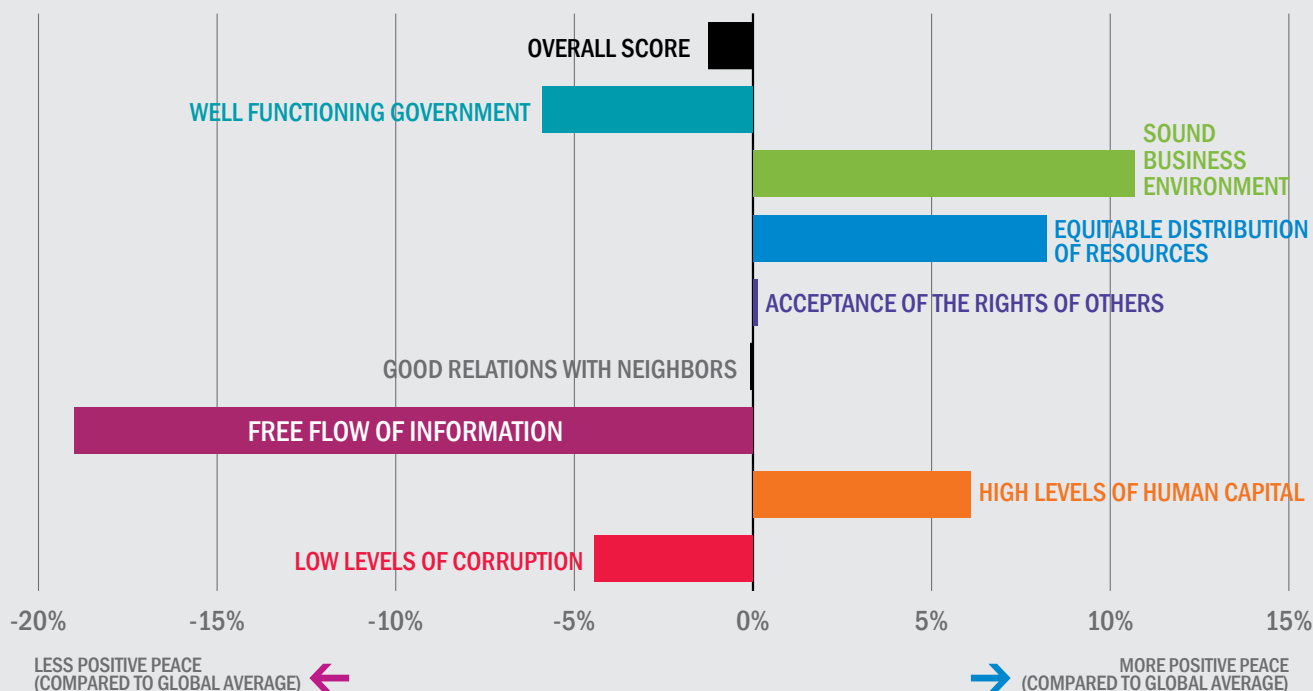
FIGURE 2.1 THE PILLARS OF PEACE

The Pillars of Peace describe the factors that contribute to a more peaceful society.

Source: IEP

FIGURE 2.2 DIFFERENCE BETWEEN MEXICO AND THE POSITIVE PEACE INDEX GLOBAL AVERAGE ON THE EIGHT POSITIVE PEACE INDICATORS (PERCENTAGE OF TOTAL RANGE)

Mexico has higher levels of human capital and a good business environment compared to the global average.

OVERALL SCORE

WELL FUNCTIONING GOVERNMENT

SOUND BUSINESS ENVIRONMENT

EQUITABLE DISTRIBUTION OF RESOURCES

ACCEPTANCE OF THE RIGHTS OF OTHERS

GOOD RELATIONS WITH NEIGHBORS

FREE FLOW OF INFORMATION

HIGH LEVELS OF HUMAN CAPITAL

LOW LEVELS OF CORRUPTION

-20% -15% -10% -5% 0% 5% 10% 15%

LESS POSITIVE PEACE (COMPARED TO GLOBAL AVERAGE) ←

→ MORE POSITIVE PEACE (COMPARED TO GLOBAL AVERAGE)

Source: IEP

When comparing the levels of positive and negative peace in Mexico and the relationship of those factors to other countries, it can be observed that Mexico has a 'positive peace surplus': the relative strength of the country's attitudes, institutions and structures imply that it should have a higher level of peace than it is experiencing.

In theory, a country's positive peace rank should be as close as possible to its GPI rank, however, in certain circumstances countries may have a 'positive peace surplus' or 'positive peace deficit'. Countries with a positive peace surplus have levels of institutional strength, which suggests that they should be more peaceful. The inverse applies for countries with positive peace deficits, they are more peaceful than what their attitudes, institutions and structures would imply. The analysis suggests that Mexico can become more peaceful based on the strength and quality of its institutions, which are ranked much higher than Mexico's actual level of peace.

THE PILLARS OF PEACE PROVIDES A BENCHMARK AGAINST WHICH TO MEASURE THE PERFORMANCE OF THE COUNTRY'S OVERALL RESILIENCE AND THE BROADER ASPECTS OF ITS SOCIAL DEVELOPMENT.

TABLE 2.1 THE FIVE COUNTRIES WITH THE LARGEST POSITIVE PEACE SURPLUS COMPARED TO GPI INTERNAL PEACE

The significant positive peace surplus in Mexico shows the country has the institutional capacity to improve its level of peace.

COUNTRY	POSITIVE PEACE SURPLUS	PPI RANK 2010	GPI RANK 2013	REGION	GOVERNMENT TYPE	INCOME LEVEL
Mexico	51	56	107	Central America and Caribbean	Flawed democracy	Upper middle income
South Africa	50	52	102	Sub Saharan Africa	Flawed democracy	Upper middle income
Colombia	42	64	106	South America	Flawed democracy	Upper middle income
Israel	41	35	76	MENA	Flawed democracy	High income
El Salvador	40	47	87	Central America and Caribbean	Flawed democracy	Lower middle income

Source: IEP

Table 2.1 shows the five countries in the world with the largest positive peace surpluses when comparing their PPI score to their GPI internal peace score.

As shown above, Mexico has the largest positive peace surplus in the world . This helps to illustrate the full extent of the improvement that Mexico could experience if the current outbreak of violence concludes. It also suggests, in the long-term, that there is great potential for reducing violence in Mexico, provided that appropriate reforms are undertaken.

What follows is an analysis of the Pillars of Peace, in order to determine how Mexico compares to other countries and how the dimensions of the Pillars apply within Mexico.

PILLARS OF PEACE – WELL-FUNCTIONING GOVERNMENT

The performance of the Mexican federal government on measures of 'quality of governance' has decreased since 2000. Figure 2.3 shows the performance of the Mexican government on the World Bank's *World Governance* indicators. It shows the change from 2000 to 2012 on the six components of the Governance indicators, which measure different aspects of governance delivery and capacity.

Of the six indicators, two improved over the period, while four deteriorated. Regulatory quality and government

FIGURE 2.3 CHANGE IN SCORES FOR MEXICO ON THE WORLD GOVERNANCE INDICATORS (2000 TO 2012)

Four Governance measures deteriorated over the last twelve years.

CHANGE IN INDICATOR (AS PERCENTAGE OF INDEX RANGE)
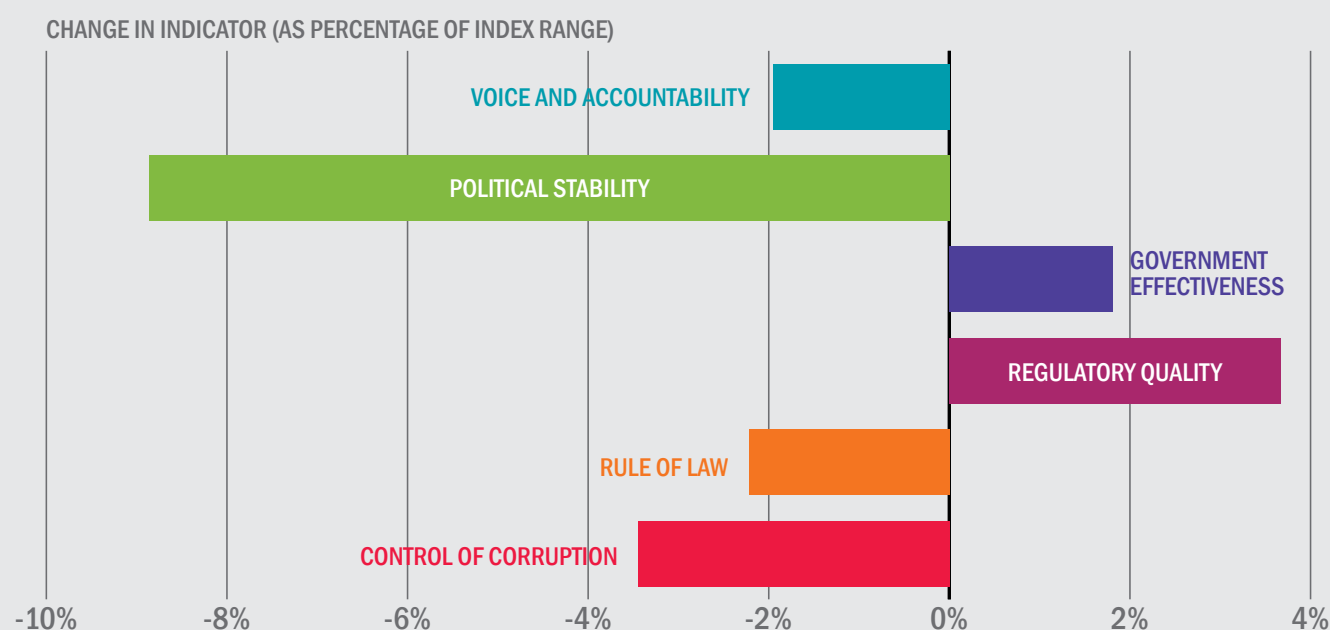
Source: World Governance Indicators – World Bank

effectiveness improved, while the level of perceived corruption, the rule of law, freedom of expression, and most notably, political stability has been greatly reduced.

Regulatory quality looks at the ability of the government to formulate sound policies and regulations while government effectiveness looks at the quality and implementation of government services.

PILLARS OF PEACE – SOUND BUSINESS ENVIRONMENT, EQUITABLE DISTRIBUTION OF RESOURCES AND GOOD RELATIONS WITH NEIGHBOURS

In the Mexican context, the Pillars of Sound Business Environment and Good Relations with Neighbours are inextricably linked. The economic fortunes of Mexico, particularly the border states, have become increasingly entwined with those of the United States, especially since the ratification of the North American Free Trade Agreement (NAFTA), which saw the removal of tariffs on over half of Mexico's imports to the US. Figure xx shows how economic growth in both countries has become more closely linked over time.

From 1960 to 1994, economic growth in Mexico was essentially uncorrelated with growth in the US. However, as the right hand side of Figure 2.4 shows, from 1995 onwards growth in Mexico has closely tracked growth in the US. This link was especially prominent in the US-Mexico border region, where employment in *Maquiladora* (manufacturing operations in a free trade zone) factories grew 86 percent in the five years after NAFTA's ratification. There are now over 3,000 *Maquiladoras* in Mexico, with over one million Mexicans employed in the sector.

Despite sustained economic growth and low levels of unemployment in Mexico, millions of Mexicans continue to seek out better economic opportunities in the US, further building ties between the two countries, although the number has plateaued in the wake of the global financial crisis, as shown in figure 2.5.

Economic research suggests that this outflow of human capital provides a benefit for Mexico due to the impact of remittances on the Mexican economy, with the World Bank estimating that remittances in 2012 constituted more than 2 percent of Mexico's total GDP.

While the economic fortunes along the border areas are closely linked, there is a huge disparity in crime rates

FIGURE 2.5 ESTIMATED NUMBER OF LEGAL AND ILLEGAL MIGRANTS FROM MEXICO IN THE US, 2000-2012 (MILLIONS)
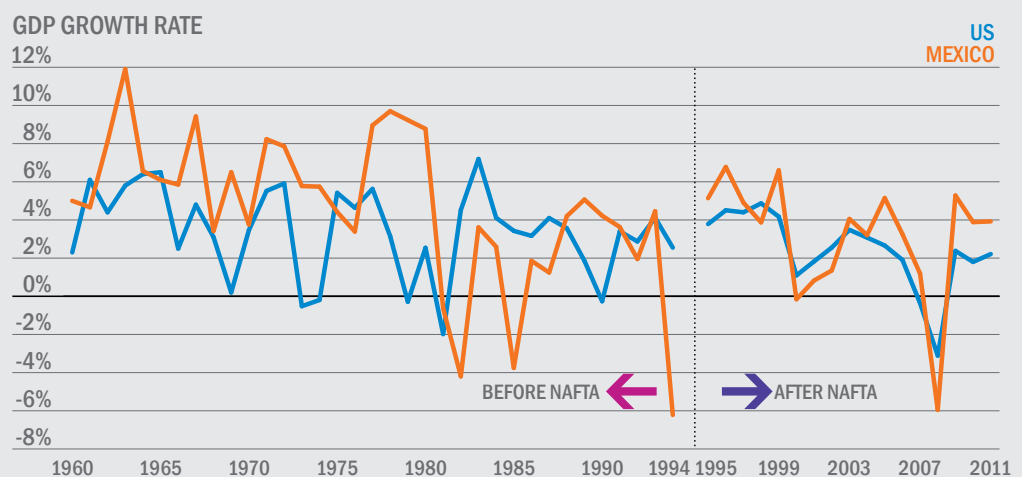The total number of migrants from Mexico has fallen slightly since the Global Financial Crisis.

NUMBER OF MIGRANTS (IN MILLIONS)
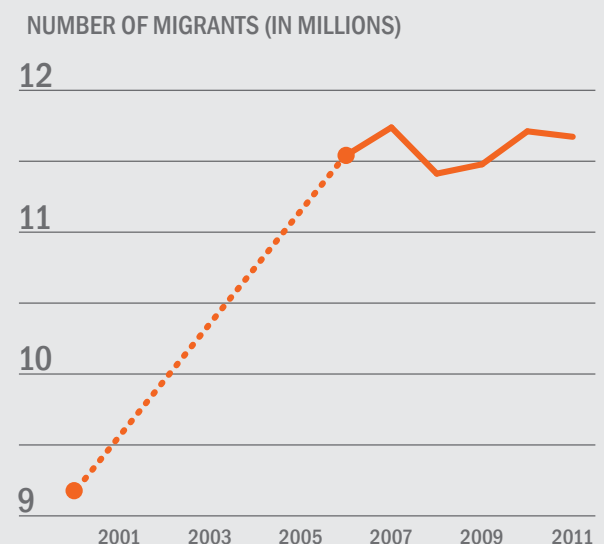
Source: PEW Hispanic Center

FIGURE 2.4 GDP GROWTH RATE, MEXICO AND THE US (1960-1994 AND 1995-2011)

Since the beginning of NAFTA, economic growth in Mexico has been closely linked to growth in the US.

GDP GROWTH RATE

Source: World Bank - WDI

and living conditions on each side of the border. Figure 2.6 shows the difference in the homicide rate between selected pairs of border cities.

The largest gap in homicide rates between border cities is observed in Ciudad Juarez and El Paso, two cities with

almost no separation between them and yet on the Mexican side of the border the homicide rate is 282.7, while El Paso has one of the lowest in the US at 0.8 per 100,000 people.

Recent years have also seen an exodus from wealthy and middle class families out of Juarez and into El Paso, as

FIGURE 2.6 HOMICIDE RATE IN SELECTED BORDER CITIES, US AND MEXICO
The homicide rate in Mexican border cities is orders of magnitude larger than the homicide rate in US border cities
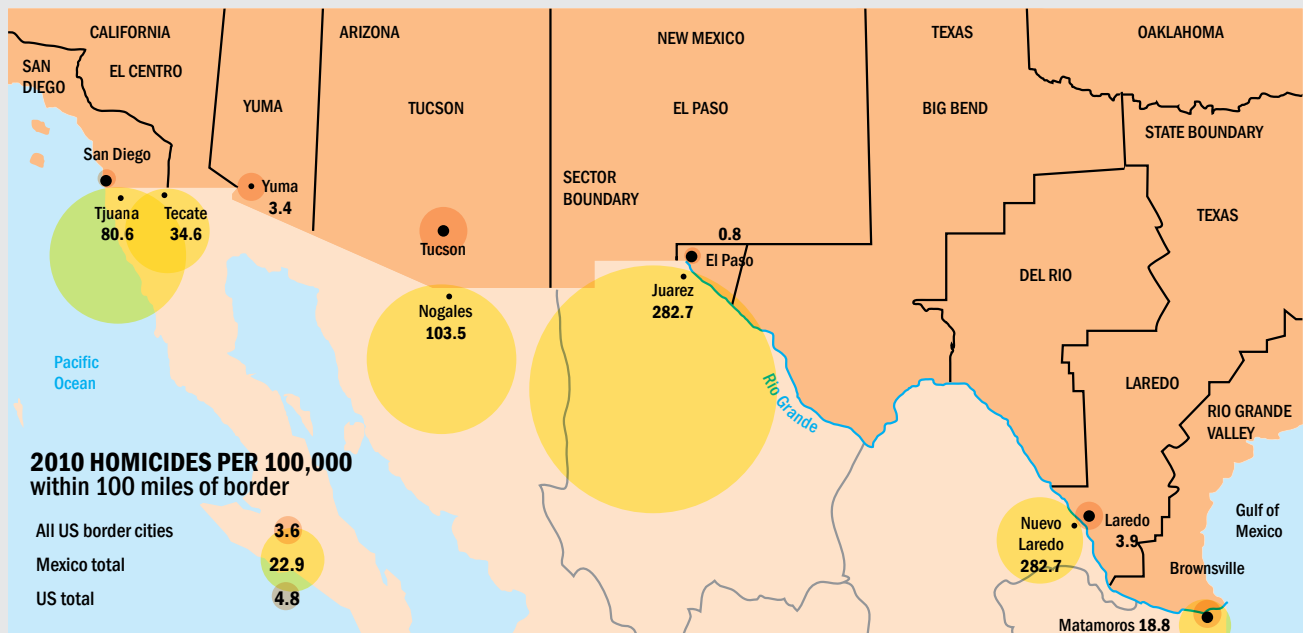
Source: The Washington Post

FIGURE 2.7 HUMAN DEVELOPMENT INDEX SCORE, BORDER AREAS IN US AND MEXICO (2000)
US HDI scores for border areas are consistently higher than Mexican HDI border areas.

Source: Anderson and Gerber (2007) Center for Latin-American Studies. San Diego State University

those with the means to depart leave the violence. There are similar, if less dramatic, discrepancies all along the border.

The gap between areas along the border is not confined to the crime statistics. It impacts aspects of social and economic development and well-being. Figure 2.7 illustrates the difference between the UNDP's Human Development Index (HDI) scores for the counties and metropolitan areas along the border.

The HDI combines income, education and health into a single score between 0 and 1, where a score closer to 1 indicates a higher level of human development. Notably, the area with the highest score on the Mexican side of the border (Mexicali) has a lower HDI score than the border area in the US (Starr) with the lowest score.

One of the patterns that emerges from Figure 2.7 is the significant variance in levels of human development, as measured by the HDI, which exist between the bordering states of the US and Mexico. Although the precise source of violence is complicated to explain and dependent on the local context, past analysis by IEP has consistently suggested a relationship between human development, peace and violence.

Lack of economic opportunity and income inequality do not in themselves guarantee high levels of violence. Many of the poorer southern states in Mexico have high levels of inequality and low GDP per capita and yet they are more peaceful than some of the more prosperous northern border states.

However, the proximity of stable, prosperous cities just north of the border means that there are significant outflows of human capital and an exodus of the middle class seeking to escape the violence in border towns.

PILLARS OF PEACE - FREE FLOW OF INFORMATION

The increase in violence in Mexico has attracted significant attention from the international media, with the number of media stories rising sharply from 2006 onwards, as shown in Figure 2.8.

The increasing attention paid to the drug war has not always been well-received. Journalists have been explicitly targeted for covering drug related violence. At least 147 journalists have been killed in Mexico since 2003, with 118 of those deaths occurring after 2007.

The very fact that journalists are targeted for harassment and assassination highlights how important the free flow of information Pillar is in supporting and maintaining a

FIGURE 2.8 NUMBER OF STORIES ON MEXICO RECORDED IN THE GDELT DATABASE, 2003-2012 (BY MONTH AND BY YEAR)

International media coverage of Mexico increased greatly after 2005.
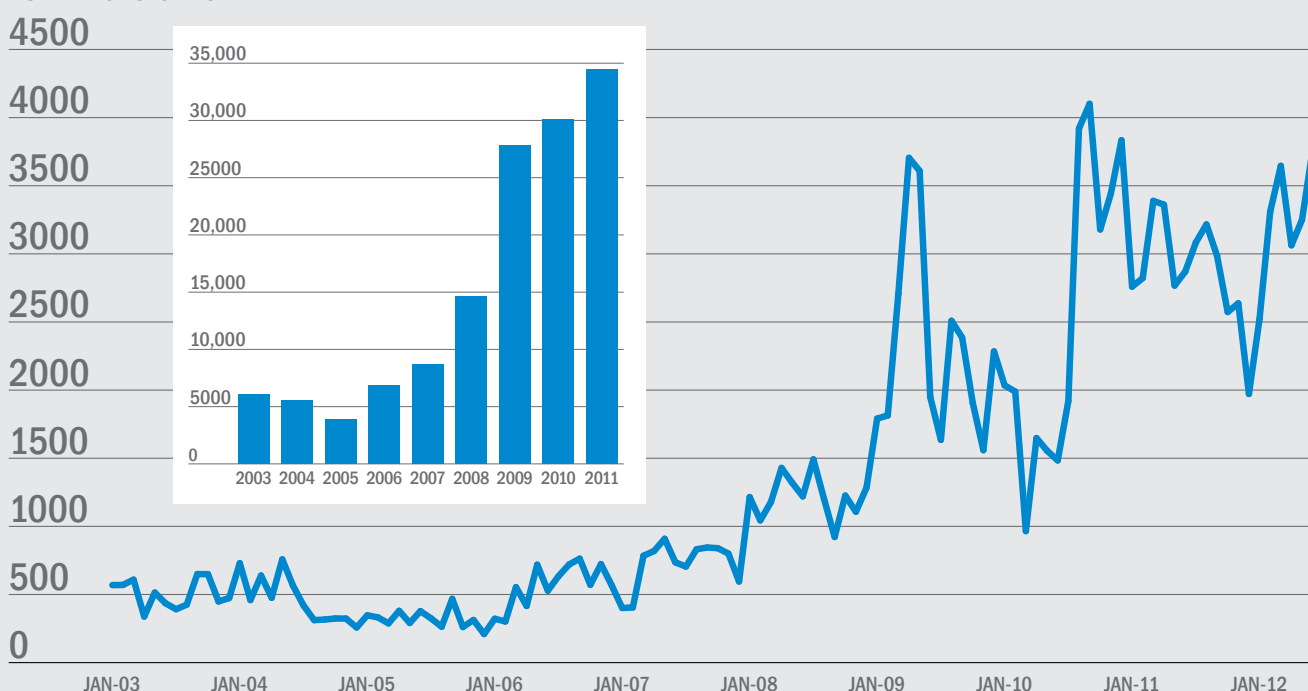
Source: Global Data on Events, Language and Tone (GDELT)

peaceful society. In the last 15 years, two Mexican journalists have received the *World Press Freedom Hero* award from the International Press Institute. In general, the free flow of information is one of the most vital Pillars for stemming corruption.

