2011 DISCUSSION PAPER

New Dimensions of Peace – Society, Economy, and the Media

GPi

GLOBAL PEACE INDEX

CONTENTS

EXECUTIVE SUMMARY

Since the first release of the Global Peace Index in 2007 the Institute for Economics and Peace (IEP) has been consistently improving our shared knowledge of peace and of the economic benefits that flow from improvements in peace. During the last twelve months the Institute has produced a number of reports and white papers. This year's Discussion Paper focuses on three of them: the United States Peace Index, the Peace & the Media report and a white paper on the relationship between social sustainability and peace.

IEP recently released the **United States Peace Index** (USPI), the first in a series of national peace indices, which ranks the states of the U.S. by their peacefulness. The study made two unique contributions to the public debate on crime. The first was estimating of the additional economic activity and the number of jobs that would be created through improvements in peace. These estimates include the direct costs associated with policing, justice, incarceration and crime. The study also conservatively estimated the flow-on effects to the overall economy if the U.S. could achieve the same level of peacefulness as Canada.

The other unique contribution of the U.S. Peace Index was the statistical analysis between a number of socio-economic indicators and the index to derive the types of environments that are associated with peace within the U.S.. Fifteen data sets were correlated and the significant factors could be grouped by three categories: economic opportunity, education, and health.

Peace & the Media is a study jointly conducted by the IEP and Media Tenor which is a leading organisation on analysing global media coverage. The report, which was used to form the central part of the book "2010 Peace Report", analyses the media coverage from news and current affairs programs for 37 television networks from four continents on their coverage of peace. It also analyses the global media coverage of the "Structures of Peace". These structures have been derived through statistical analysis and describe the environment that creates a peaceful society. There is a important section that analyses what is missing in the media coverage of Afghanistan when compared to the Structures of Peace. It provides a useful insight into some of the reasons why peace in Afghanistan has been elusive as it appears that little attention has been paid to some of the key structures of peaceful societies.

The **social sustainability and peace** white paper focuses on the new and emerging area of social sustainability. The concept of social sustainability has increasingly become the focus of intergovernmental organizations, academics, global think tanks, and policymakers within government. While sustainability has for some time been a prominent concept in environmental currents, the social dimension of sustainability has previously been overshadowed by economic and environmental aspects. The recent shift of focus to social sustainability is recognition of the interdependent nature of social, economic and environmental factors in determining progress and the importance of social institutions in helping to shape economic, political and environmental outcomes. This is also true for peace.

This section of the 2011 GPI Discussion Paper sets out to explain how the environments that shape peace are also the same environments that create the appropriate conditions for social sustainability. This study draws on recently published research from the Indices for Social Development (ISD) to correlate their measures of social sustainability with the GPI.

Peace is one of the most used and esteemed words in the human vocabulary. Yet if we wish to create peace then we must first pose the question; "what do we know about peace?" Although great strides have been made in improving our common understanding of peace and its causes, with many universities now having peace and conflict centres, peace is still not common to the major academic disciplines. There are no courses on the literature of peace in the literature departments of the major universities in the world yet most people know profound works on peace. Nor is there a chair in Peace Economics in any major university. However, surveys conducted by the United Nations Global Compact found that 80% of business leaders believe that the size of their markets expands with peace and 79% believe that their costs decrease with improvements in peace.

Knowledge is the key to creating the correct sets of initiatives to solve any problem; if we live in a world that desires peace then *how can the optimum level of peace be created if we do not fully understand it?*

We live in an age that is different to any other epoch in human history. We are more interconnected than ever before yet finding finite constraints on many of the basic resources needed to sustain life. These challenges are occurring globally and are multi-faceted; encompassing economic management, environmental sustainability and a wide variety of social ills. Global challenges do call for global actions but compounding these challenges is the inability of our institutions to adequately address their causes and to then create the remedies. This has been demonstrated by the inability to find global solutions to many pressing problems as is exemplified by the breakdown of the Copenhagen Climate Change talks, burgeoning government and private sector debt, lack of regulation of the speculative aspects of the financial system or indeed our inability to even articulate good capitalist models that aren't totally based on consumption.

Yet such imminent and urgent challenges do provide a unique opportunity for us to reconsider and redefine our institutions, relationships and values so that we can create a viable future in which humanity can meet its shared challenges and continue to prosper. Peace is one of these essential elements.

One of the more remarkable findings from the Global Peace Index in 2010 was that societies that are highly peaceful also perform exceptionally well in many other ways. The most peaceful societies also have higher per capita income, higher levels of well-being, more freedom, perform better at sustainability, and appear to have a more equitable distribution of social spending. What is important is not whether peace creates these abundances, rather the realization that what creates a peaceful society also allows for a fuller expression of human potential, and in many diverse forms. The Structures of Peace describe this environment and therefore create much more than peace.

The United States Peace Index is the first in a series of national peace indices that will build on the work of the Institute for Economics and Peace in measuring and understanding the fabric of peace. It is envisaged that by producing a series of national peace indices using the same methodology across many nations the patterns that are associated with peace will emerge. This will enable politicians and policy makers to consult and legislate in areas that will lead to more stable, affluent and peaceful societies.

The U.S. Peace Index consists of a composite set of five indicators. These indicators were chosen because they can be measured across many countries with a methodology that would allow for the data to be consistently collected by state, district or region. The definition of peace that was chosen for these studies is the "absence of violence". This is a simple definition, intuitive to most people and is the same definition used for the GPI. The indicators that have been selected relate to violent crime, homicides, incarceration rates, policing and availability of small arms.

In the U.S. there are many benefits that would flow from improvements in peace, either physically, emotionally or socially, but one of the key benefits that is often overlooked is the substantial positive economic impact that even small improvements in peace can have. Violence creates costs for both business and government. It also reduces productivity, which if unleashed will create substantial additional economic growth.

This study estimates that if the U.S. had similar levels of peacefulness to Canada, the conservative economic benefit on the U.S. economy would be $361 billion per annum. This would consist of $89 billion in direct savings and $272 billion from additional economic activity. This additional economic activity, if recouped, would have a stimulatory effect capable of generating approximately 2.7 million additional jobs.

States that rank higher on the social and economic factors that significantly correlated with the USPI tend to have higher scores in peace, indicating that having access to basic services, having an education, being in good health and ultimately being given the opportunity to succeed, are linked to peace. Improving these factors would also create additional economic activity.

Contrary to popular belief peace in the U.S. has been on the increase, recording an 8% improvement since 1991. The improvement in peacefulness has been driven by a substantial decrease in homicides and violent crime. This however, has been somewhat offset by large and progressive increases in the incarceration rate from 1991 onwards.

Media is one of the most influential aspects in any society yet using deep multi-national datasets to analyse global media patterns on societal issues is relatively new. Therefore the combination of the Media Tenor datasets and the Global Peace Index made for an original study in analysing the different patterns of coverage between continents, countries and networks with the emphasis on highlighting the accuracy of coverage, the tenor of the coverage as well as breadth of coverage.

Media accuracy is a much debated subject but how accurate is the media on reporting peace and conflict and is it more accurate than people would commonly believe?

The starting point for the analysis was to determine how closely the global media coverage of violence matched the measured levels of violence within each country. To accomplish this, the percentage of "violence" stories was tallied for all television programs by country, other than for the country in which the television network was domiciled. This dataset was then statistically analysed against the GPI to determine its alignment. It was striking how aligned the data sets were. However ,there were some notable exceptions with over reporting of violence for Austria, Ireland, Portugal and Finland. Despite their high levels of peacefulness, over half of all TV reports on these countries focused on violence issues. Russia, Israel and Sudan are identified as another set of outliers. These countries are ranked at 143, 144 and 146 (out of 149) respectively on the 2010 Global Peace Index. Yet, they had lower levels of violence reporting than would be expected.

The majority of TV programs reported on Violence less than 40% of the time. However, there are four programs that devote more than 50% of their time to topics of Violence. These are CBS Evening News,

EXECUTIVE SUMMARY

Fox Special Report, ITV News at 10 and ABC World News. All of these TV programs are aired in either the U.S. or U.K.

By categorising topics according to the Structures that build peace it was possible to further analyse media coverage of these crucial areas. In order to help facilitate an increase in peacefulness, coverage of these topics is essential as it would encourage a more informed global debate on matters of key strategic significance. It is encouraging to find that there are 20% more stories covering topics related to the Structures of Peace than stories that focused on conflict. The analysis was not concerned with whether the reports were positive or negative; rather the emphasis is on the subject matter as that is what will create awareness.

When analysing the least peaceful countries, a different picture emerges. As would be expected there is a higher percentage of reporting on Violence related topics, at 75%. Defence and Crime had by far the largest levels of coverage. The distribution of stories across the Violence topics was well spread while the distribution of stories across the Peace topics had a wide variance. For the 10 least peaceful countries, reports on topics relating to the Structures of Peace are roughly a third of the reports on conflict. However, there is a relative paucity of reports on 'education', 'equitable distribution of resources', the 'free flow of information' and 'corruption'. Other than Israel, all the countries in the group of the 10 least peaceful countries have high levels of corruption. Without an adequate focus on these topics building a sustainable society will be difficult because the citizens of many of the least peaceful countries do not have the knowledge to know what is needed.

This paper also shows for the first time that measures of social sustainability are linked to indicators of peacefulness as measured by the GPI. The research demonstrates measures of civic activism, inter-group social cohesion and interpersonal safety and trust as measured by ISD are highly correlated with the GPI. The paper also fits these informal institutions into the Structures of Peace and discusses their interaction within such a model.

The approach adopted by the IEP is not to aim at isolating single causal factors that drive peace, but rather, via statistical means, to holistically describe the environments that are associated with peace. Through focusing on all of these factors as being inter-dependent a holistic approach can be used to define the optimum conditions that create peace. Additionally, the environment that is optimal for creating peace is also optimal for many other desirable aspects of human activity to flourish, such as the arts or business.

In summary our knowledge of peace is improving and one of the most important contributions that the IEP has made to it is to statistically determine what structures build a peaceful society. The U.S. Peace Index has confirmed that the same aspects identified globally, also play a key role in the U.S. The Peace and the Media report further builds on this theme by analysing the global coverage of these structures and then compares them to the media coverage of Afghanistan where there is little to no coverage of some of these essential structures. Social sustainability is also analysed to determine how it statistically relates to peace and where it is included within the Structures of Peace.

THE UNITED STATES PEACE INDEX

The U.S. Peace Index is the first in a series of national peace indices that will be produced by the Institute for Economics and Peace (IEP). These studies will analyse the level and composition of peace within selected nations by state, district or region.

The aim of the research will be to further our understanding of what types of environments are associated with peace sub-nationally and to further define the positive economic impact of peace.

Since producing the first Global Peace Index in 2007, the Institute for Economics and Peace has been asked to develop a number of national peace indices. As the empirical basis for the GPI has progressively developed, research by the IEP has found that many large nations have substantial internal variances in their levels of peacefulness. This is especially true for nations with marked social and cultural diversity combined with varable economic conditions. It is predominantly for this reason that the IEP has decided to produce national peace indices, with the U.S. Peace Index being the first in the series.

Through analysing national peace indices a better understanding of the fabric of peace is possible. If trends and statistical relations can be found between the level of internal peacefulness of different nations, then new approaches to creating peace may emerge.

In order to undertake comparable national peace studies, it was decided to adopt a minimal number of indicators and to develop a methodology that could be applied to all future studies. This will provide a comparable framework for cross country analysis. It was also important to adopt a measurement framework underpinned by a proven and familiar philosophical foundation.

Why select the U.S. for the first national peace index?

The United States makes an ideal case study for the first national peace index principally due to the high quality of state-level data dating back to the early 1980s and the existence of a large literature of related studies which estimate the various costs of violence as well as the costs associated with the containment of violence.

Compared to other nations on the Global Peace Index, the U.S. is a middle ranking nation with a peace measure of 2.06 very close to the global average of 2.05.[1] The combination of economic size, the substantial capabilities and resources of government, and the middle level ranking, means trapped economic potential and productivity within the country is greater and has more opportunity of being realised than in any other region or nation in the world.