PILLARS OF PEACE – LOWER LEVEL OF CORRUPTION

Corruption can take many forms. It can be petty corruption, such as government employees requesting bribes, or more systemic corruption, such as having public officials give preferential treatment in their networks. Corruption is detrimental in many ways: it creates institutional inefficiencies, erodes public trust in government institutions and can facilitate criminal organizations.

Mexico ranks poorly on most international indices of corruption. It ranks 105th out of 176 countries in Transparency International's 2012 *Corruption Perceptions Index*. Mexico also ranks poorly when compared against other OECD nations as shown in Table 2.2.

TABLE 2.2 OECD COUNTRIES IN THE 2012 CORRUPTION PERCEPTIONS INDEX

Mexico scores poorly on corruption perceptions compared to other OECD countries.

CPI RANK	COUNTRY	CPI SCORE	CPI RANK	COUNTRY	CPI SCORE
1	Denmark	90	22	France	71
1	Finland	90	25	Austria	69
1	New Zealand	90	25	Ireland	69
4	Sweden	88	30	Spain	65
6	Switzerland	86	32	Estonia	64
7	Australia	85	33	Portugal	63
7	Norway	85	37	Slovenia	61
9	Canada	84	39	Israel	60
9	Netherlands	84	41	Poland	58
11	Iceland	82	45	South Korea	56
12	Luxembourg	80	46	Hungary	55
13	Germany	79	54	Czech Republic	49
16	Belgium	75	54	Turkey	49
17	Japan	74	62	Slovakia	46
17	United Kingdom	74	72	Italy	42
19	United States	73	94	Greece	36
20	Chile	72	105	Mexico	34

Source: Corruption Perceptions Index (TI, 2012)

Due to the tendency for bribery to go unrecorded, the *Corruption Perceptions Index* is not a direct measure of corruption, but rather a measure of perceived corruption based on survey data. In the case of Mexico, given the clear findings and its outlier status when compared to other OECD countries, the results are indicative of comparatively high levels of corruption.

FIGURE 2.9 PERCEPTIONS OF CORRUPTION IN KEY INSTITUTIONS IN MEXICO, (average score, 2004-2012) 5 = extremely corrupt, 1 = not at all corrupt

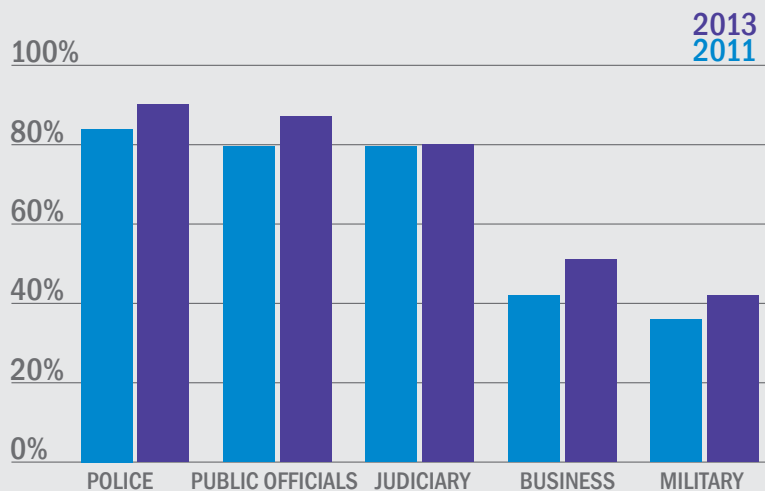The police and political parties are perceived as being the most corrupt.
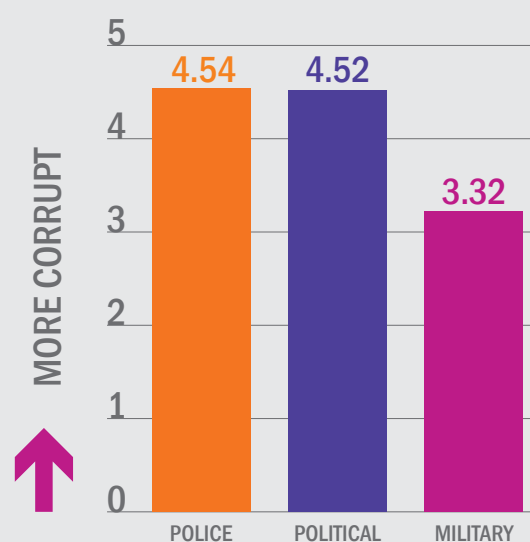
SOURCE: Transparency International, Corruption Perception Barometer

The average level of perceived police corruption in Mexico over the last decade is 4.54 out of a possible 5, meaning that the police are perceived as being highly corrupt. The closest score of the 34 OECD countries is that of Slovakia where perceived police corruption was scored at 3.8.

FIGURE 2.10 % OF RESPONDENTS WHO SEE INSTITUTIONS AS CORRUPT OR EXTREMELY CORRUPT (2011 – 2013)

90% of respondents feel that the police is corrupt or extremely corrupt, 30 percentage points higher than the global average.

2013
2011

	POLICE	PUBLIC OFFICIALS	JUDICIARY	BUSINESS	MILITARY

Source: Transparency International Corruption Perception Barometer

FIGURE 2.11 MEXICO'S SCORE IN THE WJP RULE OF LAW INDEX

The five countries with the lowest rule of law scores in Latin America.

GOVERNMENT, POLICE AND MILITARY
CONTROL OF CRIME
CRIMINAL SYSTEM

BOLIVIA

MEXICO

PERU

VENEZUELA

GUATEMALA

0.0   0.1   0.2   0.3   0.4   0.5   0.6   0.7

HIGH CORRUPTION   **LOW CORRUPTION**

Source: World Justice Project Index

Figure 2.10, which also uses data from Transparency International's Global Corruption Barometer, shows the percentage of survey respondents who feel that key institutions within Mexico are corrupt or extremely corrupt.

In 2011, 84 percent of people perceived police forces as corrupt, but the number has since increased to 90 percent in 2013. This is the 4th highest result of any country in the Corruption Perceptions Barometer and the highest level of any country outside of Africa. 87 percent of respondents also felt that public officials were corrupt or extremely corrupt, while the level of corruption amongst the private sector and the military is perceived to be much lower, albeit rising over the last two years. The perception of military corruption in Mexico is only slightly above the global average.

When compared to the Latin American region, Mexico also tends to score poorly in terms of corruption, scoring in the bottom five when compared to Latin American countries in terms of whether 'government officials in the police and the military do not use public office for private gain', 'crime is effectively controlled' and whether the 'criminal system is free of corruption'. This has been illustrated in Figure 2.11.

In the context of the drug war, these results are not surprising. Local police forces have been nearly powerless to stop the large criminal syndicates, as they are under-resourced and under-paid. This has led to the deployment of federal police and the army in certain states by the federal government. Mexico also has challenges with the functioning of the judicial system. The justice efficiency indicator shows the percentage of homicides that don't end with a sentence at over 90 percent in some states, pointing to an overwhelmed judicial system. The system is also perceived by society to be highly corrupt. Regardless of the underlying cause, it is vital to improve justice system efficiency so that cases can be properly processed and public confidence in the system restored.
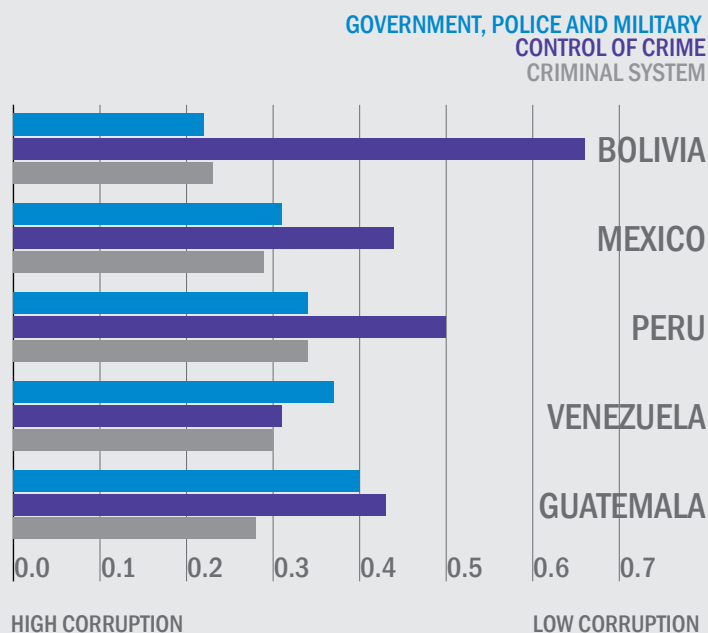
TABLE 2.2 PERCENTAGE OF POPULATION HAVING TRUST IN PUBLIC INSTITUTIONS

A high percentage of people have little or no trust in the police forces, politicians or political parties.

INSTITUTIONS / CONFIDENCE LEVEL	MUCH	SOME	LITTLE	NOTHING
Churches	41%	26%	21%	10%
Neighbours	34%	31%	25%	10%
Universities	28%	30%	19%	7%
Media	11%	31%	41%	14%
Police	5%	15%	41%	38%
Private Police	5%	13%	32%	34%
Public Minister Offices	4%	13%	35%	33%
Political Parties	3%	11%	37%	47%
Members of Parliament	2%	9%	31%	53%
Prisons	2%	8%	27%	53%
Unions	2%	8%	25%	39%

Source: IEP based on data from ENVIPE 2012 Survey

MEASURING CORRUPTION AT THE STATE LEVEL

Unfortunately, there is no direct measure of police corruption at the state level, so it not possible to identify how evenly corruption is spread across Mexican states. One potential proxy for police corruption from survey data is whether or not people feel that the police are helpful. ENVIPE survey data records whether people feel that the municipal, state and federal police are helpful. Figure xx shows the municipal-level data correlated against the under-reporting rate for sexual offenses.

BOX 2 // SURVEYS ON CORRUPTION

It is important to recognize that even though the concept of corruption is commonly understood, its exact form can vary significantly across countries and within countries. For instance, corruption may range from providing a bribe directly to a public official for the purposes of hastening the processing of official documentation to widespread election rigging or the systematic rigging of government administration systems to benefit particular segments of society. Because of the underground nature of corruption, it can be notoriously difficult to directly detect and measure.

In Mexico's case some institutions would appear to have higher levels of corruption than desirable; however it is not possible to directly measure the impact of corruption as bribes go unseen, consequently, survey data becomes the only means of attempting to gauge this, with two approaches generally utilized:

- The first involves asking the general public about their perceptions of corruption within their society. This can potentially provide an accurate reflection of public sentiment, but doesn't necessarily reflect the financial magnitude of the corruption.
- An alternative method is to ask the people surveyed about bribes paid. Although useful, it may not capture systemic corruption that may occur through preferential arrangements between officials and their benefactors.

The analysis contained in this report combines both of the above techniques.

FIGURE 2.12 TRUST IN POLICE VS. UNDER-REPORTING (r = -0.394)

There is a relationship between the feeling that municipal police are helpful and the willingness to report sexual offences to the police.

UNDER-REPORTING OF RAPE
(RATIO OF INCIDENTS TO REPORTED INCIDENTS)
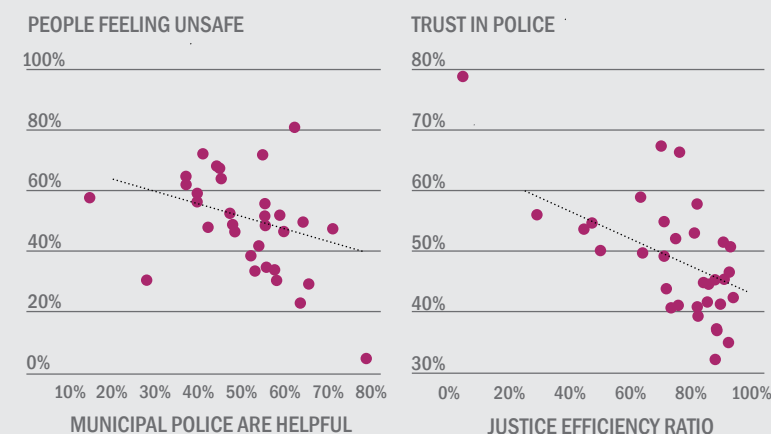

MUNICIPAL POLICE ARE HELPFUL
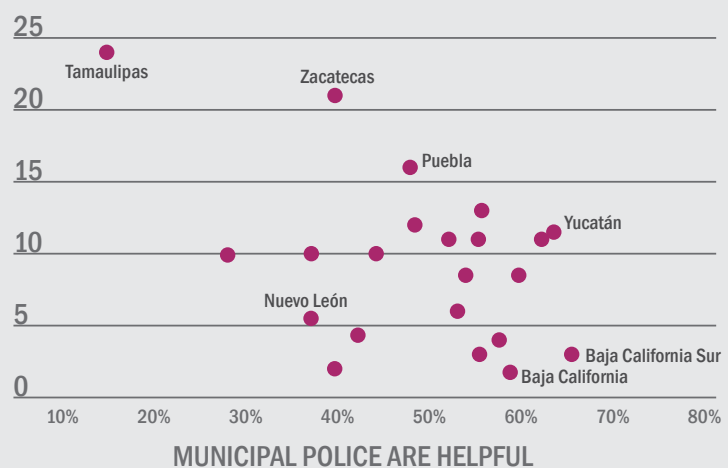
Source: IEP based on data from INEGI - ENVIPE 2012 Survey

There is a strong correlation between the perception of safety and the perceived helpfulness of the police, as shown in Figure 2.13. There is also a notable correlation between the trust in police and the justice efficiency indicator showing that where the percentage of crimes solved increases, the trust in police also increases. As police forces improve their capacity to prosecute crimes that have been committed, it is expected that levels of trust will subsequently improve. This has the potential to generate a virtuous cycle: as trust in police forces increase, justice efficiency will also increase and vice versa.

Mexico has many positive aspects from which to build a positive future; its regulatory quality and government effectiveness have improved considerably (as measured by the World Bank). It's the best-placed nation in the world in terms of its institutional capabilities to improve its peace as outlined in this report.

When compared to the rest of the world on its performance on the Pillars of Peace, Mexico ranks above the world average on its levels of human capital, the equitable distribution of resources and sound business environment Pillars. The human capital Pillar measures not only the levels of attainment in education and health, but also how well utilized that human capital is. The equitable distribution of resources and sound business environment Pillars measure equality in income, health and education outcomes as well as how easy it is to do business and the institutional environment for innovation of entrepreneurial activity. These are areas of competitive advantage and underline where there are key strengths for Mexico.

Mexico is a developed nation with a prosperous middle class, solid industrial and manufacturing base, natural resources and a recent history of resilient economic growth. As such, Mexico has the capacity to solve its problems, provided they are tackled with a thoughtful and comprehensive strategy.

FIGURE 2.13 TRUST IN POLICE VS. PERCEPTION OF SAFETY AT THE MUNICIPAL LEVEL, R = -0.61

In states where police forces are perceived as being helpful, respondents tend to report feeling safe.

Source: IEP based on data from INEGI - ENVIPE 2012 Survey

HUMAN CAPITAL AND SOUND BUSINESS ENVIRONMENT ARE AREAS OF COMPETITIVE ADVANTAGE AND UNDERLINE WHERE THERE ARE KEY STRENGTHS FOR MEXICO.
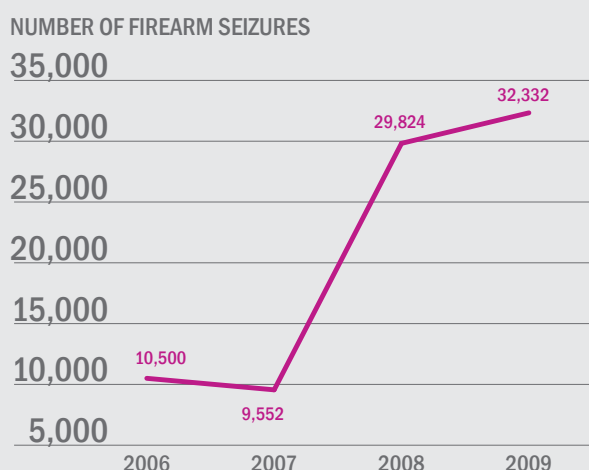
CURRENT CHALLENGES

THIS SECTION ANALYSES KEY POLICY-RELATED CHALLENGES THAT ARE BOTH IMPORTANT SHORT AND LONG-TERM PRIORITIES FOR DEVELOPING PEACE IN MEXICO.

FIREARM TRAFFICKING

The flow of firearms between the US and Mexico is an area of serious concern for both Mexican and US officials, as it allows the cartels to gain access to high-powered, military grade firearms and assault weapons. Figure 3.1 shows how the number of firearm seizures greatly increased in Mexico as the drug war intensified.

FIGURE 3.1 FIREARM SEIZURES IN MEXICO (2006-2009)

Firearm seizures increased dramatically as the drug war intensified.

NUMBER OF FIREARM SEIZURES

Source: IEP with data from IGARAPE and the University of San Diego

FIGURE 3.2 ESTIMATED NUMBER OF FIREARMS TRAFFICKED INTO MEXICO FROM THE US (UPPER ESTIMATE)

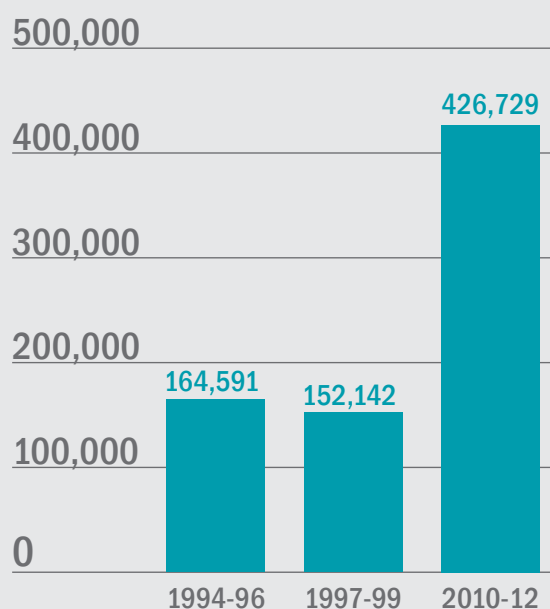The number of firearms being trafficked was three times higher in 2010-2012 than 1997-1999.

Source: IEP with data from IGARAPE and the University of San Diego

Between 2007 and 2008 there was a threefold increase in arms being seized, which coincided with the ramp up in the drug war. It is also likely that the number of firearms being seized is a small fraction of the total number of guns being smuggled into Mexico. While producing accurate estimates of the total number of firearms is difficult, research conducted by the Trans-Border Institute at the University of San Diego noted the connection between the number of Federal Firearm Licenses to sell small arms (FFLs) and the distance to the US-Mexico border. Using this fact and a number of other assumptions, they were able to construct a model of small arms trafficking from the US, which shows how the number of firearms being trafficked has increased in the last two decades. Figure 3.2 shows their upper limit estimates for arms trafficking in three different periods.

The number of firearms being smuggled has greatly increased over the last decade and was almost three times higher in 2010-2012 than it was in 1997-1999. The sale of these firearms is worth an estimated US$127.2 million to the firearms industry in the US.

The flow of firearms into Mexico from the US has been a constant source of frustration for Mexican officials. The mismatch between the two regulatory regimes plus the seeming ease with which weapons can be smuggled across the border means that organized crime syndicates in Mexico can easily access a far greater number and variety of weapons than similar organized crime groups in other countries. As the percentage of homicides committed by firearms continues to rise, this is one area in which increased cooperation between the US and Mexico is important to help reduce overall levels of violence.

FEDERAL FUNDING OF STATE PUBLIC SECURITY

An analysis of federal funding to state public security (Public Security Contribution Fund, *Fondo de Aportaciones para la Seguridad Publica or* FASP) found that there was a moderate statistical relationship between a drop in extortion rates and increases in state funding of police operations. It also found that increases in police funding resulted in increased crime reporting rates, which can be viewed as a confidence measure in policing. However, there was no apparent relationship between increases in police funding and general drops in crime, nor homicides specifically.

There are three different funds from the federal government that are specifically allocated to the states for public security: FASP, SUBSEMUN (Fund for Municipal Security) and the PROASP (Supporting Program for Public Security).

From those funds, the biggest is FASP at 7.6 billion *pesos* in 2013. These funds are required to be allocated to areas such as the professionalisation of the local police force, extraordinary payments for judicial and police personnel, police equipment, the improvement of prison and judicial infrastructure, emergency lines and security telecommunication networks. Although the aims of this funding are diverse, much of it has been aimed at improving the professionalism of Mexico's police force (Shirk, 2010).

Although it is difficult to argue against the better resourcing of police and the justice system in the interest of fighting crime, it is important to realize that the factors that influence longer-term trends in crime are more complicated than funding alone, as they relate to societal factors such as the levels of social cohesion, corruption, poverty and unemployment. To better understand the impact of police funding on peace, an analysis was conducted to determine the extent to which states with higher levels of funding might have secured reductions in crime. This was analysed for both before and after the start of the drug war.

To do this, changes in crime rates and police funding were examined between two periods, 2003 to 2007 and 2007 to 2012, representing the periods before and after the start of the drug war. If increasing the level of funding, adjusted for a state's population, did coincide with reductions in crime, we might expect that the states with the biggest increases in funding were also experiencing larger decreases in crime. On the other hand, those states with the smallest increases in funding would also have tended to experience either smaller decreases, or increases, in crime.

The states with the four largest and smallest increases in FASP funding from 2007 to 2012 have been provided, along with changes in their homicide and extortion rates in Table 3.1 and table 3.2.

FIGURE 3.3 TOTAL FASP FUNDING 2003 TO 2012
The level of FASP funding has more than doubled since 2003.

FASP FUNDING (billions of pesos)
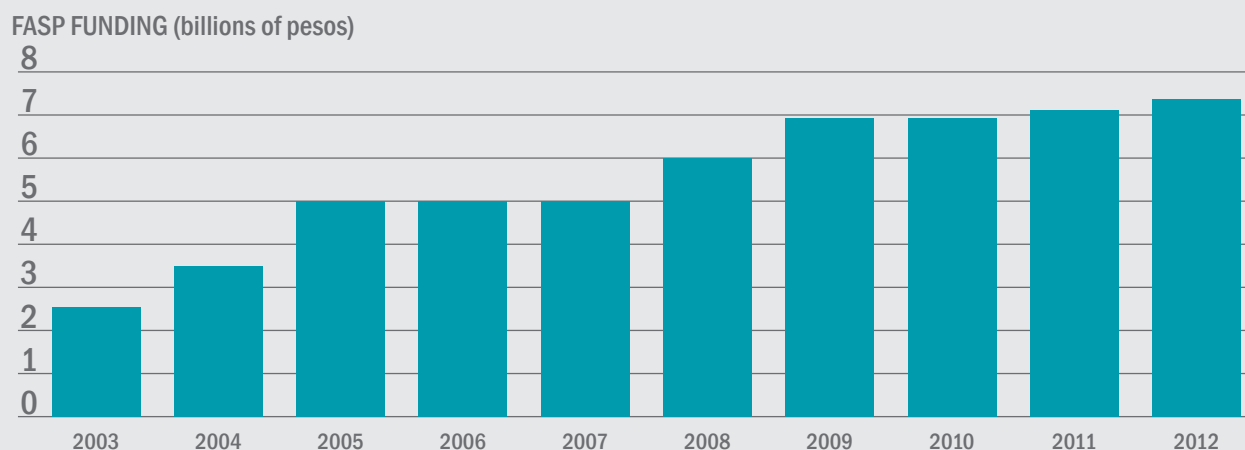
Source: IEP based on data from Secretaria de Hacienda y Crédito Publico - SHCP

TABLE 3.1 STATES WITH THE BIGGEST INCREASES IN PER CAPITA FASP FUNDING 2007 TO 2012

Those states with the biggest increases in per capita FASP funding didn't necessarily experience crime reductions.