The U.S. was also attractive because it is commonly characterized as having a higher rate of violence than many other developed economies and also because trends in crime over the past twenty years have been the subject of much debate and curiosity. It is interesting to note that at the beginning of the 1980s the U.S.'s crime rate was comparable to that of other developed nations and violence steadily increased to a peak in the mid-1990s and has since been falling. However, this fall has been accompanied by a steadily increasing incarceration rate which has significant economic consequences associated with it.

The excellent availability of time series data allows these correlation trends to be compared with the U.S. Peace Index so changes in correlations can be seen over time. Additionally, the large pool of available literature on the cost of the items associated with this study meant that reasonably good estimates could be made on the savings or costs from either improvements in peace or losses in peacefulness. Estimated savings have been broken down by state. It is acknowledged that with better data and more time the estimates could be refined even further.

Furthermore, the U.S., being the largest economy in the world and having a relatively lower level of peacefulness than other developed economies means the potential economic gains are of a much higher magnitude than in other nations. In the context of the lingering effects of the Global Financial Crisis this is especially pertinent, because the additional economic activity that would be created through improvements in peace can provide a powerful economic stimulus to aid economic recovery. The opportunity to move expenditure from violence-containment industries to more economically productive industries is significant. This can be exemplified by the opportunity to build a highway instead of a jail, or the expansion of employment in teachers rather than prison guards. While such efforts would not necessarily generate additional economic activity in themselves, they would create the foundation for a more productive economy. The realisation of additional economic activity is defined as the 'dynamic peace dividend' and can result in a substantial lift in GDP and employment. The concept is further explained in the economic analysis section.

Definition of peace

For the purpose of this study, peace has been defined as "the absence of violence". This definition is easily understood while also being relatively open to empirical quantification.

The methodological framework was based on envisaging a society that is perfectly at peace; a society

where there is no violence, no police and no one in jail. Evidently, this does not exist in any modern developed nation. Without police crime would be rampant, while violence can be reduced by increasing the number of police and/or jailing large numbers of individuals.

This study does not seek to make any moral or value judgments about the appropriate levels of policing or incarcerations. It is acknowledged that without police higher levels of crime would exist and that it is necessary to incarcerate individuals who pose a danger to society.

The indicators are interdependent, well-recorded, and measurable across states and provide a solid foundation from which to develop measures of peace.

Identifying the potential determinants of peace

To further the understanding of the economic and social factors associated with peace, the IEP compiled a secondary dataset composed of 37 secondary factors grouped into four categories of education, health, economic conditions, politics and demographics. The composite USPI score was correlated with each factor to determine statistical significance. The correlation coefficients are calculated across the 50 states plus Washington D.C. and values where r > 0.5 and r < -0.5 were considered to be statistically significant. A high positive correlation suggests a factor is associated with violence, while a high negative correlation suggests that the factor is associated with increasing peacefulness.

Economic measurements and benefits of peace

To understand the economic impact of peace the economic costs associated with homicides, violent crime, policing, judicial services and incarceration have been estimated. The figures chosen were based on a review of the existing literature and the sources used are mentioned in the study in the relevant commentary. The estimated costs are considered to be conservative as there are many additional costs associated with violence that have not been included due to the difficulty in finding accurate statistics. These include: higher insurance premiums, lost management time dealing with defensive measures against crime, additional security costs, and the productivity loss from investing in less productive assets.

Two of the main economic losses caused by violence are the value lost of life-time employment of homicide victims and the lost value of employment when an employed person is imprisoned. It is estimated that 70% of people imprisoned had full-time employment for a year prior to their incarceration.[2]

In order to realise the peace dividend investments will need to be made, but some actions can have quick returns. As an illustrative example let's consider incarceration as it has significant economic effects. Lowering the rates of incarceration of low risk non-violent offenders who are employed in full-time work would have an immediate economic benefit to both state government budgets and the economy. For each person imprisoned tax receipts are lost while the state also has to fund their imprisonment. Additionally, the value of their wage is lost to the economy. This also has flow on effects as their spending employs others. Management programs would be self-funding through reductions in state expenditure on incarceration and increased tax receipts. Estimating the costs or recommending the programs is beyond the scope of this study but lessening new incarcerations of non-violent offenders who are currently employed would have immediate benefits to state government budgets as well the economy.

Methodology and Data Sources

Five indicators reflecting the absence of peace have been selected to construct the index because of the ability to scale these indicators in a consistent way across many nations.

In addition, data for these five indicators was readily available in the U.S. without the need to make qualitative assessments. Owing to the purely quantitative nature of these measurements, it has been possible to collect data from 1991 onwards, and construct U.S. peace indices for almost 20 consecutive years. This has allowed for the development of a detailed trend analysis which is included in this report and will hopefully serve as a useful resource for academics interested in further research.

The Indicators

Each of the five indicators is a quantitative measure. The five indicators are:

• **Number of homicides per 100,000 people**

Source: FBI Uniform Crime Reports, 1991-2009

The USPI uses the same definition of homicide as the U.S. Bureau of Justice Statistics, wherein homicide is defined as "murder or non-negligent manslaughter".

• **Number of violent crimes per 100,000 people**

Source: FBI Uniform Crime Reports, 1991-2009

The U.S. Peace Index measure uses the Bureau of Justice Statistics definition of violent crime and the associated quantitative measures. In the U.S., the measure of violent crime includes homicide, forcible rape, robbery, and aggravated assault. The USPI measure of violent crime excludes homicide from this group, as it is already included in the first indicator.

2 Visher, C., S. Debus, et al. (2008) "Employment after Prison: A Longitudinal Study of Releasees in Three States " Urban Institute, Justice Policy Centre October.

• **Number of jailed population per 100,000 people**

Source: U.S. Bureau of Justice Statistics, 1991-2009

In order to allow for meaningful comparisons across states, the USPI only includes prisoners under state jurisdiction who have been sentenced to more than one year in prison. This means that both federal prisoners and prisoners in jail are excluded from this indicator.

• **Number of police officers per 100,000 people**

Source: FBI Uniform Crime Reports, 1991-2009

This number includes both sworn officers and civilian employees. The USPI uses the census population estimates for all states and indicators for the sake of consistency.

• **Availability of small arms**

Source: Centre for Disease Control and Prevention, National Centre for Injury Prevention and Control, Fatal Injury Reports, 1991-2007

Although the U.S. has excellent data for many statistics, there is no reliable data on small arms availability, small arms ownership, or small arms sales within the U.S. or within the states of the U.S.. An accurate measure of gun prevalence cannot be calculated from administrative records alone. For this reason many studies on gun prevalence use a quantitative proxy. The proxy used in the USPI is: firearm suicides as a percentage of total suicides (FS/S). As this indicator varied significantly from year to year for some states, a five year moving average was used in order to smooth out the variance. For example, the figure used for Alabama for 2008 was an average of FS/S for 2003-2007.

All indicators are scored between 1 and 5, with 1 being the most peaceful possible score, and 5 being the least peaceful. Scores are calculated to two decimal places.

Weighting the Index

In order to maintain consistency, the weights assigned to each indicator mirror those used in the GPI for the equivalent measures[3]. GPI indicators weights were agreed upon by an international panel of experts based on a consensus view of their relative importance. The weights assigned to the 5 indicators are presented in table 1.

Table 1. The indicators and their scores

Indicator	Weight
Number of homicides per 100,000 people	4
Number of violent crimes per 100,000 people	4
Number of jailed population per 100,000 people	3
Number of police officers per 100,000 people	3
Availability of small arms	1

The Results

Table 2 provides the scores and rankings for the fifty U.S. states in 2011. States most at peace are ranked first.

Table 2. U.S. Peace Index Results

Rank	State	Score	Rank	State	Score
1	Maine	1.34	26	New Jersey	2.61
2	New Hampshire	1.50	27	Kansas	2.63
3	Vermont	1.54	28	Colorado	2.66
4	Minnesota	1.62	29	New York	2.69
5	North Dakota	1.71	30	Alaska	2.70
6	Utah	1.75	31	Michigan	2.79
7	Massachusetts	1.80	32	North Carolina	2.79
8	Rhode Island	1.83	33	California	2.89
9	Iowa	1.85	34	Mississippi	2.97
10	Washington	1.87	35	Illinois	2.98
11	Nebraska	1.88	36	Delaware	3.14
12	Hawaii	1.91	37	Arizona	3.14
13	Oregon	2.08	38	New Mexico	3.16
14	South Dakota	2.17	39	Georgia	3.18
15	Connecticut	2.21	40	Missouri	3.21
16	Idaho	2.24	41	Maryland	3.24
17	Montana	2.28	42	South Carolina	3.26
18	West Virginia	2.28	43	Oklahoma	3.27
19	Wisconsin	2.30	44	Arkansas	3.30
20	Kentucky	2.39	45	Texas	3.30
21	Pennsylvania	2.42	46	Alabama	3.42
22	Ohio	2.43	47	Florida	3.50
23	Wyoming	2.49	48	Nevada	3.50
24	Indiana	2.50	49	Tennessee	3.61
25	Virginia	2.52	50	Louisiana	3.97

Note: As incarceration data is not available post 2002 for Washington D.C., it has been excluded from the USPI.

3 With the exception of the indicator for availability of small arms, due to data availability limitations.

Key Findings

1. From 1995 to 2009, the United States has become more peaceful

Peace improved by 8% from 1995 to 2009, driven by a substantial decrease in the rates of homicide and violent crime. However, these improvements have been largely offset by large and progressive increases in the incarceration rate, which has seen a slight decline only in the last two years.

There have been three trends; the first was from 1997 to 2000 when there was dramatic decrease in homicides and violent crime. This was followed by a plateau effect with no change in homicides and violent crime from 2000 to 2007, and finally the improving trend resumed from 2008 onwards.

From 1991 to 2009, 28 states improved their peacefulness while 10 of these states experienced an increase in peacefulness beyond 15%. Overall, the average USPI score moved from an average of 2.74 in 1991, to 2.62 in 2009, with most of the improvement coming from the bottom 30 ranked states.

2. The five most peaceful states are Maine, New Hampshire, Vermont, Minnesota and North Dakota

The Northeast is the most peaceful region in the U.S., with all of its states ranking in the top half of the U.S. Peace Index, including the heavily populated states of New York, Pennsylvania, and New Jersey. The least peaceful states are Louisiana, Tennessee, Nevada, Florida and Alabama.

3. Peace is linked to opportunity, health, education and the economy

Statistically significant correlations were found with fifteen different social and economic factors. These related to health, education, demographics and economic opportunity, but not to political affiliation. The key correlants were:

- % With at least high school diploma (2009)
- High school graduation rate (2007)
- PEW State of the States – Educational Opportunities
- % Without health insurance (2008-2009)
- % With diabetes (2008)
- Life expectancy at birth (2007)
- Teenage pregnancy rate (2008)
- Infant mortality rate (2007)
- Teenage death rate (2007)
- Household income Gini coefficient (2009)
- % Households in poverty (2009)
- Gallup State of the States (2009) Basic Access
- Labor force participation rate (2009)
- % Children in single parent families (2009)
- % Females in Labor force (2009)

Many of these factors can be seen as measures of opportunity. States that ranked higher on these social and economic factors tended to have higher scores in peace – indicating access to basic services, having an education, good health, and ultimately the opportunity to succeed, are key pre-requisites to a more peaceful society.

4. Peace is not linked to political affiliation

Neither the groupings of Republican nor Democratic states had a discernible advantage in peace. Although the top five states are predominantly Democratic and the bottom five states are predominantly Republican, once the other states were included in the analysis they neutralised out any effect.

5. The potential economic gains from improvements in peace are significant

Improvements in peace would result in the realisation of substantial savings for both governments and society. If the U.S. reduced its violence to the same levels as Canada then the general community and state governments would collectively save in the region of $89 billion while the same reductions in the level of violence would provide an economic stimulus of approximately $272 billion. The release of trapped productivity through the abatement of violence would create a stimulus that could generate an additional 2.7 million new jobs, effectively lowering the U.S. unemployment rate by 20% from 8.9% to 7.1%.

6. On a per capita basis, the top five states with the most to gain from reductions in violence are Louisiana, Florida, Nevada, Alaska and New Mexico

The total economic effect of violence tends to be greatest in the most violent states; however several states have a structurally higher cost of violence because of the composition of their violence. For instance, lost productivity from assault and lost productivity from incarceration are the largest shares of the total cost of violence, so states with high levels of incarceration and assault tend to have a higher per capita cost. In outright dollar terms, the large populous states with high levels of incarceration have the most to gain, such as California, Florida and Texas.

7. Growing incarceration is a drag on the economy and in recent years has not had a significant effect on violent crime

While homicide and violent crime rates have fallen, the economic benefits to flow from these decreases have been largely offset by the costs associated with the increase in the incarceration rate. In recent years there has been no statistically meaningful relationship between increases in incarceration rates and decreases in violent crime. While from 1991 to 1999 increases in incarceration were met with falls in violent crime, from 2000 to 2007 increases

in the incarceration rate had no impact on the level of violent crime. Furthermore for 2008 and 2009 both the violent crime and incarceration rates dropped.

8. **The Gallup Basic Access sub-index is the strongest correlating qualitative measure, linking the perception of how satisfied people are with their access to basic services to peace**

The Gallup Basic Access sub-index has a correlation of r=-.75. This sub-index is based on 13 questions gauging access to basic needs for a healthy life – specifically, access to clean water, medicine, a safe place to exercise, and affordable fruits and vegetables; enough money for food, shelter, and healthcare; having health insurance, having a doctor, having visited a dentist recently, satisfaction with the community, the community getting better as a place to live, and feeling safe walking alone at night. This strong correlation shows further research into qualitative attitudinal factors such as feeling comfortable in a community and feeling optimistic about the community one lives in are also important factors not necessarily captured in quantitative studies.

9. **Six of the top ten most populous states were also in the top ten percentage improvers of peace**

These states included New York, California, Texas, Georgia, Illinois and Michigan. This is an interesting finding which requires further qualitative research and potentially provides a novel insight into why Pennsylvania as the sixth most populous state, also ranked in the bottom ten for declines in peace. Further research could perhaps better reveal common demographic, economic and governance related trends in these populous states.

10. **The three Midwestern states, North Dakota, South Dakota and Montana, all experienced the three most significant declines in peacefulness**

This result stands out as the three Midwestern states all declined in peacefulness by over 40%. However, these states are still relatively peaceful states and in the top half of the USPI. Understanding commonalities between them may improve understanding as to why these states have declined in peacefulness and what they can do to improve.

The U.S. and the global average

The peacefulness of the U.S. can be further analysed by comparing the internal U.S. 'peace score' from the Global Peace Index with the average GPI score for each of the categories measured. Indicators that are not shaded are those where the U.S. performed better than the global average while indicators shaded red are those where the U.S. scored below the global average.

Table 3 - U.S. vs. global average, internal indicators, 2011 Global Peace Index[4]

Internal Indicators	Average	USA	Difference
OVERALL SCORE	**2.05**	**2.06**	**-0.01**
Perceptions of criminality in society	3.1	2	1.1
Number of internal security officers and police per 100,000 people	2.3	2	0.3
Number of homicides per 100,000 people	2.6	2	0.6
Number of jailed population per 100,000 people	1.5	5	-3.5
Ease of access to small arms and light weapons	3.1	3	0.1
Level of organised conflict (internal)	2.4	1	1.4
Likelihood of violent demonstrations	2.9	2	0.9
Level of violent crime	2.7	1	1.7
Political instability	2.5	1	1.5
Respect for human rights	2.7	3	-0.3
Potential for terrorist acts	2.3	3	-0.7
Number of deaths from organised conflict (internal)	1.4	1	0.4

It is interesting to note how relatively well the U.S. performs on the majority of the internal indicators when compared to the rest of the world. The U.S. performs particularly well on measures of internal cohesion with low levels of organised internal conflict and a high level of political stability. The country also performs well on the perception of crime within the country and the likelihood of violent demonstrations.

Regional Overview of the United States

The results of the U.S. Peace Index show there are wide variances in peace between the main geographic divides in the United States. While all of the major regions have a mixture of relatively peaceful and less peaceful states, some clear trends are evident when the regions are compared as a whole. There are four major regions, West, Midwest, Northeast and South which are then further divided into nine divisions.

The Northeast was found to be the most peaceful region in the U.S., followed by the Midwest and then the West region which is a very close third. There is a substantial drop in score to the South region which is the least peaceful region in the U.S.

There are nine divisions within the four regions of the U.S. with the most peaceful division being New England, which has a significantly higher score than the second placed West North Central division. There is a 21% difference in their scores which demonstrates, in clear quantitative terms, the high level of peacefulness of New England. Contrasted to this is the West South Central division which is the least peaceful division in the U.S. This score is double that of New England and highlights the wide variance in peace between regions.

Regional Overview

Average Score		
NORTHEAST	1.99	
Mid-Atlantic	2.57	
New England	1.70	
MIDWEST	2.34	
East North Central	2.60	
West North Central	2.15	
WEST	2.51	
Mountain	2.65	
Pacific	2.29	
SOUTH	3.13	
East South Central	3.10	
South Atlantic	2.99	
West South Central	3.46	

The lower the score, the more peaceful the region

Investigating the Potential Determinants of Peace in the United States

To further understand what types of environments are associated with peace, the IEP has compiled a dataset of over 30 secondary factors grouped by category which gauge education, health, economic conditions, political attitudes and demographics and are correlated against the USPI to determine which factors are statistically significant. Each of the five USPI indicators was also correlated against one another to determine their significance as can be seen in table 4.

Table 4. Correlation Coefficients run with the USPI

CORRELATION COEFFICIENTS		Overall Score
	Overall Score	1.00
	Overall Rank	0.97
USPI Indicators	Number of homicides per 100,000 people	0.91
	Number of violent crimes per 100,000 people	0.86
	Number of jailed population per 100,000 people	0.80
	Number of police employees per 100,000 people	0.72
	Availability of small arms	0.21
Education	% with at least high school diploma (2009)	-0.63
	High school graduation rate (2007)	-0.72
	% bachelor's degree or higher (2009)	-0.07
	Average teacher salary (2006)	0.10
	PEW State of the States – Educational opportunities	0.57
	Educational funding (per student average) (2005-06)	-0.11
Health	% without health insurance (2008-2009)	0.61
	% with diabetes (2008)	0.55
	Life expectancy at birth (2007)	-0.62
	% adult obesity (2008)	0.32
	Teenage pregnancy rate (2008)	0.68
	Infant mortality rate (2007)	0.68
	Gallup State of the States (2009) Wellbeing	-0.30
	Teenage death rate (2007)	0.59
Economic Conditions	Household income Gini coefficient (2009)	0.57
	% households in poverty(2009)	0.56
	Gallup State of the States (2009) Basic access	-0.75
	Unemployment rate (2009)	0.37
	Labor force participation rate (2009)	-0.55
	GSP per capita (2009)	0.32
	Median income (2008-2009)	-0.34
	U.S. Human Development Index (2008)	-0.26
Politics & Demographics	% Children in single parent families (2009)	0.76
	2008 election (% voted republican)	0.02
	2008 election (% voted democrat)	0.01
	2008 election (voter turnout)	-0.43
	Reported political affiliation (% conservative)	-0.02
	Reported political affiliation (% moderate)	-0.04
	Reported political affiliation (% liberal)	0.00
	PEW State of the States – Campaign finance	-0.09
	PEW State of the States – Government management	-0.15
	% individuals with home internet access (2009)	-0.49
	Armed forces participation rate (2009)	0.00
	Population (2009)	0.23
	% population aged 16-24 (2009)	-0.14
	% male population aged 16-24 (2009)	-0.25
	% females in labor force (2009)	-0.53

The correlation coefficients are calculated across the full 50 states plus Washington D.C. Values where r > 0.5 and r < -0.5 were considered to be significant and have been highlighted in red. A high positive correlation suggests that the factor is associated with violence, while a high negative correlation suggests that the factor is associated with increasing peacefulness.

Out of the 37 secondary factors correlated against the USPI, fifteen emerged as statistically significant. The selection of these secondary factors was based purely on the availability of data at the state level for the shown categories and not related to normative preferences. Future iterations of the USPI could have more secondary factors or even new categories added.

The health category registered the highest number of correlations where six of the eight factors were found to be significant. Four of the economic and three of the education factors also correlated significantly, while only two of the demographic indicators showed a significant correlation and none of the factors associated with political attitudes correlated.

Health and education are also factors that correlate strongly with the Global Peace Index, which would indicate that these factors are not only important within the U.S. but also in many other nations.

The three strongest correlating factors were the Gallup State of the States Basic Access, the percentage of children in single parent families and the high school graduation rate, all of which recorded correlations above either 0.7 or -0.7.

Notably, the factors that conclusively did not correlate were those relating to political affiliation, whether liberal, conservative, or moderate. This showed that political affiliation has no immediate connection to violence at the state

level. While more democratic states are represented in the top five states and more republican states in the bottom five, these rankings were neutralised by the mix in the middle ranking states. Voter turnout correlated significantly prior to the 2008 presidential election, but fell to 0.43 in 2008 suggesting engagement in the political process is potentially important in reducing violence.

Education

Three of the six factors related to education correlate strongly with the USPI. The strongest correlation is with high school completion through two measures: the percentage of students who graduate from a certain year and the percentage of the state population as a whole that has a high school qualification. The third measure that correlated significantly was educational opportunity. Other measures, such as funding per student, average teacher salary or percentage of the state with an undergraduate degree, did not significantly correlate with the U.S. Peace Index.

This suggests that the key driver of peace in relation to education is the high school graduation rate. This finding aligns with research from the Global Peace Index which has reviewed similar educational indicators internationally. These show that mean years of schooling

is the leading education indicator while percentage of GDP spent on education and tertiary graduation rates are not as significant.

Chart 1. The high school graduation rate is correlated to peace (2008)

The 2008 high school graduation rate correlates strongly with the USPI (r= -.63). The one outlier is Nevada, which ranked 47th on the U.S. Peace Index with a high school completion rate of just 51%, making it not only the lowest rate in the country, but over 35% behind the next lowest completion rate, Wisconsin.

Health

The health category had more factors correlating to peace than any of the other categories measured, with six of the eight factors being statistically significant. Three of the significant factors are the infant mortality rate, teenage pregnancy rate, teenage death rate and life expectancy at birth.