RANK	STATE	FASP CHANGE IN STATE FUNDING (PER CAPITA)	HOMICIDE CHANGE	EXTORTION CHANGE
1	Distrito Federal	45%	-7%	-20%
2	Yucatán	41%	-27%	19%
3	Quintana Roo	40%	31%	-
4	Chihuahua	40%	154%	-

As illustrated above, there was no consistent pattern in the performance of states with the largest increases in funding. In fact, some states, such as Chiapas, which received the lowest increases in funding, experienced reductions in homicide rates greater than those states, such as Chihuahua, which received the largest FASP funding increases.

TABLE 3.2 STATES WITH THE SMALLEST INCREASES IN PER CAPITA FASP FUNDING 2007 TO 2012

Some of the states with the smallest increases in per capita FASP funding experienced growth in extortion rates.

RANK	STATE	FASP CHANGE IN STATE FUNDING (PER CAPITA)	HOMICIDE CHANGE	EXTORTION CHANGE
32	Baja California Sur	21%	-34%	176%
31	Nayarit	23%	1%	67%
30	Sonora	24%	-1%	385%
29	Chiapas	25%	-14%	155%

Despite this, there did appear to be a statistically significant correlation between the change in extortion and the change in FASP funding (per capita), suggesting that on average, those states that achieved the biggest reduction, or smallest increases, in extortion were those which received the largest proportional increases in FASP funding. This has been illustrated in greater detail in Figure 3.4.

FIGURE 3.4 FASP FUNDING PER CAPITA AND THE CHANGES IN EXTORTION RATE, 2007 TO 2012 R=0.31

On average, states that received larger funding injections also experienced the largest reductions in extortion.
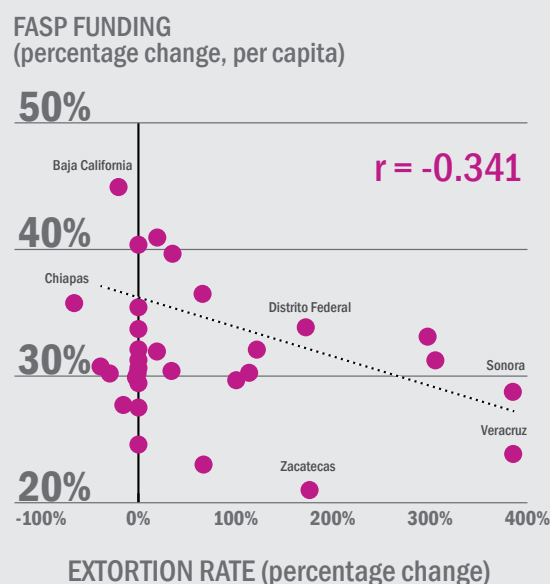
Source: IEP based on data from Secretaria de Hacienda y Crédito Publico and SESNSP

Although this would seem to suggest the increases in funding as part of FASP have been effective, it is important to note a number of key points:

1. States which were able to maintain or reduce their rates of extortion appeared to require funding increases of approximately 25 percent or higher. However, a number of states experienced increases in their extortion rates despite having received an increase in funding.

2. The nature of correlation analysis means that we cannot suggest that funding caused changes in the rates of extortion, merely we observe that on average reductions in the extortion rate were larger where FASP funding increases were more substantial.

An analysis was carried out to determine whether there is a relationship between funding increases and drops in crime. The ratio of crimes committed to crimes reported, based on the 2012 ENVIPE survey, were examined to determine the rate of under-reporting for particular categories of crimes. The ratio of unreported to reported crimes were then analysed against the average level of FASP funding per state to determine whether there was a relationship between the two. Results that were found to be statistically significant are provided in Figure 3.5.

FIGURE 3.5 FASP FUNDING PER CAPITA AND THE UNDER-REPORTING OF ROBBERY (R=- 0.539) AND ASSAULT (R= -0.385)

The under-reporting of robbery and assault decreases as the level of FASP funding increases.
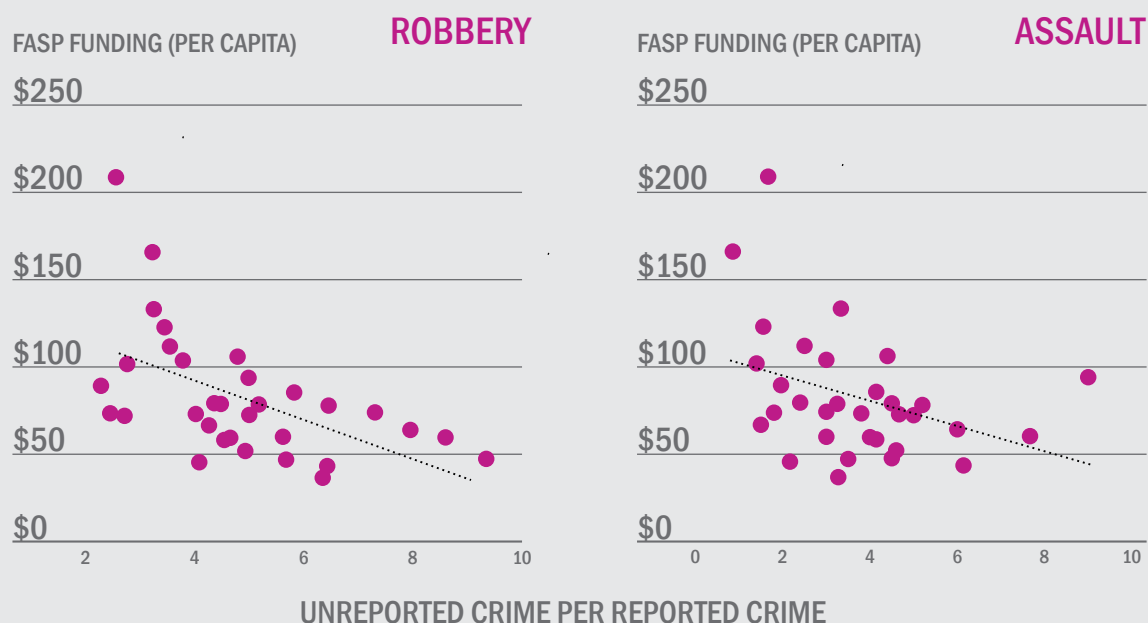
Source: IEP based on data from ENVIPE 2012 Survey and Secretaria de Hacienda y Crédito Publico

As is illustrated above there appears to be a tendency for states with higher per capita levels of FASP funding to have a lower rate of under-reporting for robbery and assault. Although this does not imply one causes the other, given that we would expect the capacity of police forces to deal with crimes to be higher when they are better funded, this relationship is not unexpected.

CURRENT APPROACH TO FASP FUNDING DISTRIBUTIONS

FASP funding is allocated according to a range of criteria designed to intelligently target funding for the purposes of deterring and dealing with the consequences of crime. In particular the CSNP (National Council for Public Security) annually sets the criteria for the allocation of funds to each of the states. To do this, they use five aspects with different weights that can change year by year.

The criteria for FASP funding in 2013 is as follows (Diario Oficial de la Federación, 2013):

1. Population (40 percent): is defined as the basic aspect of equity between states. The larger the population, the larger the requirement is for public security infrastructure.

2. Fight against crime (25 percent): rewards those states that have shown larger improvements in security.

3. Confidence control (15 percent): rewards states that have shown the largest progress in the professionalisation of their police forces.

4. Information (15 percent): rewards the states that have developed their IT intelligence infrastructure and those that have a robust and complete system of indicators.

5. Use of resources (5 percent): rewards those states that have shown lower levels of under-utilization of budgeted resources in previous years.

In addition to the funds allocated from the Federal Government, the states of Mexico have to make a contribution for the execution of the National Public Security Strategy, which is equivalent to 20 percent of the federal funding.

The following IEP analysis (Figure 3.6) suggested that the level of FASP funding per capita did not appear to align with the level of violence in a state, although in some respects it is not necessarily true that higher levels of FASP funding would be allocated to less peaceful regions, given the broad criteria used to set FASP funding.

FIGURE 3.6 STATES WITH THE BIGGEST INCREASES IN PER CAPITA FASP FUNDING 2004 TO 2007

In 2012, the level of FASP funding per capita did not appear to follow the level of violence experienced in a state.

FASP FUNDING (per capita)

MPI SCORE IN 2012

FASP FUNDING (per capita)

AVERAGE HOMICIDE RATE (per 100,000 people)

FASP FUNDING (per capita)

AVERAGE DRUG CRIME RATE (per 100,000 people)

FASP FUNDING (per capita)

AVERAGE EXTORTION RATE (per 100,000 people)
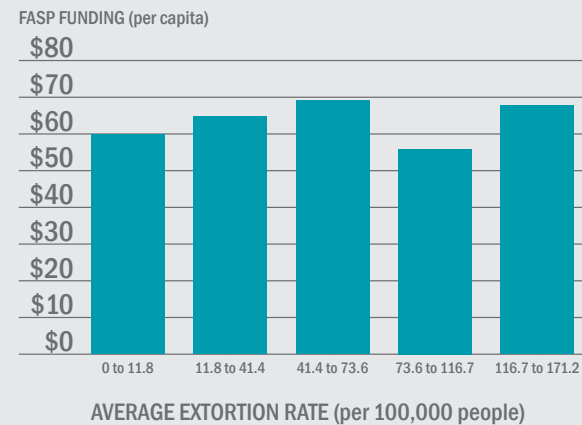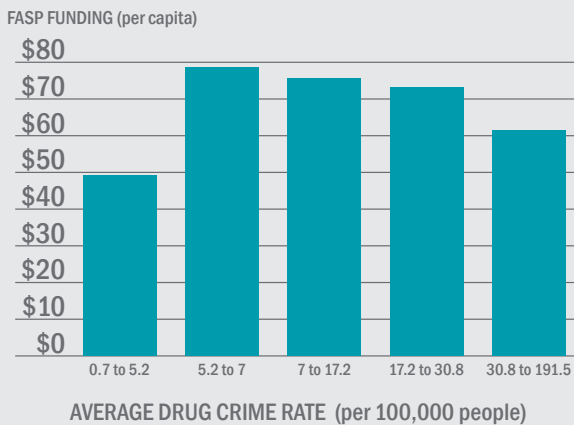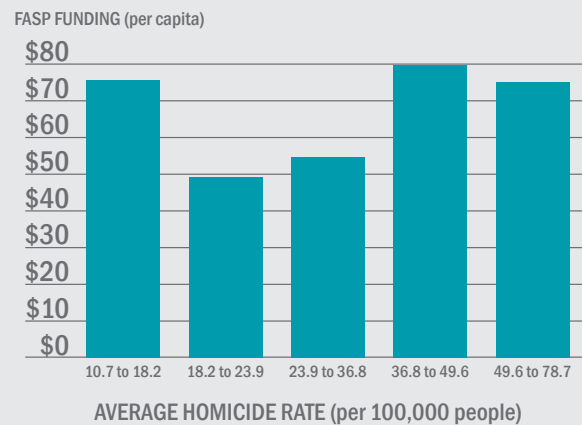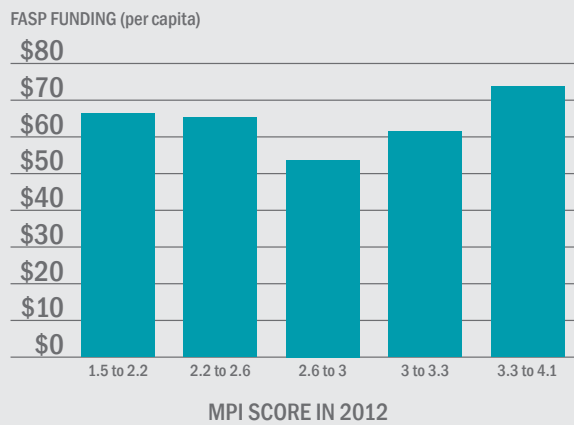
Source: IEP based on data from Secretaria de Hacienda y Crédito Publico

THE LEVEL OF
FASP FUNDING
PER CAPITA DID
NOT APPEAR
TO ALIGN WITH
THE LEVEL OF
VIOLENCE IN
A STATE

INCARCERATION TRENDS AND UNPUNISHED CRIMES IN MEXICO

The impact of the increase in violence on the judicial system can be seen in changes in the incarceration indicator and justice system indicator trends.

Note that the incarceration indicator measures the conviction rate in a given year rather than the total number of prisoners. Thus, it is not that the total number of prisoners in Mexico has declined in the last ten years, but rather the number of people being sentenced to prison.

One of the more startling findings is that the justice efficiency indicator has continuously declined even while organized crime and violent crime have been decreasing. The justice efficiency indicator measures the ratio of homicide sentences to homicides within a year. From this analysis it is clear that the Mexican government needs to place emphasis on improving the efficiency of judicial systems .

The three key findings are:

- The increasing levels of violence after 2006 began to overcome the capacity of the system to the extent that in some states the percentage of homicides that are not convicted is higher than 90 percent.
- The national rate of unpunished homicide has increased by 14 percent in the last ten years, with the northern region presenting the most significant increase of 49 percent compared to 2003 level (Table 3.3).
- Although the central, southern and eastern regions seem to be more stable, the rates of unpunished homicide were already high in 2003 and have not shown any improvement since.

TABLE 3.3 SENTENCING RATES FOR HOMICIDE BY REGIONS
The biggest increase in unpunished homicide has been in the northern and western regions.

YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	CHANGE 2003-2012
Average for states *	62%	59%	58%	62%	66%	66%	70%	73%	75%	77%	24%
Central region	76%	76%	72%	76%	65%	62%	69%	69%	73%	78%	3%
Northern region	58%	54%	61%	64%	66%	78%	83%	88%	88%	86%	49%
Southern region	80%	77%	71%	76%	77%	73%	78%	79%	82%	84%	4%
Eastern region	77%	77%	74%	72%	76%	73%	74%	78%	80%	84%	10%
Western region	57%	53%	51%	58%	62%	66%	72%	74%	77%	77%	34%

Source: IEP
*Note: this differs to the national rate which registered a 14% increase from 2003 to 2012.

The MPI results for the incarceration and justice system efficiency indicators suggest a possible link between the overwhelmed state of the prison system in Mexico and the extent of the justice system's inefficiency. While the incarceration indicator shows a declining trend since 2003, the level of unpunished homicide measured by the justice efficiency indicator has increased significantly since 2006. Although there are many reasons for inefficiencies in the justice system, the results suggest a prison system (both federal and local) that is too crowded to deal with the rapid increase in violence since 2006.

For instance, the Executive Secretary of the National System for Public Security (SESNSP) reports that in 2011, 50 percent of all prisons in the country were overpopulated while 50 percent of the prison population was concentrated in 30 prisons . Furthermore, seven states (Distrito Federal, México, Baja California, Jalisco, Sonora, Nuevo León and Puebla) had 52 percent of the total population of prisoners.

Table 3.4 shows the rate of unpunished homicides and the overpopulation of the prison system in those states. Although there is not a clear relationship, some of the states with the highest judicial system inefficiency seem to be those that have the most overpopulated prisons in Mexico, suggesting that not only an overwhelmed judicial system, but also the prison capacity, may be main factors for high levels of unpunished crimes.

TABLE 3.4 RATES OF UNPUNISHED HOMICIDE AND THE PRISON SYSTEM CAPACITY

Mexico state has high levels of unpunished homicide and also a significant overpopulation in its prison system.

STATE	% UNPUNISHED HOMICIDE	PRISON CAPACITY	PRISON POPULATION	% OVER-POPULATION
Nuevo León	93%	6,317	8,936	41%
Puebla	85%	6,012	8,236	37%
México	79%	10,379	18,063	74%
Tabasco	73%	3,521	5,537	58%
Jalisco	67%	9,279	16,067	73%
Sonora	65%	7,880	11,855	50%
Distrito Federal	45%	23,261	42,060	81%

Source: IEP and SESNSP

BOX 3 // TRENDS IN CRIME PREVENTION

A key development over the last decade in both the US and the UK has been the increasing use of modern technology in both fighting crime and creating the conditions under which it is more difficult to commit a crime. As it becomes riskier to execute a crime, the disincentive outweighs the opportunity.

Summarized below are technological factors potentially associated with the reduction in violence in the UK. Many of these same trends have also been observed in the US and may be instructional in Mexico.

Better electronic surveillance techniques: the advent of CCTV cameras has allowed for better identifying criminals once a crime has been committed. More importantly, CCTV cameras act as a strong deterrent to crime. They are not only publicly controlled but are also extensively used by private companies and individuals to monitor activity within homes, factories and shops.

Improved sharing of information between law enforcement agencies and better use of computing: over the last decade there has been an increasing use of modern technology to analyse and share information. The proliferation of the internet and cloud based software are examples of technologies that have played a role in improving the efficiency of the police force and its ability to share information internally and with other government departments as well as with other international law enforcement agencies.

Advent of DNA profiling: major breakthroughs in DNA analysis and the collection of DNA samples at crime scenes over the last decade has enabled the solving of crimes that otherwise would not have been solved. Additionally DNA profiling, along with CCTV cameras, creates a better means of identification, leading to less mistakes being made in regard to arrests and sentencing.

Improved private electronic security systems: the proliferation of low cost home, business and car alarm systems means these security apparatus render many places untouchable for criminals.

ECONOMIC VALUE OF PEACE IN MEXICO

THE TOTAL ECONOMIC IMPACT OF VIOLENCE IN MEXICO IS ESTIMATED TO BE 4.4 TRILLION PESOS OR US$333.5 BILLION, EQUIVALENT TO 27.7 PERCENT OF GDP. **IF ALL THE STATES IN MEXICO WERE AS PEACEFUL AS CAMPECHE, MEXICO WOULD BENEFIT FROM 2.26 TRILLION PESOS.** THAT WOULD BE ENOUGH TO PAY FOR THE GOVERNMENT INVESTMENT PROGRAM (2013-2018) FOR TRANSPORT AND COMMUNICATIONS INFRASTRUCTURE.

- Of the total econimic impact of 4.4 trillion *pesos* 600 billion pesos or US$45.9 billion is direct costs, representing the immediate financial costs of violence.
- Additionally, 1.9 trillion *pesos* or US$143.8 billion as a consequence of lost productivity, destruction and suffering as a consequence of violence.
- The annual direct cost of containing violence in Mexico is 3.8 percent of GDP, approximately the same size as Mexico's automobile industry.
- The total economic impact of violence containment represents enough to provide every citizen of Mexico with a little over 37,000 *pesos*, or almost US$3,000.

- If the economic impact of violence containment expenditure was the same as it was in 2003, Mexico would gain 682.3 billion *pesos* per annum (US$52 billion) in additional economic activity, enough to pay for modernizing Mexico's public transportation infrastructure (World Highways, 2013), paying for the education of 3.9 million high school students, or repaying one sixth of Mexico's public debt each year.

ESTIMATING VIOLENCE CONTAINMENT EXPENDITURE

Although it is clear that the increases in violence in Mexico have come at a great cost, there are not many studies that comprehensively seek to estimate the total impact of violence on the Mexican economy. The aim of this study is to attempt to estimate this impact. The study by its nature is conservative as what has been counted is only information that could be sourced or reasonably deducted. Some of the items not counted in the study include burglaries, domestic violence, insurance against injury and alarm systems.

The study has also incorporated military expenses as the aim of the military is to either act as a deterrent to violence or control violence. Mexico's military has also been deeply involved in combatting violence as part of the drug war. For a full list of items included in the study, please refer to the Economic Methodology on page 73–76.

Violence impacts individuals and society in a number of detrimental ways. There is the emotional and physical impact, which may affect the victims of crime in both the short and longer term. There may also be the direct loss from damage to property, lost work time and medical costs.

High crime and violence rates foster a sense of fear that affect people's day-to-day quality of life and the economic choices that they might make. Even the fear engendered by violence has a cost, potentially resulting in more defensive expenditures on personal security items and avoidance of areas that are considered dangerous. An example is a young man, who after seeing another man his age being kidnapped at a set of traffic lights, only went out of the house when needed, varied transportation routes and stopped socialising, with obvious personal and economic consequences.

Such expenditures are important to count as development theory and emerging literature on peace indicate that direct violence has a serious negative effect on both social and economic development. This holds true for high and low income countries and is made more pertinent in Mexico because of the impact of drug violence. Violence also impacts business productivity and cost structures, as well as diverting government expenditures that otherwise may have been spent on funding infrastructure, lowering taxes, or providing stimulus.

Counting the economic benefits that accrue to more peaceful societies is notoriously difficult. Despite this, it is highly important to undertake the exercise in order to better understand the magnitude of the benefits that might accrue from pursuing peace. In recognition of this, a detailed analysis of the likely economic impact of violence has been conducted to accompany the Mexico Peace Index.

There are at least two types of economic gains associated with increases in peace:

1. **Direct benefits** are derived from the reductions in costs associated with reductions in violence. Costs will be reduced for items such as medical expenses, incarceration, justice expenditure, policing and the military.
2. **Indirect benefits** generated from the additional economic activity gained from the more productive use of expenditure. These might include the additional economic activity trapped by violence such as the wages of injured people.

IEP's analysis finds that economic activity related to violence containment in 2012 reached approximately 4.4 trillion *pesos* (US$334 billion), which is equivalent to 27.7 percent of Mexico's GDP in 2012 (See Table 4.1 overleaf). To put this figure in perspective, 4.4 trillion *pesos* is enough to provide each Mexican citizen with 37,000 *pesos* (US$3,000), double the level of government funding provided to health and education.

The 4.4 trillion pesos is comprised of the direct and indirect costs of violence and a one-for-one multiplier that represents the extra economic benefits that would be unleashed from the additional economic activity.

It is clear that the economic impacts of violence to Mexico are significant. Furthermore, with the overall increases in organized crime and drug-related violence experienced since 2007, the costs of violence have been steadily increasing, adding an extra 33 percent to the economic impact of violence to the Mexican economy. This has been illustrated in greater detail in Figure 4.1.

TABLE 4.1 THE DIRECT AND INDIRECT COSTS OF VIOLENCE CONTAINMENT IN MEXICO (BILLIONS OF PESOS, 2012)

The economic impact of violence containment expenditure reached 27.7 percent of Mexico's GDP in 2012.