The two health factors that didn't correlate significantly are Gallup Wellbeing and adult obesity, however both still had scores which would indicate that there may be a relation. These scores were -.3 and .32 respectively.
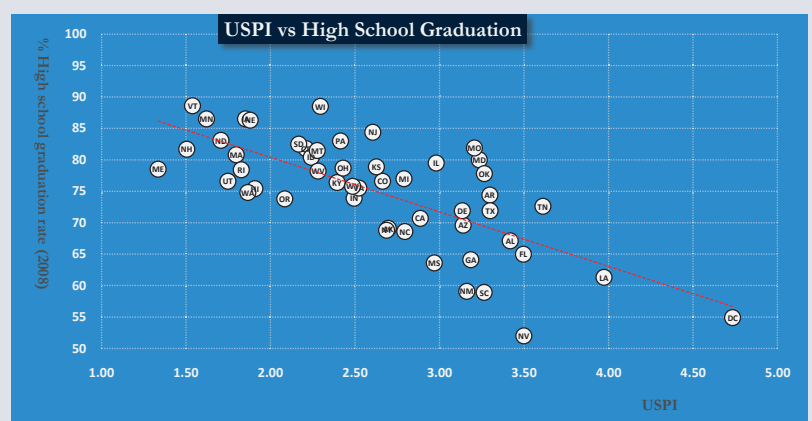

Chart 1

Chart 2. States with lower infant mortality tend to be more peaceful

Infant mortality has one of the strongest correlation coefficients of all the factors looked at in the USPI (r=.68). Although data is not available for every year, the correlation between the USPI and infant mortality has been similarly strong for every year that data is available.
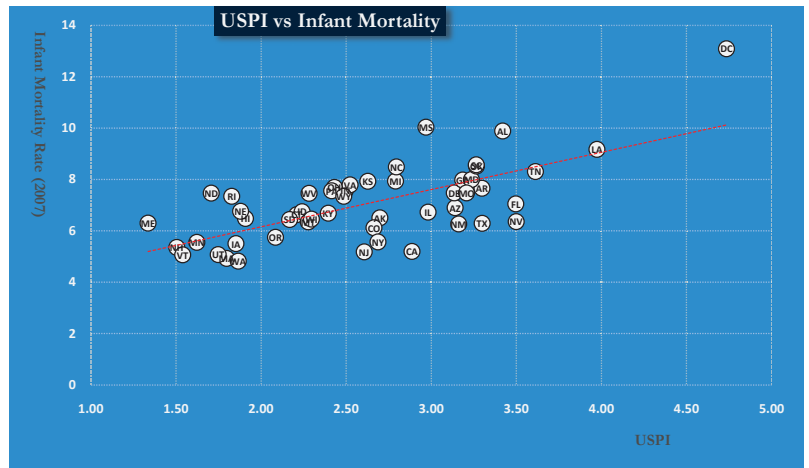
Chart 3. States with lower rates of teenage pregnancy tend to be more peaceful [5]

The relationship between the USPI and teenage pregnancy (r=.68) is one of the stronger overall correlations. The teenage pregnancy rate measures the number of pregnancies per 1,000 that occur to women between the ages of 15 and 19. Mississippi, New Mexico, Oklahoma, Texas and Arkansas have the highest teenage pregnancy rates in the U.S., and are also all ranked in the bottom half of the USPI.
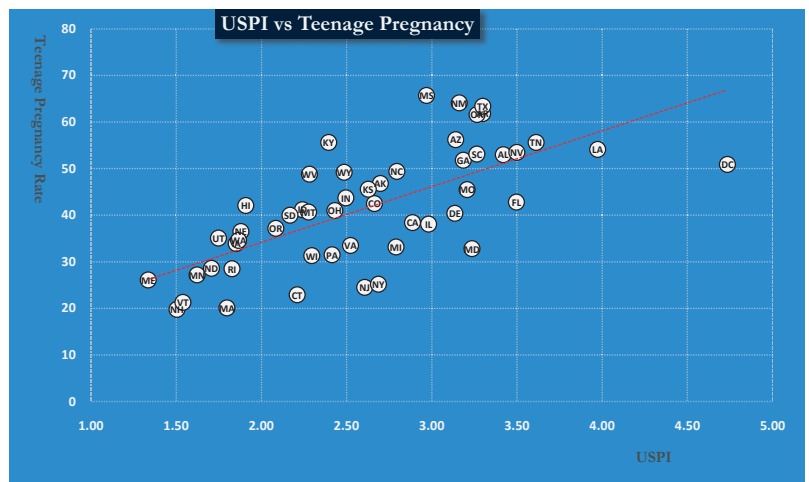
Economic Conditions

A statistically significant relationship was found between the USPI and several economic factors. Perhaps somewhat surprisingly, no relationship was found between median income and the USPI. This may be related to the relatively small range between the U.S. states as compared to differences between nations. The overall strongest economic conditions correlation was between the USPI and Gallup's 'Basic Access' measure.
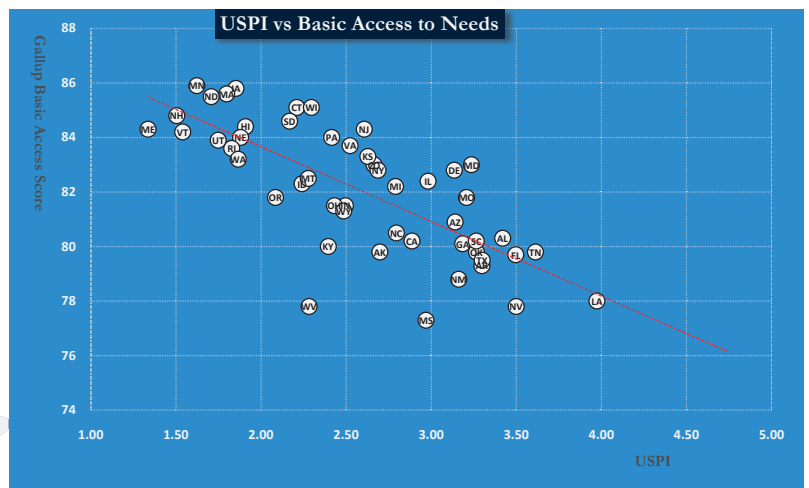
Chart 4. Access to basic needs is closely correlated to the level of peace

The Gallup basic access measure[6] is a sub-index of Gallup's "State of the States" wellbeing index, and is based on qualitative polling. The 13 questions which compose the basic access measure relate to perceptions

of access to and affordability of basic services such as water, medicine etc. The relationship between this measure and the USPI is the strongest correlation of any of the examined economic factors

(r=-.75). Only West Virginia stands out, with a relatively peaceful USPI score in spite of a relatively poor basic access score (77.8). Minnesota has the highest Gallup Basic Access score at 85.9 while also being the fourth most peaceful state.

Chart 2

Chart 3

Chart 4

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5 Number of births per 1000 to mothers aged 15-19.

6 The Basic Access Sub-Index includes 13 questions gauging access to basic needs optimal for a healthy life: clean water, medicine, a safe place to exercise, and affordable fruits and vegetables; enough money for food, shelter, and healthcare; having health insurance, having a doctor, and having visited a dentist recently; and satisfaction with the community, the community getting better as a place to live, and feeling safe walking alone at night.

Chart 5. States with a higher poverty rate tend to have more violence

The poverty rate is the percentage of people living on incomes below a particular dollar threshold set by the U.S. census for any given year.[7] An individual living on their own under the age of 65 would need to live on below $11,161 a year to be considered in the poverty rate count. The correlation suggests a solid relationship exists between poverty and the USPI (r=.56). This relationship has been consistent since 1995 and is explained further in the trends section of the report. Both Alaska and Mississippi are slight outliers, with similar GPI scores, but Alaska has a low rate of poverty at 9.1% while Mississippi has a high poverty rate of 21.8%.

Chart 6. States with more children living in single parent families tend to be less peaceful

The U.S. Census Bureau provides data on the percentage of children living in single parent families. The relationship between the USPI and this measure is very strong (r=.76) and is tightly clustered. Only Mississippi and Washington D.C. have higher levels of children living in single parent families than would be expected by their respective USPI scores.

Chart 7. Prior to 2008 voter turnout was correlated to peace

Voter turnout looks at the percentage of eligible voters who cast a ballot in the 2008 U.S. presidential election. Although the relationship is not above the statistically significant threshold at (r= -.43), this is the first election in the 19 year time series where it did not significantly correlate. This could be explained by a 10% or greater increase in voter turnout from over half of the bottom 20 states when compared to the 2004 election. It will be interesting to see

whether this is a fundamental change or peculiar to the 2008 election.

This is the strongest of all the political factors, much stronger than political affiliation or party voting patterns. This suggests that the key political relationship between peace and politics is the level of voter engagement. Over time, the correlation between voter turnout and the USPI has tended

to be stronger in years that have mid-term rather than presidential elections, refer to chart 7 graphically illustrating the changes over time. This also shows the large differences between states on voter engagement, with close to a 30% difference between the highest voter engagement in Minnesota and the lowest in Hawaii.
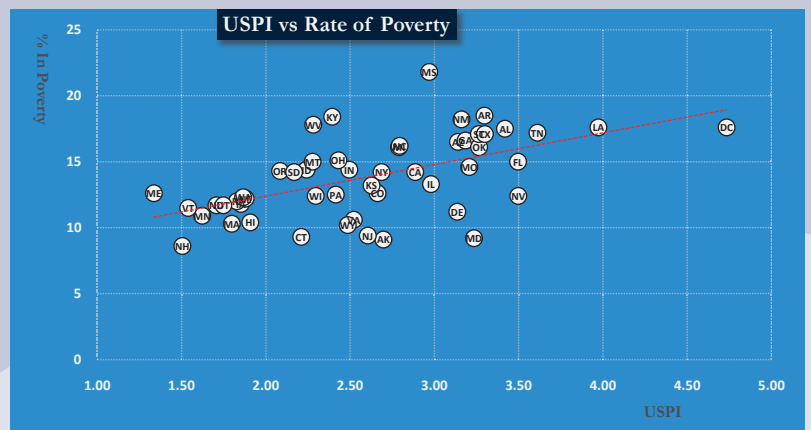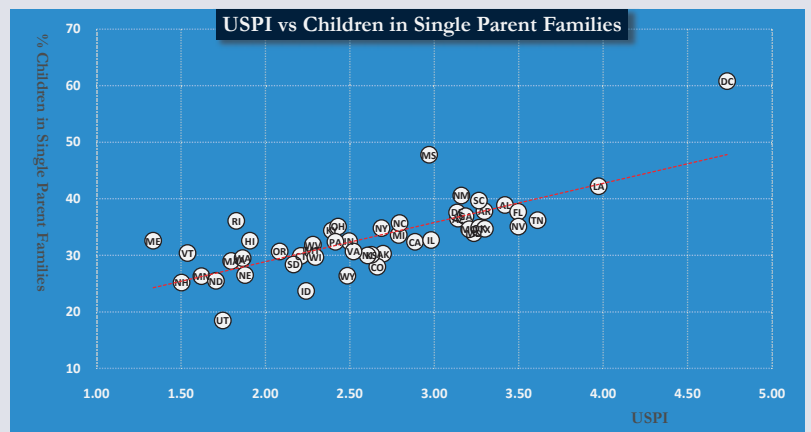

Chart 5

Chart 6
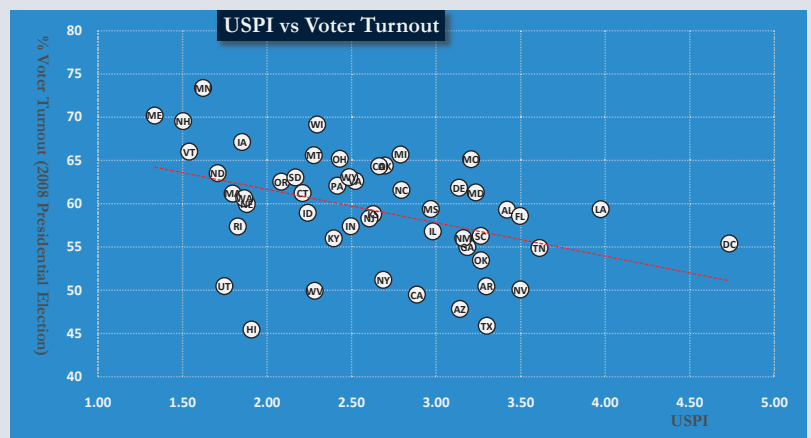
Chart 7

7 From the U.S. Census Bureau: "The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps). More detail available here: http://www.census.gov/hhes/www/poverty/about/overview/measure.html

Trends in Peace in the United States – 1991 to 2009

Chart 8 illustrates the changes in the peace score within the United States from 1991 to 2009. A decreasing score is positive and denotes improvements in peace.

The U.S. is a relatively more peaceful place today than it was in 1991.

Through analyzing the scores at different periods of the time series, three distinct trends emerge which show the relative changes in peacefulness over the last nineteen years. The percentage change in indicators reveals peace is not static, but rather constantly in flux.

From 1991 to 1995, there was a decrease in peacefulness where the USPI score increased from 2.70 to 2.78. The largest declines in this four year period were seen in the states of Oklahoma, Louisiana, and Nevada where the decline in peacefulness was greater than 10%. Increases in both the homicide rate and violent crime rate accounted for the steep declines.[8] Nevada for instance had the highest rate of growth in violent crime out of any state and the fourth largest growth in homicide over the four years.

The decrease in peace ended in 1995 when the score trended progressively downwards until 2000. This five year period in declining violence is one of the more striking aspects of the USPI's trend analysis as reductions in homicide and violent crime rates were experienced across the nation accompanied by large increases in the incarceration rate. In the five years from 1995 to 2000, 45 states had falling homicide rates, and 43 states had falling violent crime rates, reflecting the general decline in both of these indicators. This is seen in the national homicide rate
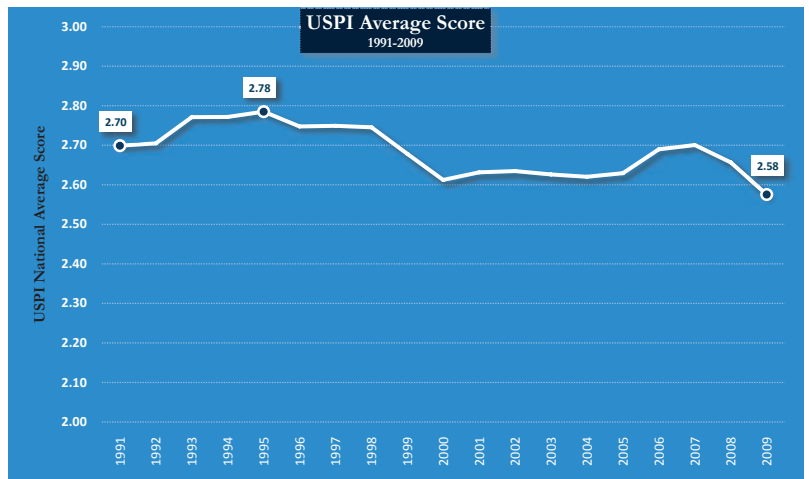
which fell from 8.22 per 100,000 in 1995 to 5.52 per 100,000 in 2000 and the violent crime average which fell from 676 per 100,000 to 499 per 100,000. While both of these falls were offset by increases in both the incarceration rates and in the number police employed, the greater weighting given to homicide and violent crime meant USPI scores generally fell. The average level of small arms availability also fell moderately during the period.

From 2000 to 2005, there was a 'peace plateau', with a brief period of increasing violence in 2005 and 2006 followed by increasing peace from 2007 to 2009. The increase in peace in recent years has been driven by sustained falls in violent crime and homicide, with the latter falling 13% to 4.96 homicides per 100,000. This is the lowest level recorded over the period of analysis. This has been accompanied by no increases in police numbers, a slight decrease in incarceration rates and the same levels of availability of small arms. Although it is hard to extrapolate on two years of data it would appear that a new positive trend towards peacefulness may be emerging.

In total, 28 states had increases in their peacefulness between 1991 and 2009, while the other

22 states experienced decreases in peacefulness during this period. Ten states experienced significant increases in peacefulness of more than 15%. While scores in the 20 most peaceful states were on average more peaceful in 1991 than 2009, the 30 least peaceful states experienced relatively large gains in peacefulness, at an average of 8% for the period. In contrast, the top 20 actually fell in peacefulness by 10%.

The states that made the largest percentage improvement on their USPI score from 1991 to 2009 are shown in Table 5 opposite. Interestingly, these show two of the most populous state in the U.S., California with the highest population and New York which is the third most populous state, have made the largest gains. New York was the most dramatic improver with a 32% improvement in peace.

Chart 8. The overall national trend in peace

8 It should be noted Oklahoma's spike in homicide coincided with the 1995 Oklahoma City Bombing which killed 168 people. This one-off event had the effect of throwing the State's score out for that year. Deaths caused by the September 11 terrorist attacks are not included in the 2000 figures as they were not included by the Bureau of Justice statistics.

Table 5. Percentage change in peace score from 1991 to 2009 – highest to lowest (negative percentage is an improvement in peace)

State	1991	2009	% Change	Rank Change
New York	3.97	2.69	-32.3%	20
California	3.78	2.89	-23.6%	9
Massachusetts	2.30	1.80	-22.0%	12
Michigan	3.48	2.79	-19.8%	8
Illinois	3.65	2.98	-18.4%	5
Maryland	3.95	3.24	-18.2%	7
Georgia	3.85	3.18	-17.2%	5
South Carolina	3.92	3.26	-16.7%	3
New Jersey	3.12	2.61	-16.4%	5
Texas	3.95	3.30	-16.4%	2
North Carolina	3.27	2.79	-14.5%	2
Washington	2.09	1.87	-10.9%	6
Florida	3.92	3.50	-10.8%	-1
Rhode Island	2.04	1.83	-10.5%	7
Alaska	3.01	2.70	-10.3%	0
Ohio	2.70	2.43	-9.9%	3
Alabama	3.79	3.42	-9.9%	-3
Connecticut	2.45	2.21	-9.8%	6
Virginia	2.75	2.52	-8.4%	2
Louisiana	4.28	3.97	-7.1%	0
Arizona	3.38	3.14	-7.1%	0
New Mexico	3.38	3.16	-6.5%	0
Nevada	3.70	3.50	-5.5%	-7
Oregon	2.19	2.08	-4.8%	4
Wyoming	2.59	2.49	-3.9%	0
Missouri	3.29	3.21	-2.4%	-5
Colorado	2.71	2.66	-1.8%	-2
Kentucky	2.41	2.39	-0.8%	0
Mississippi	2.96	2.97	0.2%	-5
Indiana	2.48	2.50	0.7%	-2
Kansas	2.59	2.63	1.3%	-3
Oklahoma	3.19	3.27	2.3%	-10
New Hampshire	1.46	1.50	3.0%	2
Nebraska	1.81	1.88	3.8%	1
Utah	1.67	1.75	4.9%	3
Minnesota	1.54	1.62	5.1%	3
Arkansas	3.14	3.30	5.1%	-12
Maine	1.27	1.34	5.5%	1
Hawaii	1.78	1.91	7.2%	-2
Delaware	2.91	3.14	7.8%	-8
Tennessee	3.30	3.61	9.3%	-13
Pennsylvania	2.19	2.42	10.1%	-3
Vermont	1.34	1.54	14.7%	0
Wisconsin	1.98	2.30	16.2%	-5
Iowa	1.54	1.85	20.1%	-3
Idaho	1.84	2.24	21.9%	-3
West Virginia	1.79	2.28	27.5%	-7
Montana	1.62	2.28	40.3%	-9
South Dakota	1.47	2.17	47.2%	-9
North Dakota	1.16	1.71	47.7%	-4

Largest improvers

The ten states with the biggest improvements include six of the top ten most populous states in the United States indicating that the country's major populated centers have become relatively more peaceful.

The states with large populations that recorded the highest increases in peace in population order are California, Texas, New York, Illinois, Michigan and Georgia. New York tops the list improving its peacefulness by 32% over the 19 year period.

California's large increase in peace has been due to the significant fall in the homicide and violent crime rate from 1991 to 2000. The homicide rate halved from over 12 per 100,000 people to just over 6 per 100,000 in 1999 while violent crime fell from over 1100 incidents per 100,000 people to just over 600 per 100,000 people. These gains in peace were achieved by only very moderate increases in the number of police officers while this was offset by a 48% increase in the incarceration rate from 1991 to 2000, after which the incarceration rate has remained the same. Meanwhile, gun availability declined from 54% in 1991 to 40% in 2009, a rate of decline of 14% and ahead of the national average which experienced an 8% decline.

Largest fallers

North Dakota and South Dakota experienced statistically the largest falls in peace whereby both states fell approximately 47%, from 1991 to 2009. These changes were driven by large increases in the incarceration, homicide and police employee rate. For South Dakota, most significant was a doubling of the jailed population over the period, from under 200 to over 400 per 100,000 people, to a large extent reflecting South Dakota's precipitous fall from quite high in the index to just below the national average.

Similarly, while North Dakota had one of the lowest violent crime rates in the country in 1991, it progressively increased to be more than three times greater in 2009 than in 1991. However at a rate of 199 per 100,000 people, it is still one of the lowest in the country. North Dakota was the most peaceful state in the country and is now ranked fifth and as mentioned the decline can be traced to the large relative increase in violent crime.

Changes in USPI Indicators, 1991-2009

Chart 9 illustrates the changes in each of the five indicators used to construct the USPI from 1991 to 2009. The improvement in peacefulness can be attributed to substantial falls in the average homicide and violent crime scores, the two indicators with the heaviest weighting in the index. There was also a fall in the national average level of firearm suicides

as a percentage of total suicides, indicating a fall in small arms availability over this period. There was a small increase in the average number of police employees, while the only large increase was in the incarceration score, which rose sharply until the year 2000, before continuing to increase at a slower rate till 2007. Since then it has experienced a slight decrease. The increase in incarceration rates has had a significant impact on the overall peace scores nearly offsetting the falls in homicides and violent crimes during this period.

The Economic Impact of Peace in the United States

Violence is costly and the cost can be measured in many ways, either physically, emotionally or financially. This analysis has limited itself to only estimating the economic impact of violence so that a better understanding of the financial benefits of peace can be reached.

The economic impact of peace is substantial but is seldom addressed with a holistic approach. The aim of this section is to estimate the costs associated with four of the five indicators used in constructing the U.S. Peace Index and to also estimate the additional productivity that would flow from reductions in violence.

To aid in the analysis of the economic benefits the economic impact has been broken down in two ways. Firstly, savings that are directly associated with reductions in violence, and secondly the additional economic activity that would be generated from these reductions in violence. Cost estimates are mainly based on data from the Centers for Disease Control and Prevention (CDC) and the U.S. Bureau of Justice Statistics (BJS) and were used to calculate the cost of homicide, violent crime, incarceration, the judiciary and policing. These costs are not exhaustive and there are additional
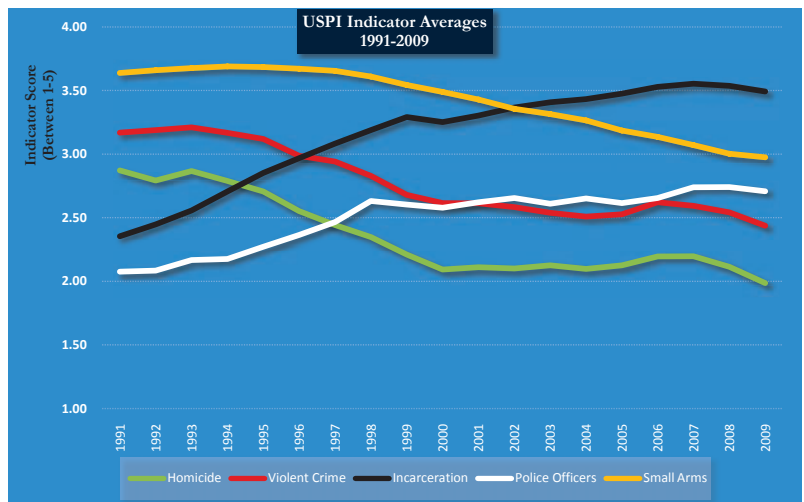

Chart 9. Changes in indicator levels over time

costs that have not been accounted for in this study due to empirical limitations.

The economic benefits that would flow from greater peace can also be divided into two categories titled the *static peace dividend* and the *dynamic peace dividend*.

The static peace dividend is defined as the transfer of economic activity from violence-containment industries to other forms of economic activity. These are savings that accrue from reductions in violent crime, incarceration, homicide and policing and represent expenditure which could be transferred into more productive investments. Examples of possible changes in spending that could be initiated by state governments are: redirecting expenditure from prison guards to teachers and reducing taxes which would then flow through to individuals. Static savings mean that there are shifts in expenditure but the overall economic pie remains constant.

The dynamic peace dividend is defined as the additional economic output that would be created from the liberation of human capital from reductions in violence as well as the additional productive capacity generated by the transfer of resources associated with the static dividend. Simply put, the dynamic peace

dividend is the additional economic value generated by releasing the productivity trapped by violent activities.