INDICATOR	DIRECT	INDIRECT	1 FOR 1 MULTIPLIER	TOTAL ECONOMIC IMPACT
Homicide	0.4	1,323.3	1,323.3	2,647.1
Violent Crime	92.3	524.3	524.3	1,141.0
Impact of Firearms	88.6	-	-	88.6
Incarceration	-	4.6	4.6	9.2
Police Funding	7.7	-	-	7.7
Private Security	11.5	-	-	11.5
Organized Crime's Cost to Business	190.0	-	-	190.0
Justice System Costs	118.0	-	-	118.0
Military	84.0	-	-	84.0
Fear	-	41.8	41.8	83.6
Insurance Premiums	11.8	-	-	11.8
Total (billions of *pesos*)	604.4	1,894.1	1,894.1	4,392.6
Total (billions of US$)	45.9	143.8	143.8	333.5
% of 2012 GDP	3.8%	12.0%	12.0%	27.7%

Source: IEP

When the distribution of these costs are analysed in more detail, homicide and violent crime are found to contribute the most, accounting for 60 and 26 percent of the economic impact of violence containment, respectively. This is followed by the business costs of organized crime, at four percent and the costs of maintaining the justice system at three percent. Details of the overall composition of violence containment expenditure are provided in Figure 4.2.

FIGURE 4.1 ECONOMIC IMPACT OF VIOLENCE CONTAINMENT TO MEXICO (2013 PESOS TRILLIONS)

The economic impact of violence has increased by 30 percent since 2003.

COST OF VIOLENCE (TRILLIONS OF PESOS)
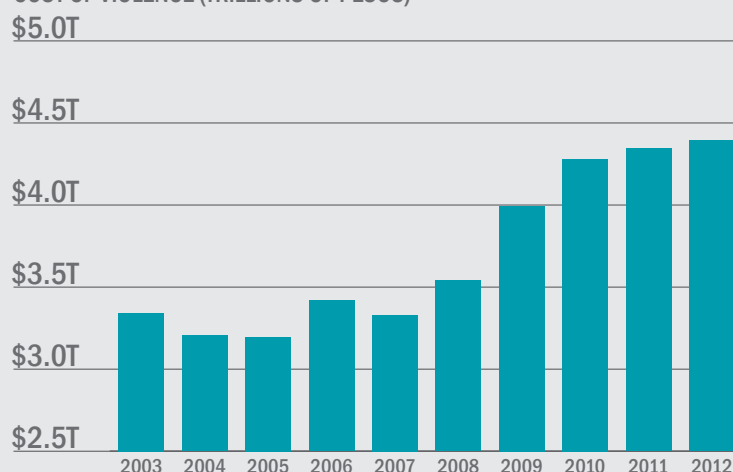
Source: IEP

FIGURE 4.2 MAKEUP OF VIOLENCE CONTAINMENT COSTS (2012)

Homicide and violent crime were found to have the biggest contribution to violence containment costs.

MILITARY (1.9%)
FEAR (1.9%)
JUSTICE SYSTEM (2.7%)
INSURANCE PREMIUMS (0.3%)
ORGANISED CRIME (4.3%)
PRIVATE SECURITY (0.3%)
POLICE OFFICERS (0.2%)
INCARCERATION (0.2%)
IMPACT OF FIREARMS (2%)
2012
VIOLENT CRIME (26%)
HOMICIDE (60.3%)
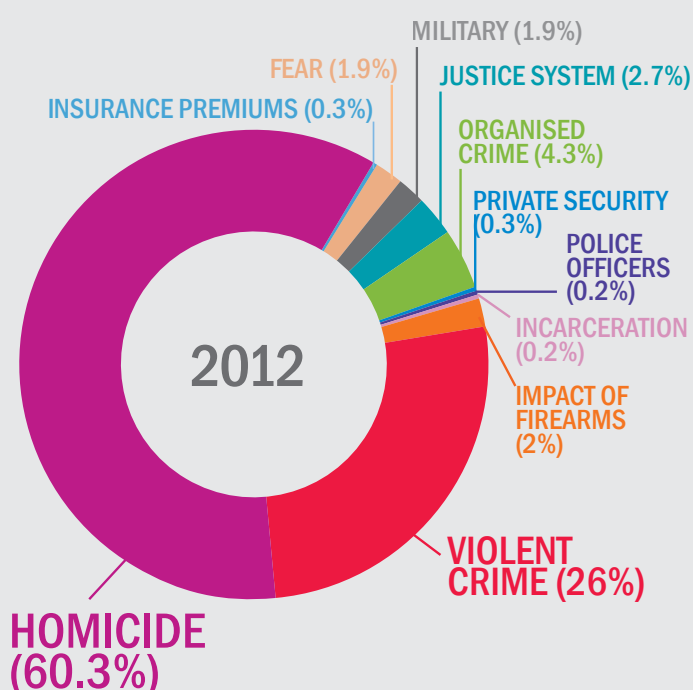
Source: IEP

One of the clear characteristics of many types of crimes is their relatively high indirect costs as compared to their direct costs. For instance, the medical costs of an assault tend to be relatively low when compared to the lost productivity of the victim. A crucial consequence of this is that the indirect impact of violence on the economy can be significant.

Indirect costs represent the lost life-time income, lost productivity from the suffering of friends and family and other costs such as crime avoidance activities. Furthermore, the significant indirect costs that result from violence do not necessarily accrue in the year the homicide occurs. For instance, homicides that occur in the current year will continue to represent a cost well into the future . This is because the potential economic contributions that would have been made by the victim throughout their life no longer occur. In recognition of this, future financial flows have been 'discounted' so they are representative of an equivalent level of purchasing power in the year in which the homicide occurred. This is because a dollar lost in the current year will not have the same purchasing power as a dollar lost in the future.

In addition, the economic benefits of avoiding the indirect costs flowing from crimes are likely to be higher than the direct economic benefits from these crimes. The economic benefit to flow to government from avoiding crime is dependent on how much more productively the money could have been used if it had not been spent on dealing with the consequences of violence. For instance, if the money spent on medical costs had been invested in education or infrastructure, then there would have been an additional contribution to society's economic development and overall well-being.

Alternatively, indirect costs, which represent suffering and lost productivity as a consequence of violence, only enter into the economy if violence is avoided. Consequently, when an act of violence does not occur, the full additional economic activity accrues to the economy. This has been reflected in the calculations below and includes the application of an 'economic multiplier'. Therefore, the estimates go beyond measuring only the recorded costs of violence to holistically account for the economic impact of violence on the Mexican economy. An explanation of the multiplier effect is provided in Box 4.

BOX 4 // **CONSIDERING THE MULTIPLIER EFFECT**

The multiplier effect is a commonly used economic concept, which describes the extent to which additional expenditure has flow-on impacts in 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 will create employment, further income and additional spending. This mutually reinforcing economic cycle is the reason behind the 'multiplier effect' and why 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 violence containment expenditure. For instance, if a community were to become more peaceful, individuals would spend less time and resources protecting themselves against violence. Because of this decrease in violence, there is likely to be substantial flow-on effects for the wider economy, as money is diverted towards more productive areas such as health, education and infrastructure.

For instance, when a homicide is avoided, the direct costs, such as the money spent on medical treatment and a funeral could be spent elsewhere. Furthermore, in avoiding a death the economy also stands to gain the lost lifetime income of the victim. The economic benefits from greater peace can therefore be highly significant. This was also noted by Brauer and Tepper Marlin (2009) who argued that violence or the fear of violence may result in some activity not occurring at all. More generally there is strong evidence to suggest that violence and the fear of violence can fundamentally alter the incentives faced by business. For instance, analysis of 730 business ventures in Colombia over 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 (Hiatt & Sine, 2013).

This study assumes that the multiplier approaches two, signifying that for every peso saved on violence containment, there will be an additional peso of economic activity. This is a relatively conservative multiplier and broadly in line with similar studies (Brauer & Tepper Marlin, 2009).

TABLE 4.2 THE DIRECT AND INDIRECT VIOLENCE CONTAINMENT EXPENDITURE
(2013 BILLION *PESOS* – EXCLUDING MULTIPLIER)

The composition of expenditures on violence containment has altered significantly over the period.

INDICATOR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Homicide	985.5	922.9	896.5	958.5	874.3	965.7	1,097.4	1,245.2	1,301.4	1,323.7
Violent Crime	576.8	565.4	557.1	575.1	618.7	625.5	641.8	652.6	645.2	616.6
Impact of Firearms	40.7	39.1	40.7	42.9	47.1	56.1	86.6	101.0	104.2	88.6
Incarceration	4.8	4.8	4.8	4.9	4.7	4.9	4.9	4.7	4.8	4.6
Police Funding	3.8	5.1	7.0	6.7	6.5	7.4	8.1	7.7	7.7	7.7
Private Security	10.0	10.1	10.2	10.3	10.4	10.5	10.6	11.1	11.2	11.5
Costs of Organized Crime to Business	102.5	114.3	166.5	217.8	202.4	209.2	233.2	171.4	124.6	190.0
Justice System Efficiency	n/a	n/a	n/a	n/a	n/a	n/a	100.4	110.2	113.9	118.0
Military	53.0	51.0	54.9	59.7	67.4	67.5	75.0	76.6	80.9	84.0
Fear	30.6	30.2	30.4	32.5	35.3	36.6	36.0	41.7	42.3	41.8
Insurance Premiums	8.4	9.1	9.4	10.2	10.6	10.9	10.2	10.8	11.4	11.8
Total	1,816.2	1,751.9	1,777.4	1,918.6	1,877.4	1,994.1	2,304.3	2,432.9	2,447.6	2,498.5

Source: IEP

A detailed approximation of the costs of violence containment to the Mexican economy since 2003 has been provided in Table 4.2. Costs included in the table include only direct and indirect costs. The table does not include the multiplier effect.

As is clearly illustrated in Table 4.2, since 2003 there have been large increases in the total expenditure on violence containment, moving from 1.8 to 2.5 trillion pesos.

The main contributor is the cost of homicides which dwarfs all other costs. Homicide is followed by justice efficiency, organized crime and illegal firearms which are all significant contributors.

Although the estimates above suggest that there has been a doubling of the direct costs of crime, it is important to recognize that one third of this may be due to there being insufficient information as to the costs of the judicial system before 2009. Despite this, there has been a clear increase in the direct costs associated with organized crime, violent crime and illegal firearms over the period.

TABLE 4.3 THE DIRECT VIOLENCE CONTAINMENT EXPENDITURE
(2013 BILLION *PESOS* – EXCLUDING MULTIPLIER)

The direct costs of organized crime have increased from 102.5 to 190.0 billion *pesos* over the last decade.

INDICATOR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Homicide	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Violent Crime	70.5	69.1	68.3	71.8	80.1	84.9	89.7	95.5	97.1	92.3
Impact of Firearms	40.7	39.1	40.7	42.9	47.1	56.1	86.6	101.0	104.2	88.6
Police Funding	3.8	5.1	7.0	6.7	6.5	7.4	8.1	7.7	7.7	7.7
Private Security	10.0	10.1	10.2	10.3	10.4	10.5	10.6	11.1	11.2	11.5
Costs of Organized Crime to Business	102.5	114.3	166.5	217.8	202.4	209.2	233.2	171.4	124.6	190.0
Justice System Efficiency	n/a	n/a	n/a	n/a	n/a	n/a	100.4	110.2	113.9	118.0
Military	53.0	51.0	54.9	59.7	67.4	67.5	75.0	76.6	80.9	84.0
Insurance Premiums	8.4	9.1	9.4	10.2	10.6	10.9	10.2	10.8	11.4	11.8
Total	289.3	298.0	357.3	419.7	424.7	446.8	614.1	584.6	551.4	604.4
% of GDP	2.6%	2.5%	2.8%	3.1%	3.0%	3.0%	4.6%	4.1%	3.6%	3.8%

Source: IEP and INEGI

TABLE 4.4 THE INDIRECT VIOLENCE CONTAINMENT EXPENDITURE (2013 BILLION PESOS – EXCLUDING MULTIPLIER)

The indirect costs of violence have increased by 367.2 billion *pesos* since 2003 as a consequence of homicide alone.

INDICATOR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Homicide	985.2	922.6	896.2	958.2	874.0	965.4	1,097.1	1,244.8	1,301.0	1,323.3
Violent Crime	506.3	496.3	488.7	503.3	538.6	540.5	552.2	557.1	548.1	524.3
Incarceration	4.8	4.8	4.8	4.9	4.7	4.9	4.9	4.7	4.8	4.6
Fear	30.6	30.2	30.4	32.5	35.3	36.6	36.0	41.7	42.3	41.8
Total	1,526.9	1,453.9	1,420.1	1,498.9	1,452.7	1,547.3	1,690.2	1,848.3	1,896.2	1,894.1
% of GDP	13.8%	12.1%	11.3%	11.0%	10.3%	10.6%	12.5%	13.0%	12.5%	12.0%

Source: IEP

The indirect costs of crime have increased by 367.2 billion *pesos* since 2003, chiefly as a consequence of increases in homicides and the violence containment expenditure relating to fear. In considering this it is also important to recognize that because of the nature of these costs they are likely to materially impact the economy over time and be unevenly distributed, with some states tending to be more affected than others.

To provide further insight into the economic effects of higher levels of peace, the 2003 MPI scores for the states were divided into four bands representing differing levels of peace. The economic growth for these bands was then analysed in 2011 to see what their average growth rates were.

Figure 4.4 provides a clear indication that states that were more violent in 2003 tended to experience weaker economic growth over the last decade.

States with higher levels of peace also have much higher per capita incomes. Importantly, this tendency was also

FIGURE 4.3 GDP GROWTH AND VIOLENCE

The most peaceful states in 2003 grew by an additional 5% compared to the least peaceful.

GDP GROWTH (PERCENTAGE, 2011)

MORE PEACEFUL ←   → LESS PEACEFUL
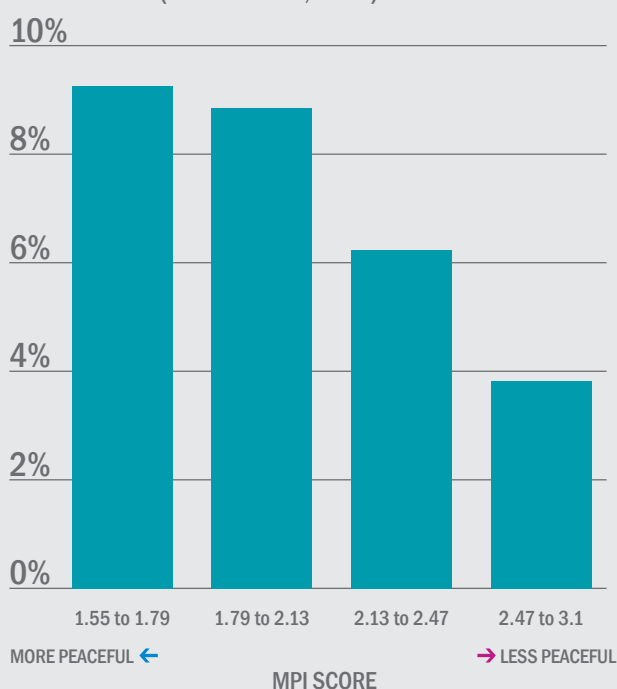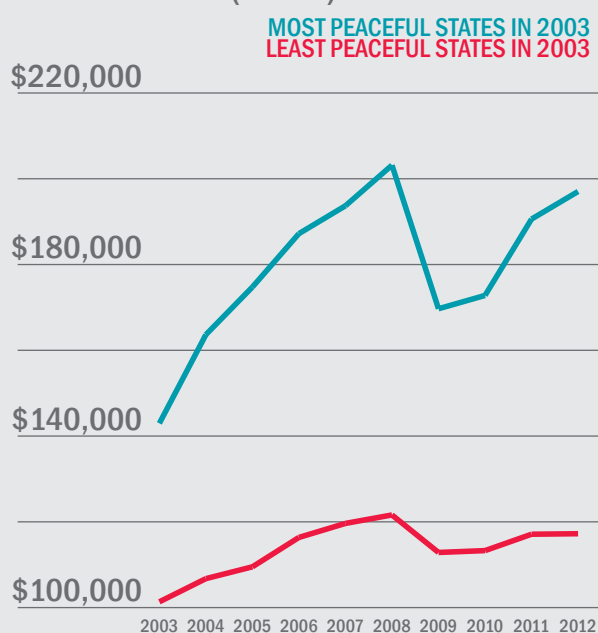
MPI SCORE

Source: IEP and INEGI

FIGURE 4.4 GDP PER CAPITA AND PEACE

Those states which were more peaceful in 2003 tend to have higher per capita incomes.

GDP PER CAPITA (*PESOS*)

MOST PEACEFUL STATES IN 2003
LEAST PEACEFUL STATES IN 2003

Source: IEP and INEGI

true when states were compared within the same regions. The only exception to this was the Central region, which was chiefly a result of Distrito Federal being relatively less peaceful but wealthier than other states in the Central region.

It is also important to note that the disparity between the most and least peaceful states has increased, with the most peaceful states in 2003 achieving almost twice the average incomes of the least peaceful states in 2012. In 2003 they had incomes which were on average only around 30 percent higher.

The full extent of the economic impact of violence by state can be seen when viewing the per capita economic impact of violence against the level of violence in a state, as measured by the MPI.

It was found that the states that were more peaceful also devoted the least economic resources to dealing with violence . This has been illustrated in Figure 4.5 where there is a positive relationship between a state's score on the MPI and its per capita violence containment expenditure. Detailed per capita estimates of violence containment expenditure by state have been provided in Table 4.5.

Although the positive relationship between a state's MPI and their per capita expenditure on violence containment is to be expected, it provides evidence of the detrimental impact that violence has on economic and social development. Furthermore, it reaffirms that the benefits of peace extend beyond the absence of violence. Peacebuilding also involves the creation of the attitudes, institutions and structures that encourage lower levels of violence and greater increased social cohesion and resilience, fostering human development.

FIGURE 4.5 THE PER CAPITA ECONOMIC IMPACT OF VIOLENCE
States with lower levels of peace on the MPI tend to have higher per capita costs of violence.

ECONOMIC IMPACT OF VIOLENCE CONTAINMENT (PER CAPITA, *PESOS*)
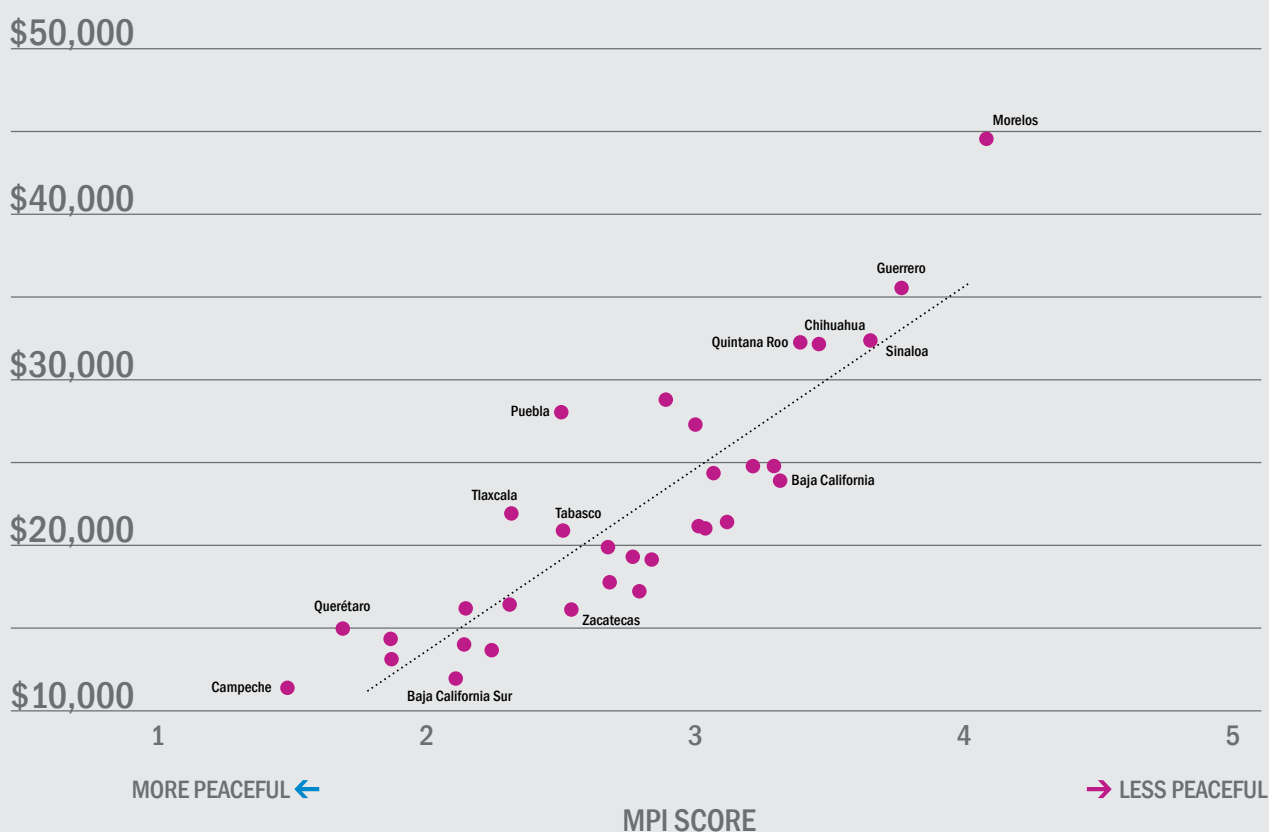
Source: IEP

TABLE 4.5 THE PER CAPITA ECONOMIC IMPACT OF VIOLENCE (2012)

States with lower levels of peace on the MPI tended to have higher per capita costs of violence

PER CAPITA COST OF VIOLENCE CONTAINMENT	
STATE	COST (PESOS)
Morelos	44,613
Guerrero	35,602
Sinaloa	32,431
Quintana Roo	32,315
Chihuahua	32,214
Tamaulipas	28,855
Puebla	28,097
Colima	27,349
Nuevo León	24,844
Durango	24,837
Michoacán	24,415
Baja California	23,961
Tlaxcala	21,981
Guanajuato	21,464
Distrito Federal	21,214
Coahuila	21,078
Tabasco	20,947
Nayarit	19,946
Sonora	19,363
Aguascalientes	19,196
México	17,824
Jalisco	17,280
San Luis Potosí	16,477
Chiapas	16,246
Zacatecas	16,174
Querétaro	15,025
Hidalgo	14,403
Veracruz	14,065
Oaxaca	13,721
Yucatán	13,177
Baja California Sur	12,007
Campeche	11,446

Source: IEP

Peace creates a virtuous cycle. Effective expenditure in reducing violence frees capital that can then be directed to areas that spawn additional economic benefits, in turn helping to reduce violence . This virtuous cycle will then improve business profits and increase tax receipts, thereby allowing government to devote additional funds to further reductions in violence.

This work is particularly relevant in Mexico, given the government's attempts to implement fiscal reform packages aimed at reducing government debt (The Economist, 2013).

The case for peace is therefore extremely strong, particularly as many programs, such as education, also have spin-off effects such as improvements in human capital, reduced recidivism rates and lower teenage pregnancies. This then helps in reducing the need for policing, judiciary and incarceration costs, as well as increasing labour market productivity and taxation receipts. This virtuous cycle of investments in peace has been illustrated in more detail in Figure 4.6.

FIGURE 4.6 THE VIRTUOUS CYCLE OF REDUCING VIOLENCE CONTAINMENT

Investing in peace can pay clear economic dividends.

Source: IEP

By understanding the social and economic drivers of violence, policymakers and business leaders in Mexico can better understand the costs and benefits of particular social and economic investment programs . Furthermore, by directing resources towards addressing the root causes of violence, society can begin to make long-term investments in the creation of a virtuous cycle of peace and economic prosperity. As this section has shown, the economic benefits are also clearly significant, with the equivalent of 27.7 percent of Mexico's annual GDP being consumed by violence and dealing with its consequences.