Some illustrations of activities that generate a dynamic peace dividend are listed below:

• If there were fewer homicides then there would be additional economic activity generated from the lifetime earning capacity of the victims.

• State governments could redirect funds from violence containment to education and business stimulation in areas of national competitive advantage, such as computer software, solar energy, or bio-technology.

• State government could invest in transport infrastructure to reduce the costs and time involved in transporting goods and people. This would then result in additional economic activity.

• Governments could reduce taxes to drive economic stimulus from the private sector.

• Investment could be made in basic healthcare which reduces child mortality rates and improves chronic health issues, thereby improving the productive capacity of individuals.

• When a skilled person is placed in prison, there is decay in their skills during the term of their incarceration, affecting their productivity. Similarly, if an employed person is placed in prison then their earning capacity is lost to society.

Additional economic activity also has a flow on effect through the economy and has been calculated using a one-for-one multiplier. This would mean that for every additional dollar added to the economy, another dollar would be counted. To illustrate the point, if a person is not placed in prison then the model would count that person's salary as additional economic activity; however when they spend that salary, there is a flow on effect through the economy where this also gets counted in other economic activity. The one-for-one multiplier can be considered to be conservative.

There are also other factors that make the model reasonably conservative as there are many costs that have not been included, such as: higher insurance premiums, surveillance cameras, security doors and grills, lost management time, the private legal costs associated with police and judicial proceedings for violent crime and homicides and the costs of emotional trauma.

All dollar values used from previous research have been adjusted to 2010 dollars.

The Static and Dynamic Peace Dividends

Table 6 shows the costs that have been measured in the USPI. Costs for each category are based on existing literature. The data sources for each of these items are detailed in the corresponding section.

The static peace dividend consists of costs that mainly accrue to state and federal government budgets and

Static Peace Dividend – Costs to society and government	Dynamic Peace Dividend – Costs that affect economic activity
Medical cost of homicide to society	Productivity loss from assault
Medical costs of violent crime to society	Productivity loss from rape[9]
Incarceration cost per prisoner[10]	Productivity loss of lost work days from homicide
Policing services including judiciary costs[11]	Individuals in the workforce rather than jail[12]

Table 6. The Static and Dynamic peace dividends calculated in the U.S. Peace Index

represent a subset of the actual costs. This can be seen as the taxpayers' burden of violence. Alleviation of these costs will theoretically lower the taxation burden and allow state governments to either issue tax cuts, increase spending on necessary public goods, or simply pay down state government debt.

To help illustrate the savings that can be generated through reductions in violence Canada has been used as a benchmark to compare to the U.S. The aim is to demonstrate the savings and additional economic activity that would ensue if the U.S. had the same level of peacefulness as its neighbor Canada. Canada was chosen simply because of its close geographic proximity as well as its similar level of economic development. Comparisons have been made to the indicators used in the U.S. Peace Index.

To realise the peace dividend there will be a need for governments to invest in policies that actively reduce or minimize violence. Estimating the costs of these programs is beyond the scope of this study, but lessening the rate of incarceration of low risk non-violent offenders who are employed, would have immediate benefits to state government budgets as well the economy. For each person imprisoned the value of their wage is lost to the economy, additionally tax receipts are lost to the government while the state also has to fund their imprisonment.

It is important to note that while many states lag behind the international comparators, the best performing states in the U.S. actually fare much better than Canada and many European countries. This demonstrates that these improvements are realistic and achievable.

Homicide

There are wide variances in the homicide rate across the U.S. with the most violent state, Louisiana, having a homicide rate fifteen times greater than the state with the lowest homicide rate, New Hampshire. Nationally, the homicide rate in the U.S. has been declining since the early nineties, and has now dropped to a level not seen since the late 1960s, with the homicide rate for 2009 at 4.96 per 100,000 people.

The decline in homicides plateaued for most of the 2000s before resuming the decline in 2008. Although the average rate since 2000 has only decreased slightly, there have been different trends between the states, for example:

9 Cost from lost productivity from lost work days and emotional distress.

10 Incarceration costs include the cost of corrections as identified by the BJS.

11 Note: The policing services section includes the judicial costs associated with criminal cases. Calculation method is detailed in the police costing section. For the full definition of what is included in policing services refer to the Bureau of Justice Statistics website at: http://bjs.ojp.usdoj.gov/dataonline/Search/EandE/definitions.cfm.

12 Based on calculation of 70% of prisoners attaining employment, each providing $75,000 per annum to the economy.

- Minnesota – homicides decreased from 3.06 per 100,000 in 2000 to 1.41 in 2009
- Rhode Island – homicides decreased from 4.28 per 100,000 in 2000 to 2.94 in 2009
- Ohio – homicides increased from 3.68 per 100,000 in 2000 to 4.5 in 2009
- South Dakota – homicides increased from 0.93 per 100,000 in 2000 to 2.58 in 2009
- New Hampshire is the state with the lowest homicide rate at 0.75 having decreased from 1.77 in 2000.

Chart 11. U.S. homicide rate per 100,000 population, 5 highest and 5 lowest states (2009)

It is interesting to note that the five states with the highest levels of homicide have a rate approximately five times as high as the five states with the lowest homicide rates. The homicide rates in the five lowest states are lower than those of Canada.

Comparison with other countries

While the U.S. has homicide rates lower than other countries with a similar Global Peace Index rank, they are still much higher than in other highly developed countries. As chart 12 demonstrates, the U.S. homicide rate is more than three times higher than the United Kingdom's. What is striking about the U.K. comparison is that the U.K. has a higher level of violent crime than the U.S.

Chart 12. Homicide rate per 100,000 population (2009)

Costs

Although the full cost of homicide is almost impossible to capture due to empirical limitations, some clear areas of economic loss resulting from homicide can be easily identified. These include the initial
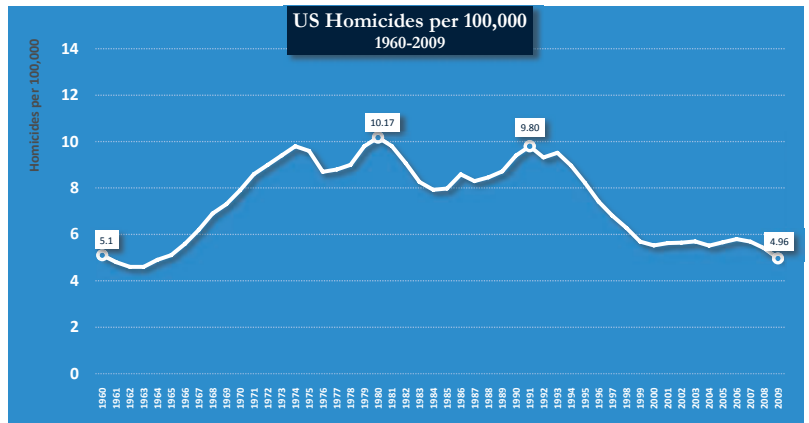

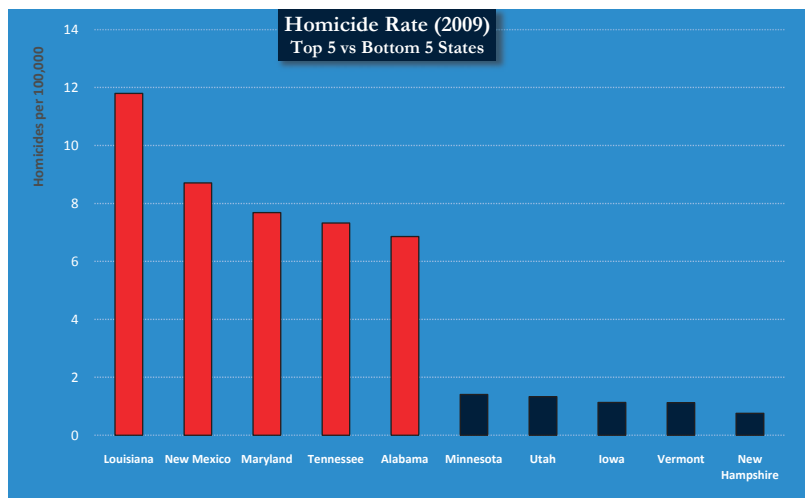*Chart 10. U.S. murder and non-negligent manslaughter rate, per 100,000 population (1960-2009)*

Chart 11
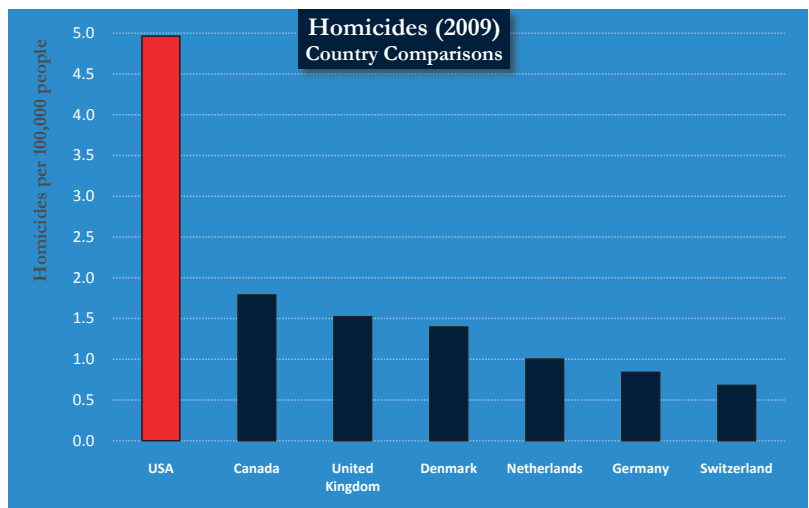
Chart 12

medical costs and lost productivity resulting from a homicide. A study by the Center for Disease Control and Prevention (CDC)[13] has been used as the basis for the cost estimates. The CDC report does not incorporate police, coroner

and judicial costs. Judicial costs are covered in the costs of policing services detailed later in the report.

According to the CDC, the total medical cost of homicide in the year 2000 was approximately $83 million, or $5,000 per victim. The

13 Corso, P., Mercy, T., Simon P., Finkelstein E., and Miller, T. (2007). "Medical Costs and Productivity Losses Due to Interpersonal and Self-Directed Violence in the United States." American Journal of Preventive Medicine 32(6). Authored by CDC economists.

associated costs resulting from lost lifetime productivity are much higher, at an estimated $22 billion in total, an average of $1.3 million per victim.[14] These costs can be further decomposed into those savings that accrue to the general economy and those which would generate more economic activity.

Costs to government and the community

The medical costs of homicide consist of ambulance transport, coroner/medical examiner costs, emergency department and immediate in-patient hospitalization.[15] This is the only cost that has been assigned to homicides due to the difficulty in finding accurate estimates of the costs that are associated with the crime. Therefore the costs associated with homicide, particularly the medical estimates, are considered conservative.

The medical costs of homicide accrue to both state and federal governments as well as the general community. The CDC estimates the average medical cost of a homicide to be $6,212 in 2010 dollars. The component of this cost that accrues to state and federal government is assumed to be half, at $3,106 per homicide.[16]

With the U.S. recording 15,241 homicides in 2009, the cost to government can be calculated by using the figure of $3,106 a homicide adding to a total of $47,338,546. This figure does not include policing or judicial costs which would include prosecutions on behalf of the state. Policing and judicial costs have been included in the section on policing costs. However, the largest cost that is excluded from this approach is the tax receipts that would have been gained from the lifelong employment of the victims as well as the lost productivity to the broader economy.

If the U.S. had the same number of homicides as Canada then there would have been 9,746 fewer homicides in 2009. This would have resulted in $ 61,542,000 fewer medical costs.

Cost of productivity loss

The total cost of homicide will be significantly higher than the costs borne by government because of the lost work days that result from homicide. This represents a huge productivity loss to the wider economy and CDC calculates that for each life cut short by homicide, the economy loses $1,652,000.