THE ECONOMIC COST OF THE DRUG WAR

Although the significant rise in the death toll since the escalation of the drug war in Mexico can scarcely be overlooked, it is important to recognize that even without the onset of the drug war, violence would have persisted. As a result, the cost of violence to Mexico is not necessarily equal to the cost of the drug war. Given this, additional analysis was conducted by IEP in order to determine the likely financial impact of homicides from the drug war violence.

Although it is difficult to discern to what extent increases in violence are a consequence of the drug war, rather than changes in factors such as the level of unemployment, impunity and inadequate police funding, examination of the data suggested that the form of violence most closely associated with the drug war is homicide. In recognition of this, an analysis was conducted to determine the likely number of additional homicides that have occurred as a consequence of the drug war.

Because it was not possible to reliably determine exactly which homicides occurred as a result of the drug war, it was assumed that the number of homicides would have remained at their levels before 2007 had the drug war not occurred. This is considered to be a relatively conservative assumption given the levels of homicide had been trending downwards in Mexico prior to the drug war. The cost of homicides relating to the drug war was then calculated as being the number of additional deaths multiplied by the assumed cost of a homicide. [2] Results have been provided in Table 4.6.

As illustrated in Figure 4.7, the level of homicide in 2012 is approximately 40 percent higher than it would have been without the drug war, with around 11,000 additional deaths in 2012 alone. Although the personal costs in terms of lost lives are immeasurable, the financial costs are significant, with each death costing Mexico approximately 35 million *pesos* (approximately US$2.6 million) as a consequence of

FIGURE 4.7 ADDITIONAL HOMICIDES AS A CONSEQUENCE OF THE DRUG WAR

The level of homicides is 41 percent higher in 2012 as a result of the drug war.

NUMBER OF HOMICIDES

HOMICIDE (WITH DRUG WAR)
HOMICIDE (WITHOUT DRUG WAR)

Source: IEP

the lost productivity of the victim and the productivity lost from the suffering of family members and friends. When this cost is multiplied by the additional homicides, the significant financial burden of the increases in violence becomes clear. Specifically, the cost to Mexico escalated from 25 to 383 billion *pesos* between 2008 and 2012 or approximately 2.4 percent of Mexico's 2012 GDP .

It is also important to recognize that the costs of the drug war potentially exceed the revenue currently being achieved by the cartels. For instance, estimates have suggested that wholesale earnings from the illicit drug trade lie somewhere between 154 and 548 billion Mexican *pesos* (US$14.1 and US$50.3 billion) in 2013 (USDJNDIC, 2006). However, given that the estimated costs of the additional homicides alone exceeds mid-range estimate of the revenue sourced from the drug war, it seems probable that the drug war represents a net loss to Mexico with the costs being borne by the wider community.

TABLE 4.6 THE DIRECT AND INDIRECT COSTS OF THE DRUG WAR ARE SIGNIFICANT

Since 2008, the drug war has cost Mexico 1,229 billion *pesos* (US$93 billion)

	2008	2009	2010	2011	2012
Estimated additional homicides from the drug war	713	4,500	8,748	10,363	11,006
% of additional homicides against baseline	3%	17%	32%	38%	41%
Direct costs of additional homicides (billions of *pesos*)	0.01	0.05	0.10	0.12	0.12
Indirect costs of additional homicides (billions of *pesos*)	25	157	304	360	383
Total cost of additional homicides (billions of *pesos*)	25	157	304	361	383
Total cost of additional homicides (billions of US$)	2	12	23	27	29

SINCE 2008, HOMICIDES RELATED TO THE DRUG WAR HAVE COST MEXICO 1,229 BILLION PESOS (US$93 BILLION) OR APPROXIMATELY 2.4 PERCENT OF MEXICO'S 2012 GDP

METHODOLOGY

A COMPOSITE INDEX COMBINES MULTIPLE FACTORS IN A STANDARDIZED WAY TO CREATE A STATISTICAL MEASURE THAT IS AIMED AT MAKING A COMPLEX IDEA SIMPLE TO UNDERSTAND.

MEXICO PEACE INDEX METHODOLOGY

The Mexico Peace Index (MPI) is based on the work of the Global Peace Index, the preeminent global measure of peacefulness that has been produced by IEP annually since 2007. The Index is the third in a series of National Peace Indices, following the 2013 United Kingdom Peace Index (UKPI) and the 2012 United States Peace Index (USPI). Based on a definition of peace as '*the absence of violence or fear of violence*', this Index uses a similar methodology to the UKPI and the USPI.

IEP's starting point in creating peace indices is to imagine a perfectly peaceful state, region, or country. In such a state, there would be no direct violence, no homicides, or violent crime. In addition, there would be no need for state actions against the perpetrators of crime and no need for the state to devote resources to violence containment. Thus, there would be no police employees and no incarceration. Citizens would have no fear of violence being committed against them, so there would be no harassment or public disorder. Finally, in a perfectly peaceful state, citizens would have no need to own firearms or other weapons for the purpose of self-defense.

Such a state is clearly theoretical and aims only to provide a starting point for conceptualizing how to measure a society perfectly at peace. In police states where the government may exercise repressive control and have significant police numbers and intrusive monitoring, there may be relatively little crime, but this does not reflect an environment without the fear of violence. Similarly, a society that has a large proportion of the population incarcerated reflects high levels of historical violence and consists of a group of the population, which if released, would theoretically cause greater violence. A state without law enforcement would experience higher rates of violence. Through counting and building a composite index, which reflects these factors, a more comprehensive reflection of the peacefulness of a society can be obtained.

It is important to note that the MPI makes no moral judgment on what the appropriate levels of a state's response to containing violence should be. Different contexts and circumstances will call for different government responses to the problem of violence. Thus, the MPI score should be seen as a measure of how close a state currently is to realizing a perfectly peaceful environment and not a moral judgment of its peacefulness, nor a judgment on the current administration.

In order to ascertain whether similar patterns and environments associated with peace at the sub-national level exist in different countries, IEP has maintained a consistent structure for all National Peace Indices. However, some differences are necessary as each country has its own history and specific cultural factors that need to be accounted for in order to properly capture peacefulness as a multidimensional phenomenon. In addition, data limitations may mean that some indicators that are available in one country are not available in another.

A composite index combines multiple factors in a standardized way to create a statistical measure that is aimed at making a complex idea simple to understand .

The MPI measures peacefulness at the state level in Mexico. A key reason for choosing this unit of analysis is that, similar to the United States, Mexico's state governments have wide-ranging powers allowing them to have a significant impact on the level of violence and thus the response to violence may differ significantly from state to state.

The MPI is composed of seven indicators, five of which are very similar to the indicators used in the US Peace Index and UK Peace Index. These are homicide, violent crime, weapons crime, police and incarceration. The remaining two indicators, justice system and organized crime, are specific to the MPI.

MEXICO PEACE INDEX EXPERT PANEL

The MPI Expert Panel was established to provide independent advice and technical guidance to IEP researchers in developing the index methodology. The Panel is composed of experts from independent, non-partisan and academic organizations.

- Edgar Guerrero Centeno, Director of Governmental Information Policies, Instituto Nacional de Estadística y Geografía (INEGI)
- Edna Jaime, Director General, México Evalúa
- Carlos J. Vilalta Perdomo, Professor, Centro de Investigación Y Docencia Económicas, A.C. (CIDE)
- Eduardo Clark, Researcher, Instituto Mexicano para la Competitividad A.C. (IMCO)

MEXICAN GOVERNANCE OVERVIEW

Mexico or the United Mexican States is a federal constitutional republic as outlined it its 1917 Constitution. The Constitution establishes three levels of government: the Federal Union, the State Governments and the Municipal Governments. According to the Constitution, all constituent states of the federation must have a government composed of three branches: the executive, represented by a governor and an appointed cabinet, the legislative branch composed of a bicameral congress and the judiciary, which is headed by the Supreme Court of Justice. Each state also has its own civil and judicial codes.

Until 1994 the administration of public security in Mexico was mainly managed regionally. An important change occurred between the end of the 1980's and the beginning of the 1990's when there was a rapid increase in drugs and narcotics traffic, together with a democratization process that led to a decentralization of political power. As a result, the Federal Law against organized crime was approved in 1996 and in response to this many new federal institutions were created, mostly devoted to the fight against organized crime and drug trafficking.

The prosecution and judicial jurisdictions are divided between the local courts and federal courts. Each state has an autonomous judicial branch that administers and implements justice for those local courts crimes committed within its jurisdiction. Additionally, the judicial branch of the Federation divides the national territory into 31 judicial circuits that almost exactly correspond to the states.

Law enforcement personnel are divided by both jurisdiction and function. Jurisdictionally, the police are divided into municipal, state and federal police departments, each of which has different responsibilities. For example, drug trafficking is considered a federal crime and falls under the jurisdiction of the federal police. Homicides are state crimes and investigated by state police. Functionally, the police have traditionally been divided into preventive and investigative departments. Preventive police departments operate at all three levels of government and are typically organized under the auspices of the Executive Secretary of the National System for Public Security (*Secretario Ejecutivo del Sistema Nacional de Seguridad Publica,* SESNSP). Their primary responsibility is to conduct patrols, maintain public order, prevent crime and administrative violations and be the first responders to crime. The transit police, responsible for sanctioning traffic violations and responding to accidents, are technically considered part of the preventive police; however, in some cases they are organized as a separate police force. The ministerial police, formerly known as the judicial police, are organized under the auspice of federal and state public ministries, are responsible for investigating crimes and carrying out judicial and ministerial warrants.

DATA SOURCES

One of the key challenges in developing a composite peace index is finding adequate data over a sufficient period of time to accurately and comprehensively understand the underlying trends in peace. In general, IEP uses data from national statistics offices wherever possible. However, where enough doubt exists as to the veracity of official data, IEP has supplemented or replaced official government data with survey based data and qualitative expert assessments. All of the seven indicators in the MPI come from government bodies in Mexico; however, IEP has used survey data to adjust the figures in order to account for under-reporting. Where possible the data source used for this study is the Executive Secretary of the National System for Public Security (*Secretario Ejecutivo del Sistema Nacional de Seguridad Publica,* SESNSP).

CRIME DATA: RECORDED VS. SURVEY DATA

In constructing an index that relies on crime data, a decision must be made between a range of alternative sources, all of which come with their own advantages and disadvantages. For instance, for most countries, the recorded levels of crime tend to be significantly lower than the actual level. Although there is a range of reasons, often this is because many offenses are simply not reported to the police.

The under-reporting of crime in Mexico was found to be a significant problem. Specifically, the 2012 National Survey on Victimization and Perception of Public Safety (*Encuesta Nacional de Victimizacíon y Percepcíon,* ENVIPE) from the National Institute of Statistics and Geography (*Instituto Nacional de Estadística y Geografía,* INEGI) suggests that the recorded levels of crime only capture approximately

15 percent of what actually occurs . This survey uses a representative sample of households to analyse not only the impacts of crime on individuals and society but also perceptions of public security. It collects information on a number of different crimes, the victims and their context, and perceptions about public security, confidence in the institutions and the justice system.

One of the main advantages of this dataset is that it contains information regarding unreported crimes as opposed to official data that only accounts for crimes reported to the authorities. The ENVIPE survey also contains information on the percentage of crimes that are actually reported to the police.

The level of under-reporting varies quite considerably by both state and offense. According to the ENVIPE 2012 data, only 19 percent of robberies, 10 percent of fraud cases and 8 percent of extortion cases are reported. Out of the crimes reported, assault is the most reported, with 25 percent of assaults being reported to the police. In comparison, estimates from the British crime survey suggest that around 40 per cent of violent crime is reported in the UK, with the US closer to 48 percent. In Mexico, the degree of under-reporting is extremely high for some crimes. For instance, it is found that in states such as Nueva León or Aguascalientes, for each reported case of extortion, up to 33 cases are not reported. There are also high levels of under-reporting for fraud and rape where the average under-reporting rate is 10 per each reported case.

While there are crime victimization surveys at the state level in Mexico, the coverage is sporadic with only three non-consecutive year surveys carried out in the last decade. As a result variations in under-reporting could not be determined over the entire period of the Index. Consequently, IEP has used official recorded data in constructing the indicators for the MPI, adjusting for under-reporting where necessary. Thus all MPI indicators have been adjusted to account for the level of unreported crimes ("cifra negra") based on responses to the ENVIPE survey [3]. The SESNSP data on rape, robbery and assault as well as some of the components of the organized crime indicator, have been multiplied by the ratio of reported to unreported crimes to allow for a more accurate reflection of the occurrence of violence in Mexico.

INDICATORS

HOMICIDE RATE PER 100,000 PEOPLE
Source: Executive Secretary of the National System for Public Security (SESNSP) - cases being investigated by the State Prosecution Authorities

The definition of homicide includes murder, infanticide and non-negligent homicide, including drug-related homicides.

There are a number of different government sources in Mexico that record the number of homicides by state. In addition, a number of non-governmental sources have collected estimates of the number of homicides that are specifically related to the drug war in Mexico.

VIOLENT CRIME RATE PER 100,000 PEOPLE
Source: SESNSP

IEP uses a definition of violent crime that matches the US Federal Bureau of Investigation (FBI) definition. Under this definition, violent crime consists of aggravated assault, rape and robbery, but excludes homicides. For a full list of the crimes listed in the SESNSP database that fall under the definition of violent crime, see Appendix B.

WEAPONS CRIME RATE PER 100,000 PEOPLE
Source: SESNSP

The weapons indicator used in the GPI and USPI measures the availability of firearms; however because data on firearm ownership in Mexico is unavailable by state a proxy was used. Thus the weapons crime indicator is based on the proportion of crimes that involved the use of firearms.

INCARCERATION RATE PER 100,000 PEOPLE
Source: National Institute of Statistics and Geography (INEGI)

Although data on the number of prisoners was unavailable over the entire period of the Index, data was available for the number of people sent to prison each year. The incarceration indicator consequently is based on the annual sentencing rate per 100,000 people aged 18 and over.

POLICE FUNDING PER 100,000 PEOPLE
Source: Secretaria de Hacienda y Crédito Publico (SHCP)

The number of police per 100,000 at the state level only has three years of data available. Therefore, this indicator uses the next best available measure which is the Public Security Contribution Fund (*Fondo de Aportaciones para la Seguridad Publica,* FASP) that has been allocated to the states. The federal government bases this funding measure mainly on state population, the changes in violent crime and for increasing the professionalisation of police forces. It is available for all years since 2003 and has therefore been used as the measure.

The resources from FASP are used for the following purposes: reinforcement of the capacity of the police forces to fight against organized crime in Mexico; crime prevention and promotion of citizens involvement on public security discussions; institutional development (professionalism

of the police and investigation forces); anticorruption measures; and the consolidation of a reliable public security information system and telecommunication networks between all the institutions related to public security. Although FASP funding is not exclusively allocated to the police forces, most of this subsidy goes to police related expenditures.

ORGANIZED CRIME RATE PER 100,000 PEOPLE
Source: SESNSP

The escalating violence from the drug war is the single biggest issue related to peacefulness in Mexico in the last decade. Given this, there is a clear need for an indicator that captures the impact of organized crime activity in Mexico. Reflecting this, the impact of Organized crime indicator uses the number of extortions, drug-related crimes, organized crime offenses and kidnapping in recognition that these crimes tend to be associated with organized crime activities, particularly by the larger drug cartels.

EFFICIENCY OF THE JUSTICE SYSTEM
Source: INEGI

This indicator measures the efficiency of the justice system by calculating the proportion of sentenced homicides to total homicides. This ratio was used because homicide offenses are the most serious crimes and under normal circumstances receive the highest priority.

The efficiency of the justice system indicator – a measure of homicide impunity – was included in the MPI for a number of reasons. Firstly, it buttresses our understanding of the impact of organized crime by showing how overwhelmed the justice system has become. Secondly, it can be used as a proxy for the fear of violence insofar as it suggests the extent to which an individual can be expected to be protected from crime through the justice system. Third, it highlights other issues such as corruption, inefficiency, or under-resourcing. There is a strong correlation between survey data on under-reporting of crime and this justice efficiency measure.

POPULATION ESTIMATES AND SOCIO-ECONOMIC DATA

The MPI uses data from the Mexican Population and Housing Census (*Censo de Población y Vivienda*) for the state population totals. For the years where census data was not available, a linear regression model was used to provide the population estimates. The socio-economic data that was used to construct the correlations was also taken from the Mexican census and a variety of other sources. For a full list of socio-economic data, see Appendix A.

INDICATOR WEIGHTS

All indicators are scored between 1 and 5, with 5 being the least peaceful score and 1 being the most peaceful score. After the score for each indicator has been calculated, weights are applied to each of the indicators in order to calculate the final score.

There are many methods for choosing the weights to be applied to a composite index. In order to maintain consistency across IEP's various peace indices, the weights in the MPI mirror those used in the GPI, USPI and UKPI as closely as possible.

The weights for the Global Peace Index indicators were agreed upon by an international panel of independent peace and conflict experts, based on a consensus view of their relative importance. To complement this approach and reflect the local context of Mexico, a second expert panel was formed consisting of leading Mexican academics and researchers to determine the final weights for the seven indicators in the MPI. These final weights are shown in table 5.1.

TABLE 5.1 INDICATOR WEIGHTS IN THE MPI

INDICATOR	WEIGHT	% OF INDEX
Homicide	4	25%
Violent Crime	3	17%
Weapons Crime	3	16%
Incarceration	1	6%
Police Funding	1	6%
Organized Crime	3	17%
Justice Efficiency	2	13%

With direction from the expert panel, a number of different methods such as equal weighting, principal component analysis and analytical hierarchical processing were used to test the robustness of the results.

ACCURACY AND AVAILABILITY OF CRIME STATISTICS IN MEXICO

Most Mexican statistics are compiled by the National Institute of Statistics and Geography (INEGI). In the case of crime and security statistics, one of the primary sources is the Executive Secretary of the National System for Public Security (SESNSP) which collects detailed information regarding all types of crimes disaggregated by each of the Mexican States. In some cases the discrepancies between the sources are significant.

One of the main problems for statistics in Mexico relates to the quality of the administrative registries at the local and state levels (OECD - IMCO, 2012) . Fortunately, this has become a key priority in domestic technical discussions between the INEGI and the network of producers and users of data, with significant progress being made in terms of coordination and transparency.

Investigating the trends in crime statistics collected by SESNSP, one can infer that there has been a clear increase in violence in Mexico since 2003. For instance, in 2011 and 2012 the homicide rate per 100,000 people was one of the highest in Latin America which partly explains the relatively low rank of Mexico in the GPI over the last six years. However, the homicide figures can vary significantly depending on the source of the information, with figures differing for the two main sources, INEGI and SESNSP.

INEGI compiles crime data from different sources than SESNSP. In the case of homicide, the recorded data by INEGI is from the Marriage and Deaths Registry (*Registro Civil),* while *SESNSP* compiles the data from the investigation cases of the Prosecution Authority (*Procuradurias Generales de Justicia*) in each of the states.

The total number of homicides recorded by both institutions is highly correlated, showing a similar trajectory over time. However, INEGI data is significantly lower mainly because the information is collected for different purposes than SESNSP and both institutions classify homicides using different criteria. For instance, the information compiled by INEGI from the Marriage and Death Registry is collected from data aimed at registering the cause of death, while the Prosecution Authority records investigations opened regarding a death that was presumably caused by a third party.

The Marriage and Death Registry records the presumed cause of the death as accident, homicide, suicide while the Prosecution Authority uses the legal classification of intentional homicide and manslaughter. SESNSP data has the advantage of being the most up to date with the lag of only a few months, while INEGI data is almost a year lagged. It should be noted that SESNSP figures are based on the number of crimes reported to the authorities.

FIGURE 5.1 COMPARISON OF HOMICIDE RATE PER 100,000 PEOPLE: INEGI AND SESNSP

HOMICIDE RATE (PER 100,000 PEOPLE)
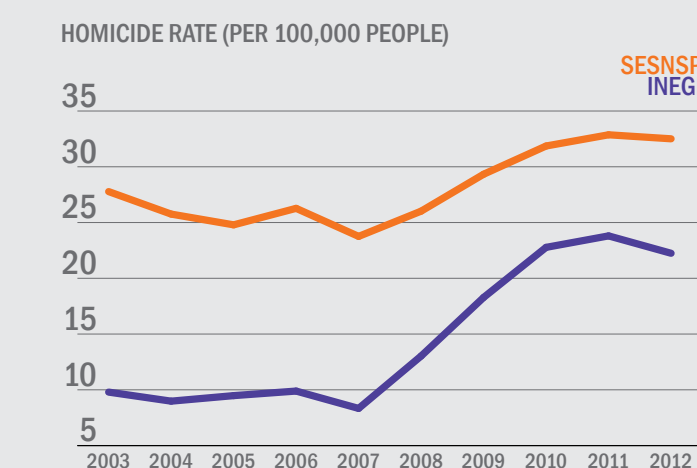
SOURCE: INEGI and SESNSP

Although INEGI compiles most of the crime and socio-economic statistics in Mexico, there is still some information that is not publically available or is compiled by different organizations, making data analysis a challenging task. In fact, one of the main obstacles to analysing Mexican data is the transparency and quality of the information provided at the state level, as well as its consistency over time.

The MPI includes an indicator that accounts for police funding per 100,000 people. To be consistent with the GPI and both the UK and US Peace Indices, the MPI would have ideally included a direct measure of the number of police forces in each of the states, unfortunately this data was not available for the entire period. However, the Public Security Contribution Fund (FASP) allocated to the states was available for the whole period of ten years and has been used as a proxy for police funding. The federal government criteria for the allocation of this funding are mostly the state population and the changes in violent crime in the previous year and even though it is not specifically directed to the police, most of the FASP funding goes to police related expenses.

To be consistent with what was used in the US and UK Indices, the weapons indicator would ideally be based on the availability of firearms; however, data on firearm ownership in Mexico is unavailable by state.

The data on weapons availability or the number of confiscated weapons in Mexico is not publically available. To be able to access this type of information, a written formal request has to be sent to the Attorney General (*Procuraduria General de la Republica,* PGR). IEP was unable to attain this information within the research period. Given this limitation, the weapons crime indicator is based on the proportion of crimes that involved the use of firearms, proxy data sourced from the Executive Secretary of the National System for Public Security (SESNSP).

Information regarding the incarceration system is publically available from SESNSP. However, in order to calculate the incarceration rate per 100,000 people, information on the number of inmates every year since 2003 was necessary, but was not available for the entire 10 year period. Although there is information compiled by INEGI that goes back to 2009, details about inmate inflow and outflows were not sufficient to make comparisons before and after the start of the drug war. Consequently, this indicator has been constructed using the numbers of people convicted and sent to jail, per 100,000 people, from the INEGI- Judicial and Penal System Statistics and Population Data (National Population Commission, *Consejo Nacional de Población* - CONAPO).

For all the crimes under the violent crime indicator (rape, robbery and assault) and the organized crime indicator (kidnapping, extortion and drug-related crimes) the information was sourced from SESNSP and data was available for the entire 10 year period. The same information but with a longer time-lag is also compiled by INEGI.

ECONOMIC COSTING METHODOLOGY

In developing the economic costing methodology IEP defines activities relating to violence as being 'violence containment spending'. The definition of violence containment spending is:

'economic activity that is related to the consequences or prevention of violence where the violence is directed against people or property.'

In estimating the economic cost of violence to Mexico's economy a combination of approaches were used. This economic analysis involved three key steps:

1. Where possible, financial information detailing the level of expenditure on items associated with violence was used;

2. Where financial information pertaining to the cost of a violent act, such as an assault, was unavailable, a 'unit costing approach' was taken. Specifically, an estimate of the economic cost of a violent act was sourced from the literature and applied to the total number of times such an event occurred to provide an estimate of the total cost of each type of violence;

3. Where data was missing it was either assumed to equal zero or estimated and based on data which was thought to provide a plausible alternative.

Costs are classified according to whether they are 'direct' or 'indirect', where:

1. Direct costs are considered to be those directly attributable to violence such medical costs and insurance. Importantly, the direct benefits also accrue in terms of lowering the costs of preventing violence and the risk abatement required to mitigate violence via incarceration, justice expenditure, policing and the military.

2. Indirect costs are those associated with the economic activity foregone from the less productive use of expenditure as well as the flow-on costs from economic activity trapped by violence and fear of violence.

A multiplier of two was used to estimate the additional economic activity related to the inclusion of lost productivity and the redirection of economic activity away from less productive activities which are related to dealing with violence or preventing violence towards more productive uses of the capital.

The term 'economic impact' has been used to define the aggregate of direct costs, indirect costs and the multiplier.

In order to account for different price levels across years, all price estimates have been inflated to represent 2013 *pesos* using data on average consumer prices from the World Bank. Where financial figures were denominated in foreign currency, they have been converted into *pesos* using the average official exchange rate for the year the estimate was made.

A range of items have not been included in this study because of the unavailability of data or the inability to find a reliable way of estimating the cost. These include:

- State and municipal contributions to public security;
- The medical costs of a homicide;
- Insurance premiums paid relating to protection against household robbery or personal injury;
- Extortion costs to individuals and households;
- The financial costs of corruption to individuals and households;
- The personal costs of maintaining security and protecting against violence, such as expenditure on alarms, security systems, etc.

CALCULATING THE COST OF HOMICIDE

The total numbers of homicides by state were sourced from SESNSP. The direct cost of a homicide was sourced from a study by the *Instituto Ciudadano de Estudios Sobre la Inseguridad* (ICESI), a civil society research organization with a focus on security (ICESI, 2011)**.**). In regards to a homicide the only direct cost used was the cost of a funeral as there was no authoritative source on the medical costs. In addition, the police and judiciary costs have been included in policing and judiciary categories. Therefore, the direct cost of a homicide is assumed as 11,273 pesos.

Estimates of the costs attributable to a homicide were based on a study by McCollister (2010) which used a range of methods to estimate both the tangible and intangible costs attributable to a homicide. Specifically, the analysis used the 'cost-of-illness' and extent of 'jury compensation' to estimate the costs of crime in the United States. These estimates were used instead of more traditional estimates of the statistical value of life, as the jury compensation method, by nature, attempts to comprehensively account for the associated lost productivity and suffering from a homicide of both the victim and their family. This method does not include punitive damages which may be awarded by US courts in civil cases. To ensure estimates appropriately represented relative income levels in Mexico, they were scaled according to Mexico's GDP per capita relative to the US before being converted to 2013 Mexican *pesos*. Specifically, a homicide was assumed to cost 34,776,464 *pesos*. This was based on the aforementioned US study suggesting the indirect cost of a homicide to approximate

US$8.4 million. The equivalent cost in Mexico was then calculated as being 30 per cent of this: US$2.6 million (34.8 million *pesos*). The scaling is based on a GDP per capita (PPP) of $12,814 for Mexico as compared to $42,486 for the US. These estimates are considered to be reasonable based on a review of similar studies (Aos, Phipps, Barnoski, & Lieb, 2001; Cohen, Rust, Steen, & Tidd, 2004; Cohen, 1988; Miller, Cohen, & Rossman, 1993; Miller, Cohen, & Wiersema, 1996; Rajkumar & French, 1997).

CALCULATING THE COST OF VIOLENT CRIME

Data on the number violent crimes was sourced from SESNSP. In order to accurately reflect the differing direct and indirect costs associated with a crime, data was separated according to the type of crime. This allowed for estimates of the costs of individual incidents by state for rape, robbery and assault. Importantly, because not all crimes are recorded, it is generally accepted that the recorded number of crimes is significantly below what actually occurs, particularly where an atmosphere of fear is prevalent. In recognition of this, the number of reported crimes from SESNP has been adjusted using the extent of under-reporting according to the 2012 ENVIPE survey from INEGI.

The direct costs for rape, robbery and assault were sourced from a study by ICESI. Because estimates of the costs of individual crimes differed between years, an average was taken of the three years of the study (2007-2009). Specifically, these costs were assumed to be 4,491 *pesos* per incidence of rape, 23,477 *pesos* per robbery and 8,883 *pesos* per assault.

In order to attempt to also account for the indirect costs of a crime such as the lost productivity and suffering of victims, indirect costs were also included. Estimates were sourced from a study which provided an estimate of the number of 'quality adjusted life years' lost through various types of violence, which is a method for assessing the relative value of a year of life, lost as a consequence of a crime (Aboal, Campanella, & Lanzilotta, 2013). These estimates were then multiplied by the indirect costs of a homicide mentioned above. Specifically, indirect costs were assumed as 134,446 *pesos* for rape, 6,829 *pesos* for robbery and 25,118 *pesos* for an assault.

CALCULATING THE COST OF FIREARMS

Although official estimates of the number of illegal firearms were not available, unofficial estimates suggest there were 15.5 million unregistered firearms in 2011 (Small Arms Survey, 2011). In order to expand this estimate over the full time period (2003 to 2012), the year-on-year growth of crimes involving firearms was used. This was then combined

with records provided by INEGI, of the number of charges laid for possessing an unregistered firearm, to enable an approximation of the likely distribution of the unregistered firearms by state. Finally, the cost of an unregistered firearm was assumed as being commensurate with estimates of the cost of purchasing a weapon on the black market (US$500 or 6,722 *pesos*).

CALCULATING THE COST OF INCARCERATION

The number of prisoners per state was sourced from data provided by the '*Mexico Estatal- CIDE*' project (CIDE, 2013). Because direct costs, such as the cost of the prison system have been included in the policing and judiciary component, the direct costs of a prisoner were not included in the incarceration estimates. However, indirect costs, such as the foregone wages of prisoners, have been included. That is, we have assumed that for each incarcerated person the potential contribution to the Mexican economy would be equal to the minimum wage.

CALCULATING THE COST OF POLICING, PUBLIC AND PRIVATE SECURITY

The costs of policing were taken from the federal Fund for Public Security (FASP), which represents a significant component of the budgetary costs of policing.

No reliable estimates were available for the number of private security personnel in Mexico over the entire period (2003 to 2012). As a result, past estimates of the ratio of private security personnel to public security officials were used to obtain estimates for the entire period.

Where data was not available in a particular year it was assumed to grow at the same rate as population growth. To provide an estimate of the likely distribution of private security between the states, data covering the period of 2007 to 2009 was then used (ICESI, 2011). To provide an estimate of the cost of private security, the total numbers by state were then multiplied by the minimum wage.

CALCULATING THE COST OF JUSTICE SYSTEM, COURTS AND OTHER PUBLIC SECURITY PROGRAMS

The costs of the justice system were taken from INEGI data on the funding provided to 'prevention', the 'justice system', 'Social re-insertion', 'Courts', 'Defense' and 'Program Limpiemos Mexico' ("Let's Clean Up Our Mexico"). Because budget information was only available from 2009 to 2010, state GDP was used to estimate the costs for 2011 and 2012.

CALCULATING THE COST OF ORGANIZED CRIME TO BUSINESS

Estimating the cost of organized crime is notoriously difficult as a large proportion of criminal activity and its impact on the wider economy is likely to be under-recorded and difficult to disentangle from normal variations in economic activity. The approach taken was therefore to use a recent survey by INEGI which estimated the cost of organized crime to business by asking business their direct expenditure on protecting against or responding to organized crime (e.g. the installation of security systems, payment of extortion fees, etc.). Because the surveys of business were conducted on a sample of the total business community in Mexico, the total cost to the business community was estimated by scaling up the number of businesses surveyed to represent the size of the business community for each state of Mexico. As this survey was only conducted for 2011, it was then assumed that changes in the costs of organized crime to business tended to follow changes in the organized crime component of the Mexico Peace Index.

Although there was no directly comparable survey for the costs of organized crime to individuals, given the inclusion of the direct and indirect costs of violent acts such as assault, robbery and homicide, it was not considered appropriate to attempt to expand these estimates to individuals. Despite this, it is important to recognize that even though businesses directly incur these costs; the wider community will suffer as businesses spend less on investing in their employees, operations and the wider community.

CALCULATING THE COST OF THE MILITARY

Total levels of military expenditure for Mexico were taken from the World Bank. Because the federal government of Mexico predominantly controls military expenditure, the state's population was used to provide an estimate of the cost of the military by state.

CALCULATING THE COST OF FEAR

Survey data from INEGI on the 'perceptions of insecurity' was combined with population statistics to estimate the proportion of individuals who were fearful of crime in each state of Mexico. For each individual in the population who reported they were at fear, this was then multiplied by 537 *pesos*. This was based on research that estimated the financial magnitude of the health impacts of living in fear (Dolan & Peasgood, 2006). Because the violent nature of crime was considered more severe in Mexico than the source of the study, the estimated costs of fear were not scaled by relative purchasing power. This approach

was taken as it was considered that doing so would underestimate its impact on individual to an individual considered to be fearful of crime.

CALCULATING THE COST OF PRIVATE INSURANCE OF VEHICLES AGAINST ROBBERY

Although comprehensive data on insurance premiums was unavailable, data on the value of premiums paid on insurance against vehicle theft was available from 2007 to 2009. Analysis suggested that the level of insurance premiums tended to most closely follow a state's GDP, consequently where data was unavailable the average proportion of GDP subsumed by vehicle insurance premiums was used to estimate the cost of vehicle insurance premiums by state. The estimates therefore are considered to be conservative, given that they only account for car insurance premiums against theft and not for other forms of insurance such as life insurance and insurance against injury and personal property.

BOX 5 // **MISSING DATA**

Although current data was used wherever possible, a number of techniques were used to impute unavailable data for the 2003 to 2012 period. The approach taken was to analyse the available years of data against the closest substitute available. For example, the level of expenditure on car insurance premiums tended to be strongly associated with a state's GDP. State GDP was consequently used to estimate car insurance premiums for missing years. Where this could not be applied, the most appropriate proxy was used. Despite this, it is important to note that data was consistently available for 2003 to 2012 for the two largest contributors to the economic impact of violence, homicide and violent crime.

The approaches taken for imputing data have been summarized in Table 5.2:

TABLE 5.2: METHODS USED TO IMPUTE MISSING DATA
A range of methods were used to estimate missing data.

INDICATOR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Homicide	Data taken from SESNSP.									
Violent Crime										
Weapons Crime	Headline figure grown according to growth in rate of crimes committed with a weapon. Distributed between states according to proportion of total charges laid for illegal firearm.								Based on 2011 Small Arms Survey	Same assumption as 2003-2010
Incarceration	Forecasted on the basis of prison inflows				Based on INEGI data on jailed population					Same assumption as 2003-2006
Police Funding	FASP Funding									
Private Security	Growth in-line with population growth	Small Arms Survey estimate	Growth in-line with population growth							
Organized Crime – costs to business	Growth in-line with OC component of Index								INEGI Cost of crime survey	Same assumption as 2003 to 2010
Justice System Efficiency	Nil						Budget Data		Assumed as constant proportion of GDP	
Military	World Bank Data									Assumed as constant proportion of GDP
Fear	Cost of fear grown according to levels of violent crime in current year relative to average of 2011-2012								Based on INEGI Perceptions of Fear Survey	
Insurance Premiums	Assumed as constant proportion of GDP				Based on data on car insurance premiums			Assumed as constant proportion of GDP		

6

EXPERT CONTRIBUTIONS

KEY EXPERTS IN THE FIELD OF PUBLIC SECURITY HAVE CONTRIBUTED THEIR ANALYSIS OF CURRENT ISSUES TO THIS REPORT. THESE CONTRIBUTIONS FOCUS ON THE LINK BETWEEN HIGH LEVELS OF IMPUNITY IN MEXICO AND THE RISE OF CRIME, AS WELL AS THE RELATIONSHIP BETWEEN PUBLIC SECURITY AND COMPETITIVENESS, THE RISE OF ORGANIZED CRIME DURING THE PERIOD OF THE DRUG WAR, AND THE RELATIONSHIP BETWEEN CRIME AND THE AVAILABILITY OF WEAPONS.

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INTRODUCTION

The findings of the *Mexico Peace Index* offer an extremely important contribution to understanding one of the most serious challenges to peace, security, and human rights in our time: the threat of widespread, organized criminal violence.

Over the last decade, our work through the Justice in Mexico Project has tried to make sense of the country's recent problems of crime and violence, and to evaluate the policy measures deployed to confront these challenges. The findings of this report provide a valuable opportunity to reflect on Mexico's current situation, and on the factors that detract from peace and security here and in other parts of Latin America.

KEEPING MEXICO'S SITUATION IN PERSPECTIVE

First, it is important to note that, in the grand scheme, Mexico's security situation has actually improved dramatically over most of the last century, and is actually quite favorable compared to many other Latin American countries. This is especially noticeable with regard to homicide the metric that arguably stands out the most in this report and in most current discussions about crime and violence in Mexico.

Despite the headlines of major US periodicals, levels of violence in Mexico are actually about average for the Americas. With over 80 homicides per 100,000 people, Honduras has roughly three times as many murders per capita as Mexico. Guatemala's homicide rate is nearly twice the rate in Mexico. Colombia—often lauded for having effectively restored its domestic security situation—has according to UNODC data, a higher homicide rate than Mexico [1].

Nonetheless, international attention to Mexico's violence is disproportionately higher than is the case for these other places. In 2012, for example, the New York Times featured 15 articles on violence in Mexico, compared with just three on Honduras, two on Guatemala, and two on Colombia. Arguably, our interest in Mexico —and the reason why it is the first Latin American country to be included in the World Peace Index— is that it is a country of enormous consequence, and the patterns of violence found there reflect broader trends that are rippling throughout the hemisphere.

That said, it is also important to offer some background

on Mexico's situation. The present security crisis is a significant deviation from its past. Mexico's homicide rate actually declined dramatically during much of the last century, falling from over 50 per 100,000 from the 1930s and 1940s to less than 20 per 100,000 by the 1960s and 1970s. Indeed, by the 1970s, homicide rates fell to an annual average of around 16 per 100,000.

Along with the consolidation of the political system that developed after the 1910-17, this shift was attributable to Mexico's "miraculous" economic prosperity during that period, as well as worldwide advances in medical practices and medicines that helped save lives that would otherwise be lost to violence.

While UNODC data show that Mexico's homicide rate increased appreciably in the 1980s, they dropped again in the 1990s. Moreover, during most of the last decade, from 1997 to 2007, Mexico's homicide rate plunged even further, from 37 to a much lower level of 23 homicides per 100,000.

THE ERA OF ORGANIZED CRIMINAL VIOLENCE IN MEXICO

Over the next few years, Mexico's relatively happy story took a sharp turn for the worse, as the homicide rate suddenly increased by 37 percent to more than 32 per 100,000 from 2007 to 2012. This remarkable surge in homicide rates was a direct result of the dramatic increase in violence associated with drug trafficking organizations and other organized crime groups.

Increased competition over access trafficking routes into the lucrative, illicit market for drugs in the United States, and increasingly Europe, as well as disruptions caused by government counter-drug efforts have been the driving factors behind much of the violence. In particular, over the course of the administration of Mexican President Felipe Calderón, the government made extraordinary efforts to arrest major drug traffickers, contributing to the splintering and reconfiguration of such groups over the last several years. The end result has been a series of violent conflicts over control of territory, leadership succession, and other aspects of the illicit drug trade.

While UNODC data show that Mexico's homicide rate increased appreciably in the 1980s, they dropped again in the 1990s. Moreover, during most of the last decade, from 1997 to 2007, Mexico's homicide rate plunged even further, from 37 to a much lower level of 23 homicides per 100,000.

Despite the ample news coverage of this violence, precise

indicators and reliable information have been elusive. Because of the methodological challenges of tracking organized crime-related violence and inconsistent reporting by the Mexican government, a large part of our work over the last several years has been dedicated to tracking and analysing different sources of information and metrics on the patterns of crime and violence in Mexico. Specifically, the Justice in Mexico Project's annual *Drug Violence in Mexico* report has identified some important general trends and shifts over the last four years, which we wish to note briefly here.

First, all told, the toll of violence has been extremely heavy over a relatively short period of time. In early 2013, based on an analysis of official homicide figures, the authors estimated that there were approximately 120,000 to 125,000 homicides in Mexico from 2006 to 2012 was, depending on the government data used.

Second, tallies compiled by independent monitoring organizations in Mexico suggest that over 60,000 killings— depending on the source, 45 percent to 60 percent of all intentional homicides— bore characteristics typical of organized-crime-related violence, including the use of high-caliber automatic weapons, torture, dismemberment, and explicit messages involving organized-crime groups. Since there was a modest 1.8 percent decline in overall homicide in the 15 years prior to 2007, organized-crime-style killings appear to explain nearly the entire increase in homicides during this period, and therefore merit special attention and concern.

Third, as the MPI report and interactive databases illustrate, the geographic distribution of this violence within Mexico has been very uneven and disproportionately affects specific areas. In particular, drug trafficking- and organized-crime-style homicides have been heavily concentrated along Mexico's border with the United States and along central Pacific Coast and the Gulf of Mexico.

Fourth, within these broader geographic patterns, violence is extremely concentrated in key cities and localities of strategic importance to organized crime groups because of their importance as production and transit zones for illicit drugs. In recent years, the worst violence has remained concentrated in fewer than 10 percent of Mexico's 2,457 municipalities, and in 2010 roughly a third of organized crime related homicides was concentrated in just five municipalities: Ciudad Juárez, Chihuahua, Culiacán, Tijuana, and Acapulco.

Fifth, Mexico's criminal violence has also been somewhat unpredictable, spiking and declining rapidly in some places while rising gradually and enduring insufferably in others. At the peak of violence in Ciudad Juarez, there were 2,738 homicides, accounting for more than one out of 10 registered Mexican homicides. However, that number fell sharply to 1,460 homicides in 2011, and dropped even further 656 murders in 2012. The surprising speed with which violence has exploded and receded in Ciudad Juarez

and several other places in Mexico, offers a cautionary tale that bears much more careful consideration.

Finally, depending on the data source, the homicide rate in Mexico either leveled off or declined somewhat, possibly dropping by as much as 1.5 percent to 8.5 percent from 2011 to 2012. While there has been much frustration and debate over the lack of reliable indicators available from the Mexican government, it is fairly certain that the number of homicides has dropped significantly in 2013, despite ongoing problems of crime and violence in many parts of the country.

THE PATH TO PEACE IN MEXICO

On the 2012 map of violent conflicts produced by the Heidelberg Institute for International Conflict Research (Institut für Internationale Konfliktforschung Heidelberger, HIIK), the security situation in Mexico is categorized as a "war," along with fourteen other extremely violent conflicts around the world. This "war," of course is really a constellation of conflicts involving competition among criminal organizations, state conflicts with heavily armed organized crime groups, and increasing predatory violence targeting ordinary civilians for extortion, kidnapping, or robbery.

As a result, Mexico's ongoing crisis of criminal violence is arguably the foremost concern for the majority of the country's citizens. Finding policy solutions has been elusive. During his first year in office, the new government of Mexican President Enrique Peña Nieto (2012-2016) has begun to shift is approach the above noted problems by scaling back the use of hard counter-drug tactics, and using a more targeted approach to address the problem.

The key to Mexico's future lies in the government's ability to bolster the rule of law: that is, its ability to maintain order in society, prevent and punish unlawful behavior by agents of the state, and ensure that the law itself is both just and justly applied. In an effort to advance this agenda, the Mexican Congress passed a judicial reform package in 2008 that included legislative changes and constitutional amendments to transform from its traditional justice system into one that emphasizes the presumption of innocence, an adversarial criminal procedure, and oral advocacy in the courtroom. Ongoing progress to bolster these reforms is critical to improve judicial sector effectiveness in Mexico by raising the bar for police, prosecutors, public defenders, and judges who are the brokers of justice and the keepers of the peace.

That said, it is important to recognize that Mexico's challenges are not purely domestic. As the world's main proponent of the current international drug prohibition regime, the largest consumer of drugs, and its largest supplier of firearms, the United States is a direct contributor to Mexico's drug violence. Over the last three decades, a growing number of US adults, including nearly half of

individuals over the age of thirty-five, admit to some drug usage during their lifetime. Because of the size of the US black market for drugs and the inflationary effect of prohibition on prices, Mexican suppliers enjoy enormous profits, estimated at $6 billion to $7 billion annually.

There is a growing trend toward alternative approaches to managing drug consumption—including, drug courts, medicinal applications, and even legalized recreational use of drugs—which merits continued consideration and experimentation. Indeed, with over half of US citizens supporting marijuana legalization, this policy shift seems almost a certainty over the next decade or so. Yet, with at least 70 percent of Mexican drug traffickers' profits coming from hard drugs like cocaine, heroin, methamphetamine, and other synthetics, marijuana legalization will be a palliative but not a panacea in the fight against organized crime.

The ready availability of guns from the United States that are clearly not for "sporting purposes" has produced a far greater toll than it would have if there were more effective US controls on the sale of high-caliber and automatic type firearms. Indeed, a recent research initiative headed by economist Topher McDougal suggests that the high concentration of firearms dealers in the US southwest caters specifically to and depends heavily on Mexican market for firearms. In a vicious circle, US drug black market demand spawns a vast Mexican gray market for guns, and without serious effort to address this it will be difficult to reduce violence.

In recent years, the United States and Mexico have worked together to try to address these challenges together as part of a shared responsibility to one another. Specifically, both governments have crafted a wide range of initiatives under a framework known as the Merida Initiative, to foster bi-national collaboration in combatting

DTOs, providing assistance to strengthen the judicial sector, improving border controls, and introducing social programs to revitalize Mexican communities affected by crime and violence. Such efforts have hit a number of stumbling blocks and even tensions in 2012 and 2013, so there is some uncertainty whether and in what measure they will continue.

CONCLUSION

In the meantime, Mexico's security situation has taken an enormous toll on society. For the tens of thousands who have died in the recent wave of violence, there are hundreds of thousands of family members who mourn them and millions more —friends, neighbours—who are left behind to deal with the aftermath.

It is important to note that the rise of criminal violence has overshadowed other enduring patterns that must be taken into consideration in any holistic approach to peace-building and rule of law promotion. Wrapped up in and in many ways perpetuated by Mexico's recent violence are modes of gendered violence, economic pressures, rural land tenure disputes, and other patterns that belie unresolved tensions and fissures in the fabric of Mexican society.

The patterns can be easily identified in the rich compilation of data found in the MPI. What the index underscores most importantly is the need to continue to monitor and measure Mexico's progress toward its potential as a peaceful and prosperous nation.

ENDNOTES

[1] Note: these homicide statistics are based on UNODC.