In order to calculate the potential economic savings that could be made, the U.S. can be benchmarked against other comparable nations. Chart 13 below shows the additional dollars that would be added to U.S. GDP if it had a homicide rate the same as Canada and several European countries. It should be noted that not only are the police, judicial and medical costs not included in this figure, but other economic costs are also not taken into account, such as defensive measures against crime, less productive investments, expenditure on funeral services, or higher life insurance premiums. It is therefore reasonable to suggest actual economic returns from a reduction

in the homicide rate would likely be much higher as only the medical costs mentioned earlier and the value of lost life-time work have been included.

Chart 13. Savings to the economy if the U.S. had the same homicide rate as Canada and several European countries

If the U.S. managed to reduce its homicide rate to that of Canada, it would potentially add $16 billion to the U.S. economy. This notably, does not include any multiplier effect for additional economic activity, which would effectively double this figure to $32 billion. Even greater economic gains would be made if the homicide rate fell to that of Germany. This would result in over 12,000 less murders and an additional $21 billion added to the economy, $42 billion if including the multiplier.

Incarceration

Data sourced from the U.S. Bureau of Justice Statistics shows incarceration rates[17] in the U.S. have dramatically increased from 1981 to 2007. However, this trend seems to have reached a plateau and the incarceration rate has even slightly decreased over the last two years. Chart 14 shows the average national incarceration rate from 1981-2009.

14 In year 2000 U.S. dollars.

15 Corso et. al. (2009:475)

16 Medicaid is partly funded by the state and federal governments, with the respective amounts varying across states, it is difficult to decompose how much would be shared by state and federal. It is also not possible to decompose what proportion of the cost is carried by the general community versus the government as the CDC data does not provide further breakdowns. For this reason the CDC $6,212 number is halved to $3,106 as half is assumed to be paid for by the general community through health insurance funds.

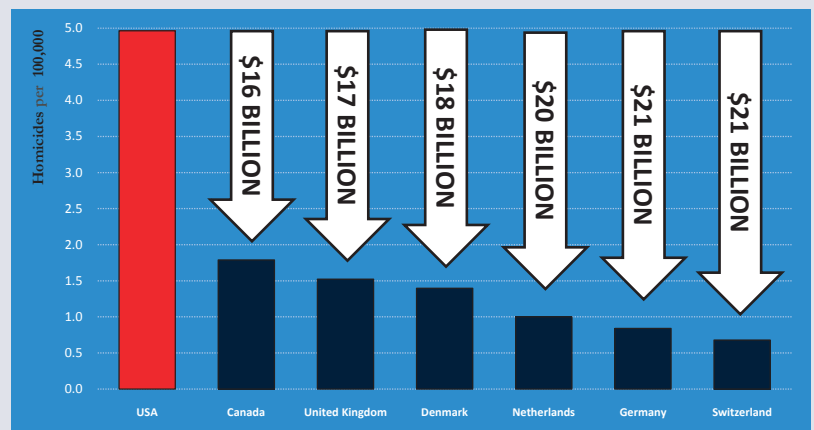17 The incarceration rate is expressed as the number of jailed population per 100,000.

Chart 13

Chart 14. Incarceration Rate per 100,000 population (1981-2009)

The increase in the incarceration rate is a source of significant debate and interest within the U.S., with a large body of literature focusing on the effect of mandatory minimum sentences, the proliferation of legislation as well as an increased focus on drug offenders after the declaration of the 'War on Drugs' in 1973. Reasons for the increases aside, it is well known that the dramatic increase in the level of incarceration has significant economic costs associated with it and a reduction in the prison population can be a source of significant potential savings for both the state and federal governments providing that released individuals do not create greater costs to the community.

Costs

The U.S. Bureau of Justice Statistics has kept detailed records on the prison population and the associated costs of imprisonment since 1982 up until 2005.[18] The total cost of incarceration has been estimated from 2006 onwards using the number of prisoners from the BJS statistics and using the cost of incarceration from 2005 in 2010 dollars. A close examination of these figures reveals that from 1982 to 2009, the prison population has increased by 269%, while the total cost of imprisonment has increased by approximately the same rate. The total cost per prisoner has not fluctuated much since 1982, and was estimated as being $42,173 in 2005 in 2010 dollars. Of this cost, $34,727 was the result of costs associated with incarceration in correctional facilities, while the remaining $7,446 was the results of costs associated with arrest, conviction, and judicial costs.
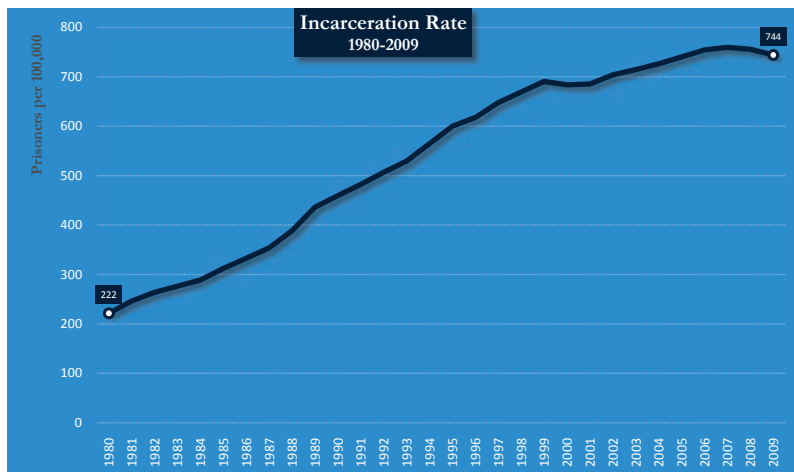
18 2005 is the latest year of data release for associated costs of imprisonment.

19 It is acknowledged that in order to realise this total amount a number of employees associated with the criminal justice system (prison guards, police officers etc.) would be losing their jobs. Given most of the employment burden is carried by state governments, the savings would accrue to the relevant governments, either enabling them to lower taxes or hire workers in other sectors. Even if a smaller savings rate was achieved without a loss of jobs, this could potentially still free up criminal justice system resources, resulting in better quality service delivery and the ability to focus on more serious crimes.
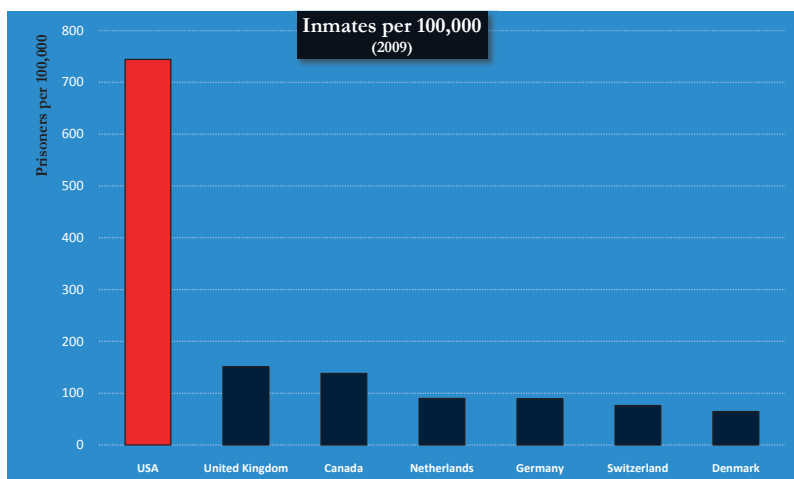

Chart 14

Chart 15

Comparison with other countries

The incarceration rate in the U.S. is markedly different to that of other developed countries. In 2009, the U.S. incarceration rate was 760 persons per 100,000, compared to 138 in Canada, 151 in the United Kingdom, 89 in Germany, 76 in Switzerland, 74 in Sweden and 64 in Denmark.

Chart 15. Inmates per 100,000 population (2009)

Costs to government and the community

The possible savings to U.S. states and the federal government can be calculated by estimating the savings that would result if the U.S. managed to lower its incarceration rate to that of Canada and other selected European nations.

If the U.S. could reduce its incarceration rate to the same level as Canada (138 per 100,000) the total correctional population would fall to 424,590 persons. This would mean that total costs of incarceration would fall to around 10 billion dollars meaning total potential savings would exceed $64 billion per annum.[19] However, in the best case scenario, if the U.S. could reduce its incarceration rate to the same level as Denmark (64 per 100,000), the potential savings would be greater than $72 billion.

A substantial proportion of these savings would flow to state governments and could help to alleviate the significant pressure on

their budgets and would provide policymakers with a greater range of options to trim budgets or stimulate the economy. The savings could also be directed into policies targeted at young offenders or ex-prisoners to reduce recidivism rates, thereby driving further increases in future savings.

Cost of productivity loss

The size of the economic pie could be increased if a proportion of the prison population were part of the labor force rather than in correctional facilities. While prisoners tend to have lower levels of educational attainment, the majority have held employment prior to entering prison. Research, from the Urban Institute[20] shows that 70% of prisoners had held a job for at least one year before entering prison[21].

The average value added of each worker can be reasonably calculated. It can be assumed that their average wage is $37,500 per annum and working on the proposition that 70% would have stayed employed if they had not gone to prison. The salary used is a smaller salary than the median wage which was calculated at $49,777 in 2009 by the U.S. census as it is assumed that people entering the criminal justice system are on lower average wages than other members of the workforce.

The total cost of this lost productivity figure is $97,666,954,421 or approximately $97.7 billion. This additional economic activity has a flow on effect through the economy for which it is assumed a one for one multiplier, resulting in the total additional economic activity of $195.4 billion.

Chart 17 illustrates the potential savings and subsequent economic boost to the U.S. economy if its incarceration rate was the same as Canada. The initial savings of $65

20 Non-partisan economic and social policy research think tank based in Washington D.C.

21 Visher, C., S. Debus, et al. (2008). "Employment after Prison: A Longitudinal Study of Releasees in Three States " Urban Institute, Justice Policy Centre October (pp2).

22 FBI Definition of Robbery: The taking, or attempting to take, anything of value under confrontational circumstances from the control, custody, or care of another person by force or threat of force or violence and/or by putting the victim in fear of immediate harm.
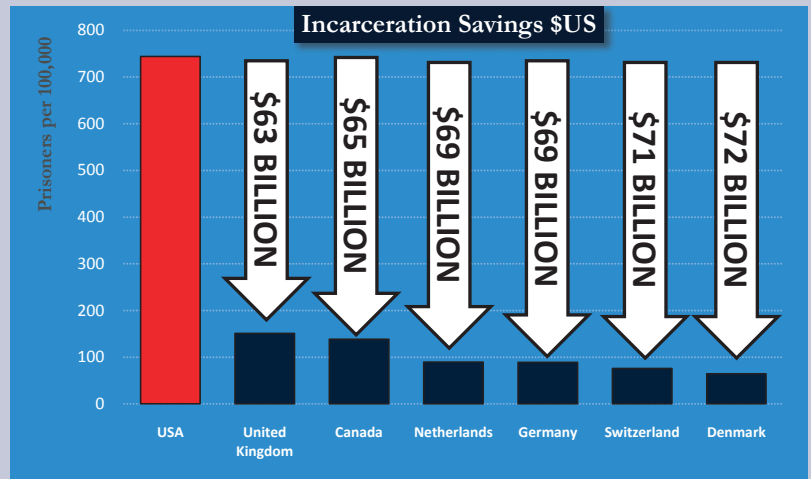
Chart 16. Savings if the U.S. had the same incarceration rate as Canada and other selected European nations
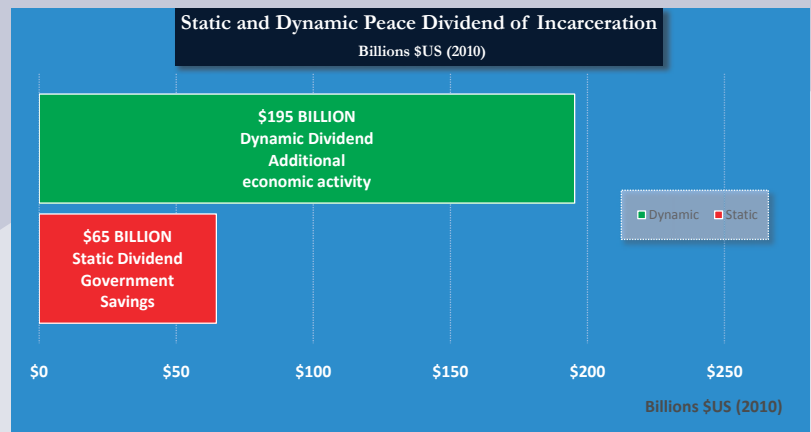

Chart 17

billion in dark red accrues to state governments, as they no longer have to share the burden of the cost of maintaining those prisoners. The $195 billion however, is the amount of additional economic activity that would flow to the general economy.