CUANDO MATAR NO CUESTA. LA LÓGICA DE LA VIOLENCIA EN MÉXICO

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El precio de una bala, más el de un arma de fuego y, si acaso, el de un gatillero. Es muy posible que ejercer violencia contra otro nunca haya sido más barato en otro momento de la historia moderna de México que a partir de 2008. Y cuando algo resulta barato en extremo, se incorpora a los instrumentos o recursos de uso cotidiano, empoderando a delincuentes para atemorizar

a comunidades enteras. La violencia es un recurso que se utiliza indiscriminadamente y que siembra un gran temor entre la población en general. Funciona además, como combustible derramado en una pila de papel: no se necesita más que un chispazo para desatar el caos.

MÁS DE UN TIPO DE VIOLENCIA

Existen muchas clasificaciones posibles de la violencia e inevitablemente, la que se utilice reflejará un cierto sesgo en el análisis, que depende en gran medida del tipo de argumento que se está construyendo y más precisamente, desde la política pública que se está analizando o por la que se está abogando. Desde una perspectiva de salud pública, por ejemplo, la violencia que se ejerce contra uno mismo--suicidio, automutilación y otras--puede ser extraordinariamente relevante pero en la práctica no lo es tanto desde una perspectiva de seguridad pública y procuración de justicia, que tiende a considerarlo como un problema médico exclusivamente. Otras formas de violencia, como el terrorismo, son susceptibles de un tratamiento dual como amenazas a la seguridad nacional a la vez que como delitos que deben perseguirse en el marco de los sistemas de justicia penal, donde las agencias de inteligencia y las fuerzas militares tenderán a privilegiar el primero y los policías y fiscales el segundo. Y lo mismo puede decirse de violencias como la intrafamiliar y la de género, que tienden a abordarse primero desde una perspectiva de derechos humanos y políticas sociales y sólo de manera secundaria como un tema de procuración de justicia, sea porque no se reflejan adecuadamente en códigos penales o porque el nivel de denuncia es muy bajo.

En el análisis de la violencia en México estos sesgos analíticos son particularmente relevantes. Durante los últimos años, la mayor parte del análisis de "la violencia" se ha concentrado en el tema del homicidio como problema relevante y de manera secundaria en otras formas de violencia como el secuestro, el robo con violencia y más recientemente la extorsión. Esto se puede atribuir en parte a la importancia que tiene el homicidio por sí mismo, en tanto que tienen un efecto devastador sobre la víctima y su familia, pero también responde a una coyuntura específica en la que los homicidios se incrementaron de manera explosiva y el propio Gobierno Federal y muchos observadores especializados los convirtieron en el principal indicador de éxito o fracaso de las estrategias de seguridad. Pero este énfasis debe atribuirse también a la disponibilidad de datos--así como a la ausencia de estos. Mientras que para el homicidio se contaba con dos fuentes separadas, una basada en actas de defunción y otra en denuncias, para el secuestro y la extorsión sólo había una, basada en denuncias. Es sólo hasta que la Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública comienza en 2011 a recopilar información sobre extorsión y en 2013 sobre secuestro que se crean fuentes alternativas, que por otra parte aún presentan retos graves de interpretación.

Es posible argumentar que equiparar la violencia en México a estos delitos específicos deja fuera del análisis otras formas de violencia que son igualmente nocivas e incluso potencialmente más peligrosas a largo plazo--la violencia intrafamiliar viene a la mente. Esta aproximación deja de lado también la posibilidad de que haya factores políticos y sociales involucrados en los actos de violencia que no pueden reducirse a la simple persecución e investigación de delitos. La relación de un delincuente o un grupo delictivo con su comunidad es compleja, en tanto que puede ocupar una posición de liderazgo e incluso de intermediación políticas, como se discute más adelante. Sin embargo, para fines del análisis de la coyuntura actual, esta aproximación es bastante útil. No sólo son estos delitos frecuentes en todo el territorio nacional, sino que apuntan a debilidades críticas de las instituciones del Estado que deben atenderse de manera inmediata, además de que implican un gran costo social y económico. El énfasis en delitos violentos no agota pues el análisis de las violencias en México, pero es un buen punto de partida.

LA DEPRECIACIÓN DE LA VIOLENCIA

Desde una perspectiva de seguridad pública y procuración de justicia, la violencia debe entenderse como un medio para alcanzar ciertos objetivos. Esto es, la violencia es en realidad una herramienta que se utiliza para obtener algo; no un fin en sí mismo. Y la diferencia entre los fines de un acto violento y otro es muy importante: a primera vista debe resultar obvio, por ejemplo, que hay una diferencia de fondo entre un asesinato que resulta de una riña, – hecho en el que no hay premeditación ni ganancia obvia más allá del impulso original de ganar el pleito–, y el de un competidor en el mercado ilegal, difundido en internet con fines propagandísticos. En el primer caso hay un impulso emocional difícil, si no imposible, de cuantificar y disuadir. En el otro, hay un cálculo racional sobre los beneficios que se esperan y las posibilidades de salir perjudicado.

La intuición se puede expresar matemáticamente de manera compleja (Becker, 1968) pero es relativamente sencilla: el criminal espera obtener algún beneficio del delito y este beneficio debe ser mayor que los costos posibles de cometerlo. Esto no quiere decir que todo criminal calcule perfectamente el costo/beneficio de lo que hace sin factores emocionales o expectativas falsas--en realidad, nadie lo hace. Basta con que desde su perspectiva, cometer el delito sea más redituable que no cometerlo. Y el costo de delinquir depende, entre otras cosas, de la posibilidad de ser detenido y castigado, así como del tipo de sanción que recibirá o por decirlo de otra forma, de la posibilidad de quedar impune. Por regla general, a mayor impunidad se vuelve más "barato" cometer un delito.

Es probable que la impunidad –y la consecuente reducción en el costo de delinquir–no sea la única explicación del incremento en la incidencia de homicidio y otros delitos violentos (Hope, 2013). De hecho, lo más sensato sería suponer que hay varios factores que inciden en una coyuntura u otra y que en realidad es difícil estimar

el impacto de cada uno (Levitt, 2004). Sin embargo, está claro que la impunidad vuelve más atractiva una opción criminal de lo que lo sería si hubiera más riesgo de ser castigado y, en el caso particular de la violencia criminal, esto tiene implicaciones muy importantes.

Consideremos de entrada que un cierto nivel de impunidad es natural e incluso inevitable en cualquier sistema de justicia penal. No se puede esperar que todos los delitos sean investigados y sancionados con la misma efectividad, en tanto que no hay recursos ilimitados para perseguir y castigar a todos y cada uno de los delincuentes (Barrena, 2013). Es natural entonces que los delitos violentos, en tanto que tienen el mayor impacto social, económico e incluso político, atraigan más la atención de las autoridades. (Por ejemplo, las penas para secuestradores en México se han incrementado sensiblemente en los últimos años, al punto de convertirlo en uno de los delitos con las penas de prisión promedio más largas en el país, por encima incluso del homicidio, lo mismo que los recursos destinados a formar unidades especializadas en el combate al secuestro.) En condiciones normales esto implica que el uso de la violencia es potencialmente menos rentable que las alternativas y que se optaría por minimizarlo, cuando no a evitarlo. También, que los delincuentes y organizaciones criminales que pueden evitar recurrir a ella, ya sea por que tienen capacidades operativas y logísticas superiores o por sus conexiones con las autoridades, tienen una ventaja en los mercados ilegales. De hecho, los modelos que enfatizan el combate a las organizaciones criminales violentas –como los que se aplicaron en Nueva York, Chicago y Seattle contra los vendedores de droga callejeros– pretenden justamente crear incentivos para que la actividad criminal adopte esencialmente un perfil más bajo y la comunidad experimente menos violencia.

Dado que en los últimos años en México la incidencia de delitos violentos ha rebasado por mucho las capacidades del Estado para sancionarlos (México Evalúa, 2012), es necesario considerar un escenario en que la impunidad del homicidio –o de cualquier otro delito violento– es muy alta. Esto hace que los delincuentes no requieran capacidades superiores para sacar ventaja en sus actividades. Por el contrario, la violencia empodera a quienes no tienen recursos financieros superiores ni acceso privilegiado a la protección de las autoridades, pero están dispuestos a arriesgar sus vidas y las de sus víctimas a cambio de montos de dinero mucho menores de lo que en otro tiempo hubieran exigido organizaciones criminales más sofisticadas.

Esta "democratización" de la violencia genera también incentivos para utilizarla de manera indiscriminada –de nuevo, por su bajo costo– y hacerla lo más llamativa posible, para fortalecer su posición o defender el propio territorio. Si no hay costo en señalizar a rivales y víctimas que uno está dispuesto a utilizar más violencia que ellos, el valor propagandístico se vuelve irresistible. La intimidación es, después de todo, un mecanismo fundamental para alcanzar una posición de liderazgo en los mercados ilegales y, quizás más importante, para extorsionar y secuestrar de manera efectiva. Y el impacto sobre la percepción de la población general es notable e inmediato.

EL TEMOR A LA VIOLENCIA

Cuando en México la delincuencia llegó al punto en el que la violencia no era más un recurso excepcional –alardeando incluso de su capacidad para ejercerla impunemente–, el miedo a convertirse en víctima permeó a la esfera social ajena al negocio ilegal. El mensaje es para todos, no sólo para los directamente involucrados. Que la amenaza se perciba permanente: de la noche a la mañana en 2011, pequeños y medianos empresarios en prácticamente todos los estados del norte, región caracterizada primordialmente por concentrar el desarrollo industrial del país, vieron sus locales consumidos por las llamas en represalia por no pagar la cuota de extorsión fijada por grupos delincuenciales ávidos de nuevas fuentes de financiamiento. Restaurantes, talleres mecánicos o puestos en centrales de abastos, compartieron la misma suerte.

En Michoacán, una entidad dedicada primordialmente al sector primario y con un puerto de carga comercial en la costa del Pacífico recientemente intervenido por las autoridades federales por concentrar actividades estratégicas para el tráfico de narcóticos, el cobro de una suerte de impuesto a cada uno de los eslabones de la producción de aguacate y limón (desde la siembra hasta la venta del producto) y la muy limitada respuesta oficial, provocó la conformación de guardias comunitarias armadas.

También en 2011, las matanzas se acumularon escribiendo varios de los capítulos más sangrientos en lo que va del siglo en el país. En Boca del Río, Veracruz (costa del Golfo de México), 35 cadáveres con huellas de tortura fueron apilados en una vía pública concurrida; otros 26 encontrados en vehículos abandonados en una de las avenidas principales Guadalajara, ciudad capital de Jalisco (colindante con Michoacán). Aunque no producto de un mismo hecho, pero sí en el mismo lugar, los restos de 193 personas asesinadas fueron rescatados de 47 fosas clandestinas en San Fernando, Tamaulipas (frontera norte), municipio en el que menos de un año atrás, 72 inmigrantes centroamericanos, presuntas víctimas de secuestro, fueron masacrados y sus cuerpos, apilados.

Así, a punta de golpes y disparos, entre 2011 y 2013 el miedo permeó en la población en general y la cifra de ciudadanos que se consideran víctimas posibles de extorsión o secuestro aumentó 103 por ciento de acuerdo con la Encuesta Nacional de Victimización y Percepción de Inseguridad del Instituto Nacional de Estadística y Geografía. Un aumento similarmente alarmante, de 102 por ciento, se registró respecto al temor de ser víctima de lesiones causadas por una agresión física. Y no hablamos de

miedos infundados: las denuncias por lesiones intencionales con arma de fuego crecieron 176 por ciento entre 2006 y 2012 según la información recopilada por el Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública. En el caso del robo con violencia, el alza es de 51 por ciento en el mismo periodo. Las denuncias por secuestro, 80 por ciento. La violencia malbaratada, el peor negocio posible.

Este escenario abrió además una ventana de oportunidad nada despreciable para delincuentes comunes: usufructuar "franquicias" del negocio de la violencia para extorsionar vía telefónica, haciéndose pasar por miembros de La Familia Michoacana o Los Zetas. Porque si ambas organizaciones delictivas funcionan como una empresa, la violencia es su identidad de marca y tiene a más de un beneficiario. Por ende, también demasiadas víctimas y efectos negativos: gastos catastróficos para familias y empresas, desconfianza en las autoridades, daños psicológicos y más miedo, por nombrar solo algunos.

Mientras el Estado mexicano no logre constituirse de manera legítima en una amenaza creíble de sanción para quienes estén dispuestos a truncar vidas y libertades como parte de una estrategia de negocio, la misma lógica de la violencia seguirá funcionando en México. Matar y violentar seguirá siendo una herramienta barata al servicio de la ambición. La puerta falsa del populismo penal es ahora una de las mayores tentaciones y la oferta de la pena de muerte o cadena perpetua se escucha en el mercado político de tintes justicieros, aun con toda la evidencia de la inefectividad de estas medidas. El tiempo corre y sigue siendo cuestión del precio de una bala, más el de un arma de fuego y, si acaso, el de un gatillero.

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SECURITY AND COMPETITIVENESS

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In Mexico, four out of five individuals who have been victims of crime permanently change their behavior and activities (Gallegos and Gurrea, 2006). This fact has a transcendental impact on the economy, not only by affecting the productivity of labour and the number of work days lost due to crime, but more importantly modifying consumption patterns, the demand for health services, and other difficult-to-quantify consequences that directly impact a region´s economic growth and competitiveness. For these reasons the improvement of public safety conditions within a region is not only in the interest of governments but also of non-government stakeholders, in particular the business community.

The World Economic Forum defines competitiveness as the "set of institutions, policies, and factors that determine the level of productivity of a country (WEF, 2010)." An alternate definition is: a country or region's ability to attract and maintain investment and talent (IMCO, 2011). These definitions make clear why lower levels of public safety for individuals and property, lead to lower overall competitiveness for a region. In an increasingly globalized world, firms should encourage and foster competitiveness with the intention of increasing their general productivity and being better able to compete both in national and global markets.

To date, the majority of research regarding the relationship between competitiveness and security has dealt with the existence and fulfillment of clear laws and norms, most importantly the legal certainty of firms and contracts guaranteed by trustworthy and objective court systems. This incorporates judicial certainty into the interaction between individuals, firms, and the government within an economy as a fundamental determinant to creating investment, growth, and competitiveness. Regions lacking

such legal systems impose higher transaction costs to market participants. While these factors are very well understood within competitiveness research, we believe that there is still a need for more detailed examination of the effects of insecurity and criminality, rather than the judicial system's impact, to a region's competitiveness.

The main argument to support the negative relationship between public safety and competitiveness is that insecurity and criminality impact individuals and firms by imposing higher costs of market participation. For firms, these can be issues such as the amount of resources spent on private security or the cost of stolen or damaged goods and property, which lower the ability of firms to compete by raising costs relative to firms in safer regions. This means that, given a certain set of characteristics, firms and market participants in regions facing less secure environments, are forced to produce relatively more expensive goods and services, essentially reducing their productivity, thus lowering their capability to compete in a globalized, or even in intra-national, marketplaces.

Despite the fact that the causes of insecurity and criminal incidence in different regions depend on structural variables such as employment and education opportunities, income distribution, demographic composition, and poverty, these causes are at the same time dependent on institutional factors. For example, there is powerful evidence showing that countries with worse structural conditions than Mexico have in fact lower criminal incidence rates as a result of changes in their justice procurement institutions (Gallegos and Gurrea, 2006). This stresses the idea that the evaluation of law enforcement and justice institutions within a region is of central importance.

The main idea that we hope to convey is that both government and the business community have significant incentives to promote the reform of institutions that lead to better security of individuals and property. But one question remains: just how much does insecurity affect competitiveness?

The answer to this question is even less developed in the case of Mexico. Despite an increasing media and social focus on public safety since the beginning of president Felipe Calderon's term in 2006, most of the attention has been mainly about the loss of human lives and the suffering of those involved. At the same time very little research has been done on the effects that these events have had on the development and growth of the Mexican economy. One of the main reasons for this lack of information is the unsatisfactory state of public safety data in Mexico due to both data unavailability and quality concerns in the existing public data.

It is clear how the lack of basic information, and therefore of evidence, hampers the abilities of stakeholders to undertake actions aimed at improving public safety conditions within a region. Particularly in the case of Mexico, the lack of data has been one of the main obstacles for research that would provide better understanding of the relationship between public safety and competitiveness.

THE ROAD FORWARD

Using the OECD´s four step evidence-based policy-making framework, we wish to address how the relationship between security and competitiveness can be further explored with the intention of creating information that could impact the decisions of both government and citizens. The OECD framework relies on four basic components: generating basic data; transforming data into actionable evidence; using evidence to affect public policy-making; and creating indicators and reports that could mobilize non-government stakeholders (OECD-IMCO, 2013).

i)   Generating basic data:

As previously mentioned, basic data is of fundamental importance to the policy-making process. In Mexico, available data for security and justice system indicators such as resources spent, human and physical infrastructure outputs, criminal incidence outcomes, and public perception on public safety is still far from desired levels. For example, a strong effort must be made to collect and compile data from criminal reports and justice system records.

Additionally, the increasingly common method of surveying unobservable outcomes such as the public perception of safety, trust in institutions, and victimization levels will play a crucial role in obtaining a more accurate depiction of the security and justice system panorama within regions.

Lack of data is a lesser concern for measuring competitiveness as there is an increasing number of both governmental and nongovernmental organizations that collect and compile variables that are necessary to evaluate competitiveness within a region. For this reason, the highest priority should be the development of systems that ensure that data of criminal and legal processes is recorded, validated, and made available in ways that are easy to access for the general public.

Data availability and quality concerns are even more pronounced at the state and municipal level. While national statistics are often published and cited by government officials, much work is yet to be done to disaggregate the data to allow for subnational analysis. Without proper data at the state and municipal level, regional stakeholders are unable to fully participate.

While data availability and quality on justice and security in Mexico is still not sufficient, we feel the need to highlight the progress that has been made in the past few years. In particular the creation by INEGI of two new large-scale yearly victimization surveys, the Personal Victimization Survey (ENVIPE) and the Business Victimization Survey

(ENVE). These surveys have gone a long way in providing better information to both researchers and the public about criminal incidences in Mexico and also about how criminality indirectly affects the behavior of citizens and firms. Additionally, the Secretariat of the Interior (SEGOB), through the National Public Safety System (SNSP), has undertaken important steps to increase the quality and reporting frequency of criminal incidence statistics at the state and municipal level.

ii)   Transforming data into actionable evidence:

While the availability of basic data is necessary, in itself, it is not sufficient to understand the complex relationships between security and competitiveness. Compiled data must be studied in detail and analysed with the intention of finding or confirming the key determinants of security and the extent to which they affect a region´s competitiveness.

As mentioned previously, an increasing number of non-governmental institutions, such as think tanks and academic centers, have proposed and implemented complex and interesting methods to evaluate a region´s competitiveness outcomes. Increases in available data should be accompanied by the incorporation of criminal incidence and justice system indicators into such studies, potentially increasing our knowledge of the security-competitiveness relationship.

The Mexico Peace Index, and the global and national peace indices, are an interesting example of such efforts. In particular the estimation of the direct and indirect costs of crime contribute a valuable piece of information that can help mobilize citizens, business, and governments.

Additionally, more minute exercises that analyse the effects of potential interventions and reform on law enforcement and criminal justice must also be undertaken. For example, economic evaluation of potential policy can prove useful for policy-makers by contrasting the costs and benefits of certain policies, mainly because an effective intervention may not necessarily be resource efficient. Therefore, economic evaluation of reform is much more useful to policy-makers than simply an effectiveness evaluation. For example, one must keep in mind that changes in criminal incidence have complex costs such as shifts in consumer behavior than can impact competitiveness strongly and lead to weaker levels of economic growth.

iii) Using evidence on to generate policy decisions:

Once that data is transformed into evidence, it should be disseminated among relevant decision makers. If in fact lower levels of public security hamper competitiveness, it is in the government's interest to implement reform that leads lo lesser economic growth losses because of security concerns.

iv)   Creating indicators and reports that could mobilize non-governmental stakeholders:

Secondary diffusion of evidence such as the creation of reports and indicators, as well as the involvement of media, can play a fundamental role in transforming evidence into policy. The detrimental effect of a lack of security in competitiveness levels does not only affect those institutions responsible for making policy happen. The business community, as one of the agents that can benefit the most from increases in competitiveness, can play a vital role in pressuring the relevant authorities to implement reform and ultimately improve criminality outcomes. For this reason, the creation and diffusion of evidence is a fundamental part of the policy making process, ideally informing and mobilizing stakeholders who can directly and indirectly benefit from informed decisions.

DOES INSECURITY AFFECT STATE LEVEL COMPETITIVENESS IN MEXICO?

While answering this question fully is well beyond the reach of this piece, using data from IMCO's 2012 Mexico State Competitiveness Index, we try to get a glimpse of just how much criminal incidence and perception of public safety affect a region's competitiveness.

Released every two years, IMCO's State Competitiveness Index's main objective is helping Mexican states adopt public policies that promote freedom, security, and the welfare of citizens (IMCO, 2012). Through 95 indicators in six sub-indices, the Index measures, via the indicator's relations to gross fixed capital formation and percentage of population with higher education, how competitive Mexican states are in comparison with each other.

The main question is whether criminal incidence and perception of security of a state affect competitiveness. In other words, do public safety and perception of public safety alter a state's ability to attract and retain investment and talent? More interestingly, we wanted to test if the growth rate in criminal incidence, homicide rates and perception of safety affected the growth rate of gross fixed capital formation and the percentage of the workforce with higher education.

We implemented a relatively simple econometric panel model (cross-sectional time series) with state level fixed effects and a set of controls to account for other economic, structural, and institutional variables at the state level that included the years 2001-2010. The model tried to estimate the effect of three main variables, the homicide rate, the

victimization rate, and the perception of public safety, on competitiveness (measured through gross fixed capital formation, the percentage of population with higher education working within that region, and the influx of foreign workers with higher education [1].

It seems that the growth in homicides rates within a state does not substantially alter the variables associated with higher levels of competitiveness. No relation was found between changes in homicide rates and changes in either the percentage of the population with higher education working within the state or the influx of foreign population with higher education. A very modest, yet significant, negative relationship was found between growth in homicide rates and the growth of gross fixed capital formation, where a 1 percent decrease on the formation of capital was associated with a 122 percent increase in the homicide rate.

The victimization rate (number of crimes per 100,000 inhabitants as measured through ICESI victimization surveys) correlates more strongly with competitiveness outcome variables, in particular talent attraction and retainment. We found that 1 percent increases in the percentage of population with higher education working within the state and the influx of foreign population with higher education, were associated on average with 21 percent and 12 percent reductions respectively in the state's victimization rate.

The perception of public safety (as measured by ICESI surveys) was the variable we found to be most related to competitiveness outcomes. It seems that on average a 14.3 percent improvement in the perception of public safety increases fixed gross capital formation growth by an average of 1 percent. Additionally, a 12 percent improvement increased a state's influx of foreign workers with higher education by 1 percent on average.

While the previous results are by no means conclusive, they do seem to suggest a correlation between growth in competitiveness and the improvement of public safety conditions. In particular, it is interesting to note that public perception of public safety is more closely associated with competitiveness than actual victimization and criminality.

CONCLUSION

Intuitively, it is clear why governments, firms, and citizens should all be interested in improving public safety conditions and increasing levels of peace in their regions of influence. In the case of economic competitiveness, crime and insecurity can prove very costly burdens that lower the overall productivity of a region.

Yet in the case of Mexico the situation is still more complex. One of the main barriers to action, by both government and non-government agents, is the lack of information regarding public safety either through evaluation of specific programs or even the most basic data to assess the current panorama. Without proper information, stakeholders are unable to understand the full costs of insecurity and also unable to evaluate strategies to improve public safety conditions.

The main argument of this piece is to emphasize that despite the magnitude of the public safety problem in Mexico, little has been done to understand how much criminality hampers economic growth, development, and competitiveness in Mexico. One thing is clear: without proper information not much can be done to mobilize stakeholders. For these reasons firms and non-government agents should encourage changes and reform that lead to better overall security indicators for their regions of influence. Only after the basic path is set will we start to see work that enables us to understand just how much peace affects competitiveness.

ENDNOTES

[1] A more detailed description of the model and other results are available at: http://eduardoclark.github.io/EPModel

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EXPLAINING THE AVAILABILITY OF FIREARMS IN MEXICO

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INTRODUCTION

Weapons crimes are obviously dependent upon the availability and price of the weapons themselves. In the case of Mexico, there is a longstanding debate as to whether or not the United States, with its abundance of gun retailers and relatively lax gun control laws, increases the availability of firearms in Mexican society, and therefore weapons crime. The implications of the debate for US gun control policy are potentially immense, transforming what has traditionally been a seen as a domestic rights issue, into one of international responsibilities.

Among scholars of the issue, there has been no doubt that arms flow from the United States to Mexico. Chicoine (2011) estimates that the lapse of the US federal assault weapons ban was responsible for an escalation in the homicide rate in Mexico of 16.4 percent over the 2004-2008 period. Exploiting a natural experiment, Dube, Dube, and García-Ponce (2012) demonstrate that homicide rates across the border from California, where assault weapons sales continued to be banned after 2004, remained relatively low. Moreover, Goodman and Marizco (2010) report a price gradient within Mexico: the farther from the US border, the higher the price of an AK-47. This gradient suggests that transport costs from the north to the south are raising prices. Most obviously, in 2009 alone, US and Mexican authorities seized roughly 37,000 US-sold firearms (of which the vast majority – over 85 percent – were recovered by Mexican authorities) (Goodman & Marizco, 2010).

THE PROVENANCE OF GUNS IN MEXICO

Of those firearms in Mexico, a significant portion – quite likely the majority – comes from the United States. The Bureau of Alcohol, Tobacco, Firearms, and Explosives' (ATF) National Tracing Center (NTC) traces hundreds of thousands of guns per year – 319,000 in calendar year 2011 (ATF, 2012). From 2007 to 2011, 43,000 traces were performed on firearms recovered in Mexico and submitted to the NTC by the Mexican government. 68.3 percent of those submitted were determined to have been manufactured or legally imported in the United States. Another 10.6 percent were determined to have been manufactured outside of the United States (with no evidence of having been legally

imported to the United States), and another 21.1 percent of firearms were of undetermined origin.

The National Shooting Sports Federation (NSSF) disputes those statistics. They cite a Stratfor Global Intelligence critique of a 2009 GAO report detailing the tracing results of approximately 7,200 guns submitted to the ATF for tracing by Mexican authorities in 2008 (Stewart, 2011). (Mexican authorities had seized a total of 30,000 guns that year.) Of those 7,200 submitted, about 4,000 were traceable. Of those traceable, 3,480 guns (87 percent) were determined to have been manufactured in, or imported to, the United States. The NSSF took the methodologically dubious decision of normalizing the 3,480 positive cases by the original 30,000 firearms recovered my Mexican authorities, to argue that around 12 percent of firearms in Mexico were purchased in the United States. That calculation assumes that (a) no firearms not submitted by Mexico were from the United States, and that (b) no firearms that were untraceable (due, e.g., to filed identifiers on parts of the firearm) were from the United States. Both of those assumptions are questionable if not risible.

There is likely some degree of selection bias at work in the sample of arms submitted by Mexico to the ATF for tracing. Guns that clearly lack the required identifiers or are of makes that are usually not sold in the United States are likely to be withheld in numbers disproportionate to the general pool. This consideration would suggest that the total number of guns coming to Mexico from the United States is less than 68 percent, but how much less is unknown. In any case, however, it is probably not unreasonable to guess that the majority of guns in Mexico originate in the United States.

THE LOGIC OF THE TRADE

The logic of a trade in arms is simple: guns flow from where they are cheap and abundant to where they are scarce and expensive.

There are robust legal restrictions on the purchase and possession of firearms in Mexico. Mexico's Federal Firearms and Explosives Law and other pieces of legislation strictly regulate the possession and sales of firearms, ammunition, and explosives. Whilst the United States boasts approximately 50,000 Federal Firearms Licenses to retail

firearms (FFLs), Mexico has a single retailing warehouse located in Mexico City and run by the Mexican army (SEDENA) selling through the Federal Arms Registry. Article 164 of the federal criminal code prohibits person-to-person firearm sales. Strict penalties apply to citizens who carry or possess firearms without authorization under Article 162 of the code. Calibers higher than .380 (as well as .357 magnum and 9mm) are also prohibited. Grillo (2007) estimates that there were only about 4,300 legally registered firearms in private possession in Mexico in 2007.
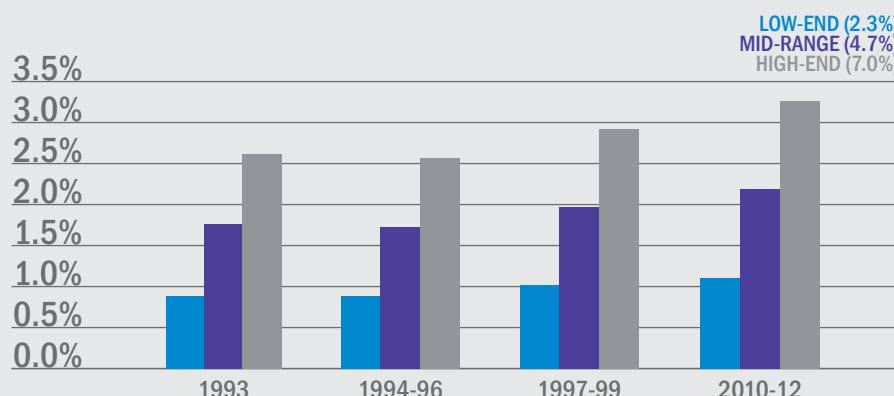
The actual number of arms in Mexico is obviously much larger than legal registrations would suggest. However, while the United States is the most heavily armed country on the planet (at around 94 guns per hundred people), Mexico can hardly be described as a heavily armed society. Mexico is a modest producer of small arms and ammunition, exporting the equivalent of just $US 22 million in the latest year for which data is available. With some 2.45 million registered gun owners and around 15 million more illegal arms in circulation (Godoy, 2013), the country has a ratio of roughly 15 guns for every 100 people. This is at least six times less than the United States and well below the global average (Small Arms Survey, 2011).

THE TRADE AS A PERCENTAGE OF US SALES

Numbers of arms seized at the border are suggestive of a larger trade, but what proportion of the total traffic do they represent? McDougal, Shirk, Muggah, and Patterson (2013) used a county-level panel of FFLs in the United States to quantify the degree to which FFLs cluster close to the border. Controlling for, and subtracting out, a suite of domestic determinants of demand, we estimated a percentage of the US domestic firearms market that can be attributed to demand arising south of the US-Mexico border. That percentage changes over time, of course, and seems to have risen from around 1.75 percent of total domestic sales in 1993 to roughly 2.2 percent in the 2010-2012 period (see Figure 1).

These percentages translate into raw numbers when we multiply them by the total numbers of guns sold in the United States for those periods. Figure 2 illustrates the pattern of US gun sales since 1986. Clearly visible are two periods of high volume: a large spike centered around 1993 (presumably in anticipation of the federal assault weapons ban going into effect), and a steady crescendo in the

FIGURE 1. ESTIMATES OF THE PERCENTAGE OF US DOMESTIC ARMS PURCHASED WITH THE INTENT OF TRAFFICKING SOUTH OF THE BORDER, ASSUMING LOW, MID-RANGE, AND HIGH PROFIT MARGINS FOR FFLS.

Source: McDougal, et al. (2013).

LOW-END (2.3%)
MID-RANGE (4.7%)
HIGH-END (7.0%)

FIGURE 2 TOTAL ARMS ON THE US MARKET (MANUFACTURES + IMPORTS – EXPORTS), 1986-2011.
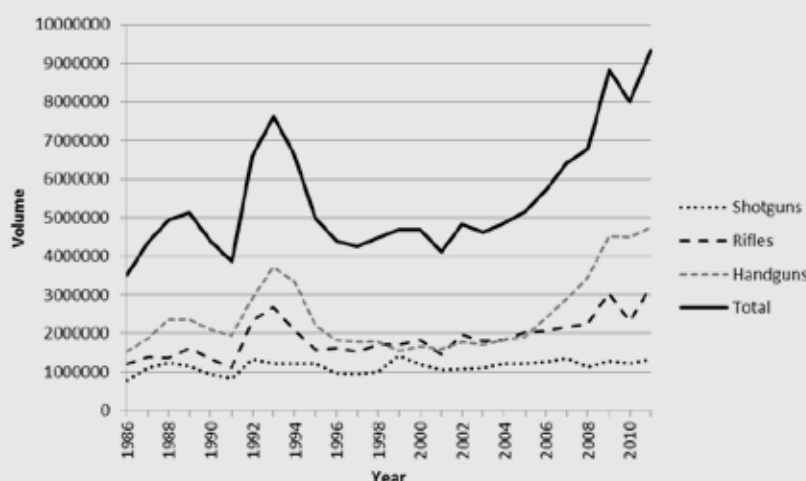
Source: McDougal, et al. (2013).

FIGURE 3. ESTIMATES OF THE TOTAL NUMBER OF US DOMESTIC ARMS PURCHASED WITH THE INTENT OF TRAFFICKING SOUTH OF THE BORDER, ASSUMING LOW, MID-RANGE, AND HIGH PROFIT MARGINS FOR FFLS.
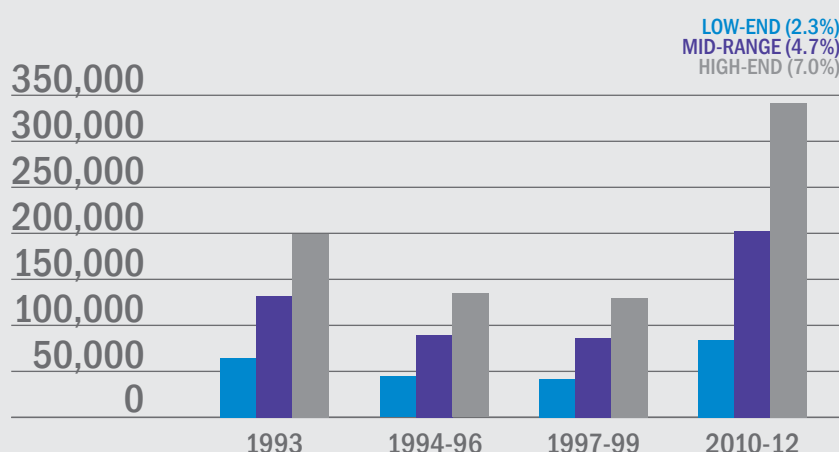
Source: McDougal, et al. (2013), updated with new estimates of US domestic sales from ATF (2013).

contemporary period. Multiplying the percentages shown in Figure 1 by the raw numbers in Figure 2, we obtain the numbers of arms purchased for trafficking south of the border, as illustrated in Figure 3. The mid-range estimate for 2010-2012 (updated from McDougal, et al. (2013)) is an annual volume of around 203,000 guns purchased. If we assume that the volume seized at the border is still roughly that reported for 2009 by Goodman and Marizco (2010), about 18.2 percent of the guns purchased to be trafficked across the US-Mexico border are actually intercepted.

CONCLUSION

We know now that (a) the number of firearms purchased with the intention of trafficking them south of the US-Mexico border is some relatively stable (though generally growing) percentage of US domestic firearms sales, and (b) guns from the United States represent a significant portion (and probably the majority) of guns in Mexico. If we further accept the assumption, based on the evidence of Chicoine (2011) and Dube, et al. (2012), that (c) the incidence of weapons crime in Mexico fluctuates as a partial function of weapons flows from the United States, then it is reasonable to speculate that the spikes in homicides in Mexico (1992-1994 and 2009-2011) are partially attributable to the spikes in gun availability on US markets. Of course, many other factors are at play, not least of which is the approach to tackling violent crime adopted by various political administrations within Mexico.

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APPENDIX A

VIOLENT CRIME CATEGORIES AND SOCIO-ECONOMIC DATA SOURCES

INDICATOR	SOURCE	YEAR	CORRELATION TO MPI SCORE
Average Number of People per House	INEGI – Mexico Population and Housing Census 2010	2010	-0.21
Average Number People per Room	INEGI – Mexico Population and Housing Census 2010	2010	-0.20
Beneficiaries of Social Welfare Program (LICONSA) per 100,000	INEGI – Mexico Population and Housing Census 2010	2010	-0.06
Books Available, Public Libraries per Capita	INEGI – Mexico Population and Housing Census 2010	2010	-0.11
Consumer Spending per Capita	INEGI - National Accounts Statistics	2011	-0.05
Number of Divorces per 100,000 People	INEGI – Mexico Population and Housing Census 2010	2010	0.27
Number of Doctors per 100,000 People	INEGI – Mexico Population and Housing Census 2010	2010	-0.10
Fertility Rate of Adolescents Aged 15-19	INEGI – Mexico Population and Housing Census 2010	2010	0.32
GDP per Capita	INEGI - National Accounts Statistics	2011	-0.23
Human Development Index (HDI) - Education	UNDP - HDI Mexico	2010	0.21
Human Development Index (HDI) - Health	UNDP - HDI Mexico	2010	0.10
Human Development Index (HDI) - Income	UNDP - HDI Mexico	2010	0.27
Human Development Index (HDI) - Overall	UNDP - HDI Mexico	2010	0.24
Homicide Rate per 100,000 People	Executive Secretary for the National System of Public Security - SESNSP	2012	0.76
Hospital Beds per 100,000 People	INEGI – Information Bank	2008	0.10
House with all Basic Services	INEGI – Mexico Population and Housing Census 2010	2010	0.28
Female Households Head	INEGI – Mexico Population and Housing Census 2010	2010	0.28
Male Household Head	INEGI – Mexico Population and Housing Census 2010	2010	-0.28
Households with Mobile Phone	INEGI – Mexico Population and Housing Census 2010	2010	0.26
Houses without Basic Goods	INEGI – Mexico Population and Housing Census 2010	2010	-0.32
Houses without Running Water	INEGI – Mexico Population and Housing Census 2010	2010	-0.16
Houses without Phone Land Line	INEGI – Mexico Population and Housing Census 2010	2010	0.50
Houses with Radio	INEGI – Mexico Population and Housing Census 2010	2010	0.16
Houses with Some Kind of Bathroom	INEGI – Mexico Population and Housing Census 2010	2010	0.11
Households with TV	INEGI – Mexico Population and Housing Census 2010	2010	0.32
Houses with Internet	INEGI – Mexico Population and Housing Census 2010	2010	0.31
Houses with No Electricity	INEGI – Mexico Population and Housing Census 2010	2010	-0.31
Houses with No Flooring Material	INEGI – Mexico Population and Housing Census 2010	2010	-0.06
Houses with Proper Floor	INEGI – Mexico Population and Housing Census 2010	2010	0.03
Houses with Refrigerator	INEGI – Mexico Population and Housing Census 2010	2010	0.47
Houses without Drainage System	INEGI – Mexico Population and Housing Census 2010	2010	-0.35
Illiterate People (%) Older than 15	INEGI – Mexico Population and Housing Census 2010	2010	-0.28
Incarceration Rate per 100,000 People	INEGI - Judicial and Penal System Statistics	2012	0.05
Household is Deprived in 1 Dimension	INEGI – Mexico Population and Housing Census 2010	2010	-0.34
Household is Deprived in 2 Dimensions	INEGI – Mexico Population and Housing Census 2010	2010	-0.32

Household is Deprived in 3 Dimensions	INEGI – Mexico Population and Housing Census 2010	2010	-0.21
Household is Deprived in 4 Dimensions	INEGI – Mexico Population and Housing Census 2010	2010	-0.04
Household is not Deprived in any Dimension	INEGI – Mexico Population and Housing Census 2010	2010	0.27
Justice System (Impunity Ratio)	INEGI - Judicial and penal System Statistics	2012	0.46
Labour Disputes per 100,000 People	INEGI – Mexico Population and Housing Census 2010	2010	0.35
Life Expectancy at Birth	INEGI – Mexico Population and Housing Census 2010	2010	0.11
Nurses per 100,000	INEGI – Information Bank	2008	0.03
Offices per 100,000	INEGI – Information Bank	2008	-0.13
People Older than 15 with Primary School Completed (%)	INEGI – Mexico Population and Housing Census 2010	2010	-0.13
People Older than 15 with Secondary School Completed (%)	INEGI – Mexico Population and Housing Census 2010	2010	0.08
People Older than 18 with Some Tertiary Education (%)	INEGI – Mexico Population and Housing Census 2010	2010	0.24
Population in Multidimensional Poverty (%)	Oxford Poverty and Human Development Initiative (OPHI)	2006	-0.18
Population Vulnerable to Poverty (%)	Oxford Poverty and Human Development Initiative (OPHI)	2006	-0.25
Intensity of Deprivation	Oxford Poverty and Human Development Initiative (OPHI)	2006	-0.03
Multidimensional Poverty Index	Oxford Poverty and Human Development Initiative (OPHI)	2006	-0.16
Organized Crime Rate per 100,000 People	Executive Secretary for the National System of Public Security - SESNSP	2012	0.49
People Feeling that their Municipality is Unsafe (%)	INEGI – Victimization and Perceptions of Security Survey (ENVIPE) 2012	2012	0.76
People Feeling that their State is Unsafe (%)	INEGI – Victimization and Perceptions of Security Survey (ENVIPE) 2012	2011	0.77
People Feeling that their Town is Unsafe (%)	INEGI – Victimization and Perceptions of Security Survey (ENVIPE) 2012	2009	0.71
People in the House Older than 3 Years Old Speaking Indigenous Language	INEGI – Mexico Population and Housing Census 2010	2010	-0.39
People Older than 15 with No Schooling	INEGI – Mexico Population and Housing Census 2010	2010	-0.23
People Older than 3 Speaking Only Indigenous Language	INEGI – Mexico Population and Housing Census 2010	2010	-0.21
Police Officers per 100,000 People	Executive Secretary for the National System of Public Security - SESNSP	2011	0.12
Police Spending per 100,000 People	Secretary of Finance and Public Credit (SHCP) - FASP funds	2012	-0.14
Population Aged 15 to 24	INEGI – Mexico Population and Housing Census 2010	2010	-0.22
Population Older than 18	INEGI – Mexico Population and Housing Census 2010	2010	0.08
Ratio Male/Female	INEGI – Mexico Population and Housing Census 2010	2010	0.14
State Population (% of National Population)	INEGI – Mexico Population and Housing Census 2010	2010	0.05
Stock of Fixed Assets per Capita	INEGI – Information Bank	2008	-0.21
Total Fertility Rate	INEGI – Mexico Population and Housing Census 2010	2010	0.08
Traffic Accidents per 100,000	INEGI	2008	0.19
Unemployment Rate	INEGI – Mexico Population and Housing Census 2010	2010	0.19
Violent Crime Rate (Assault, Rape and Robbery) per 100,000 People	Executive Secretary for the National System of Public Security - SESNSP	2012	0.54
Weapon Crime Rate per 100,000 People	Executive Secretary for the National System of Public Security - SESNSP	2012	0.73

APPENDIX B

FBI AND SESNSP VIOLENT CRIME CATEGORIES

VIOLENT CRIME – FBI DEFINITION	SESNSP CLASSIFICATION	CATEGORIES
Assault	Intentional Injuries	With Knives / Blunt Objects
		With Firearm
		Others
Robbery	All Type of Thefts/Robbery	Household Robbery
		Business Robbery
		To Pedestrians
		To Transport Companies
		Vehicle Robbery
		Others
Rape	Sexual Offenses	Rape

APPENDIX C

MOVEMENT IN RANKINGS OF STATES, 2003-2012

Ten States have improved their MPI rank, 14 have declined and four have seen no change in rank.

STATE	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2003-2012 RANK MOVEMENT
Aguascalientes	13	14	18	18	23	22	22	19	22	18	-5
Baja California	27	27	27	30	31	31	29	28	28	27	0
Baja California Sur	12	19	29	24	30	23	13	10	6	5	7
Campeche	1	1	2	1	2	2	1	2	1	1	0
Coahuila	2	3	3	3	4	12	12	15	19	22	-20
Colima	7	10	9	11	12	11	10	6	12	20	-13
Chiapas	25	24	21	15	14	5	8	7	7	7	18
Chihuahua	28	28	28	29	21	32	32	29	31	29	-1
Distrito Federal	23	22	20	19	17	16	23	26	20	21	2
Durango	4	2	15	13	15	28	28	30	27	25	-21
Guanajuato	20	21	24	22	29	25	24	20	17	24	-4
Guerrero	29	26	26	27	26	24	25	25	30	31	-2
Hidalgo	3	4	5	2	1	3	4	4	3	3	0
Jalisco	19	17	14	16	19	18	18	21	21	17	2
México	26	25	23	20	10	7	15	12	14	15	11
Michoacán	22	20	16	23	24	27	27	18	18	23	-1
Morelos	24	29	31	31	25	26	31	32	29	32	-8
Nayarit	10	7	13	26	22	20	16	24	24	14	-4
Nuevo León	8	5	8	12	13	13	9	16	26	26	-18
Oaxaca	31	31	22	25	20	15	17	13	8	8	23
Puebla	21	18	12	10	8	6	11	9	11	11	10
Querétaro	6	6	7	5	3	1	3	1	2	2	4
Quintana Roo	32	30	19	21	27	29	26	27	25	28	4
San Luis Potosí	5	13	6	6	11	14	14	17	15	9	-4
Sinaloa	30	32	32	32	32	30	30	31	32	30	0
Sonora	17	23	30	28	28	21	21	23	16	16	1
Tabasco	9	8	1	8	16	17	19	14	13	12	-3
Tamaulipas	18	16	25	17	18	19	20	22	23	19	-1
Tlaxcala	14	15	17	14	6	9	6	8	9	10	4
Veracruz	11	9	4	4	5	4	2	5	5	6	5
Yucatán	16	11	11	9	9	8	5	3	4	4	12
Zacatecas	15	12	10	7	7	10	7	11	10	13	2

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END NOTES

1. The data is from the Executive Secretary of the National System for Public Security (SESNSP); the homicide rates from other sources are generally lower but all of them follow the same trend.

2. The drop in organized crime has been noted in a recent study by Carlos Vilalta, Las Bases Sociales del Crimen Organizado y la Violencia en México, Chapter 1 Los Delitos contra la salud en México, 1997-2011.

3. There is data regarding homicides attributed to organized crime from SESNSP. Since the time series does not cover the entire period of interest of the MPI, this dataset has not been used for the cost analysis.

4. The ENVIPE 2012 survey asks each individual if they have been victim of a crime, the type of crime and if it has been reported to the relevant authorities (Prosecution Authority - Oficina del Ministerio Publico)

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