Chart 17. Additional economic benefits of lowering the incarceration rate to the same level as Canada

Evidently states with higher levels of incarceration have more to gain.

This report has focused on the cost savings and benefits from reductions in incarcerations; however there will be a need to invest in programs to supplant imprisonment or to reduce the recidivism rate. Estimating the costs of these programs is beyond the scope of this study, but lessening the rates of incarceration of non-violent offenders who are employed would have immediate benefits to

state government budgets as well the economy. For each person imprisoned their wage is lost to the economy, tax receipts are lost while the state has to fund their imprisonment as well. This also has flow-on effects as their spending provides the stimulus to help employ others.

Violent Crime

In the U.S., the definition of violent crime encompasses four categories: homicide, assault, rape, and aggravated robbery.[22] Since homicide is included as a separate indicator, it has been excluded from the calculations of violent crime. As shown in chart 18, the violent crime rate in the U.S. has been falling steadily since the mid-90s and after a slight increase in 2007, dropped in both 2008 and 2009. It has now

reached a level not previously seen since the early 1970s.

Chart 18. U.S. violent crime rate per 100,000 population (1960-2009)

Whilst this drop has been remarkable, the violent crime rate in the U.S. is still higher than most European countries, as shown in chart 19.

Chart 19. Violent crime rate, U.S. vs. selected countries

As with homicide, the full economic cost of violent crime is very difficult to capture and only the following items have been included:

- For assault, the economic costs consist of the medical costs as well as the lost productivity.

- For rape, the economic costs consist of the medical costs and lost productivity costs, as well as costs associated with pain and suffering.

- For aggravated robbery the average value of property stolen was used to calculate the cost of robbery.

It can be seen that there are many other costs associated with violent crime that have not been captured in this study. Police and judicial costs associated with violent crime have been estimated later in the report under costs of policing.

The total cost of violent crime in this model is $94 billion for the U.S. in 2009. Productivity cost of assault accounts for the great majority of this total cost at $58 billion, with the productivity costs associated with rape totals $11 billion and robbery half a billion. In order to conceptualize the relevant total cost of violent crime in America, comparisons can be made to several countries as in chart 20. This is not including any multiplier effect.

Another study, Anderson (1999), estimates three per cent of all medical expenses in the U.S. are related to violent crimes, while four out of five gunshot victims end up on public assistance and uninsured, costing the
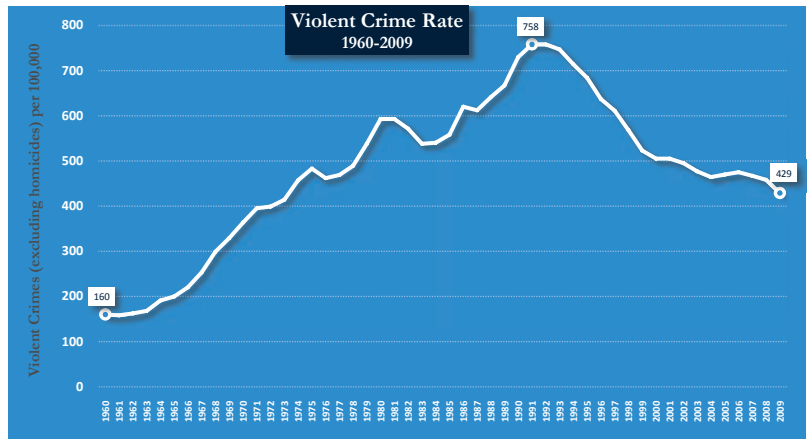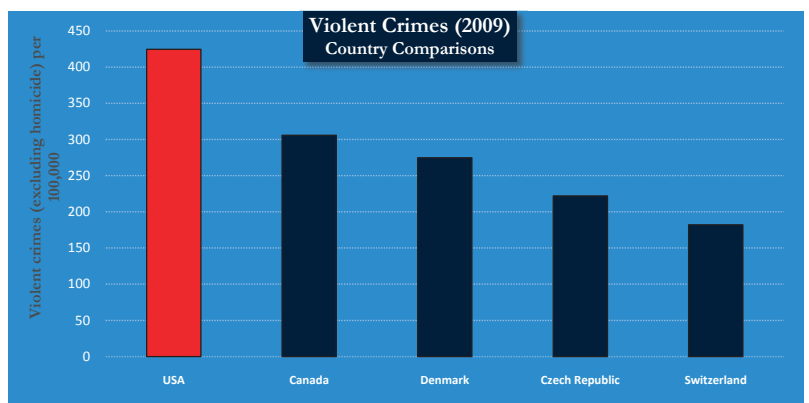

Chart 18

Chart 19
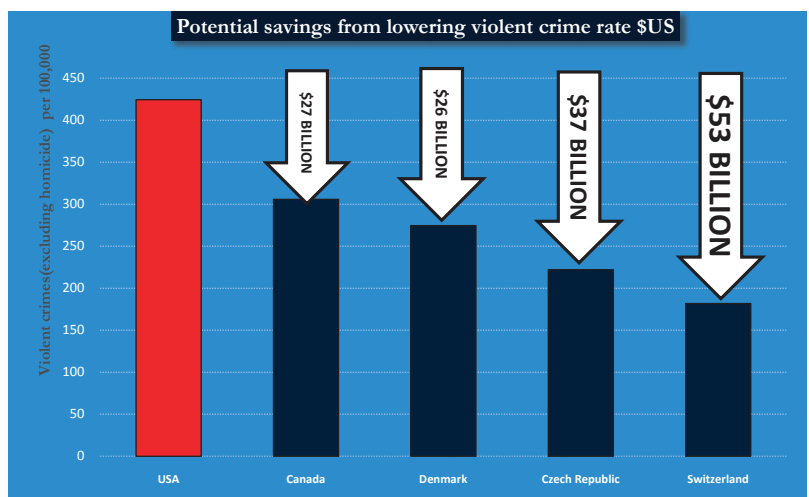
Chart 20

government $4.5 billion annually.[23] Based on U.S. government estimates of the total expenditure on health care which surpassed $2.3 trillion in 2008,[24] it can be assumed violent crime has a very significant cost via medical expenses. Three per cent of total healthcare costs is $69 billion.

Chart 20. Potential economic impact from a reduction in the total violent crime rate[25]

The total violent crime rate in the U.S. is 424 incidents per 100,000 people. A reduction in this rate to the same level as Canada, which is just over 300 per 100,000 people, would have an economic impact of approximately $27 billion, while reductions to the level of Denmark with a violent crime rate of 275 per 100,000 people, would result in economic benefits of over $26

23 David A. Anderson (1999) "The Aggregate Burden of Crime." The study was published in the October 1999 issue of the Journal of Law and Economics. Dollars have not been adjusted to 2010.

24 Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, National Health Care Expenditures Data, January 2010.

25 Sources for U.S. and Canadian Assault and violence crime data are available in Appendix D. Rape comparisons between the United States and Canada are drawn from the UN Office on Drugs and Crime, sexual assault data: http://www.unodc.org/unodc/en/data-and-analysis/crimedata.html. It is noted the vast differences in reported levels of rape between the two nations. The UN figure has been used because these are the figures reported by the Canadian and U.S. governments. Rape is defined by the UN as sexual intercourse without consent, while the Canadian definition includes sexual assault with a weapon and aggravated sexual assault that may or may not involve sexual intercourse, whereas the FBI defines rape as; 'the carnal knowledge of a female forcibly and against her will;' does not include offenses perpetrated against males.

26 The relative closeness of savings between Canada and Denmark reflect the different composition of violent crime in each of the countries. While Denmark has fewer incidents of rape and robbery, it in fact has higher numbers of assaults than Canada, which carries a higher cost.

27 Costs associated with policing services account for the following activities and capital items: patrols and communications, crime prevention activities, temporary lockups, traffic safety and engineering, vehicular inspection and licensing, all building used exclusively for police purposes, medical examinations and coroners, law enforcement activities of sheriff offices, and any unsworn school crossing guards, parking meter readers, animal wardens that are employed by a police agency.

28 It should be highlighted these savings only accrue to respective state governments and the federal government, and not into the general economy, as these savings if not put back into the economy in some other form, would effectively represent an extraction of capital from the economy. Economic gain would only flow if the respective monies went into the employment of more productive investments, whether they are tax cuts or investment in particular public infrastructure. It is for this reason savings from reductions in police officers is not included in the static dividend. This chart also assumes an equivalent proportional reduction in federal law enforcement officers and all police employees.

29 Bureau of Justice Statistics (2002) Justice Expenditure and Employment in the United States, 1999.

30 Related crimes include all violent offenses, weapon offenses and property offenses. More detail on these categories is available in the Compendium of Federal Justice Statistics, 2004. U. S. Department of Justice, Washington, D.C. 20531, Office of Justice Programs.

billion.[26] If the U.S. could reduce its violent crime rate to that of Switzerland (180), then the benefits would be worth over $53 billion. This aggregate cost includes the cost to both governments and the general community.

The cost of lost productivity from violent crime mainly consists of work days lost that result from violent crime and rape. Canada's assault rate is 305 per 100,000 people compared to the U.S. at 430 with the incidence of rape dramatically lower at 1.5 per 100,000 compared to the U.S.'s 28.7 per 100,000. If the U.S. had the same assault rate as Canada in 2009 then over 150,000 fewer assaults would have occurred.

Police Services

Police protection is defined by the BJS as the function of enforcing the law, preserving order and traffic safety, and apprehending those who violate the law.[27]

The estimate of cost per police officer is determined by dividing policing services costs, as identified by the BJS, by the number of police to arrive at a cost per police officer. The difference in police numbers per 100,000 people is then multiplied by the population and the cost per police officer to arrive at a total cost.

The number of police officers per 100,000 people had increased by 13% between 1991 and 1998 and has remained at the same level since. In 1991, there were approximately 191 police officers for every 100,000 people, in 2009 that figure was approximately 232 police officers for every 100,000 people. This rate is 15% higher than Canada's.

Chart 21. Police officers per 100,000 of population

Chart 22. Government savings[28] from reductions in policing services

The potential total savings from a reduction in the use of policing services are shown in chart 22.
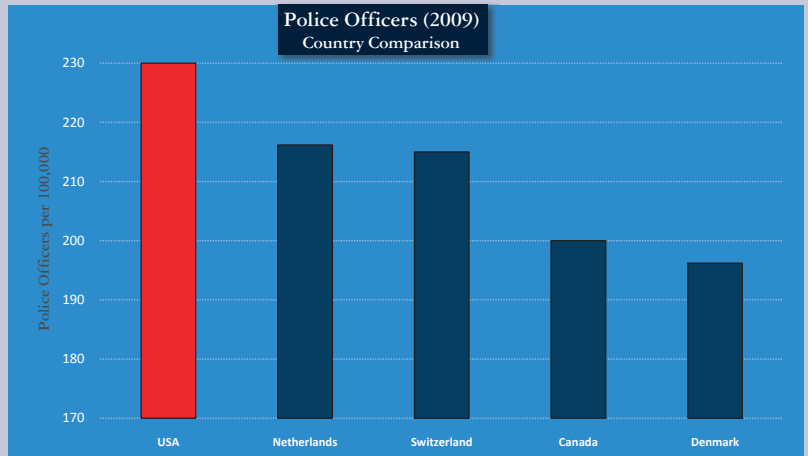
Chart 21
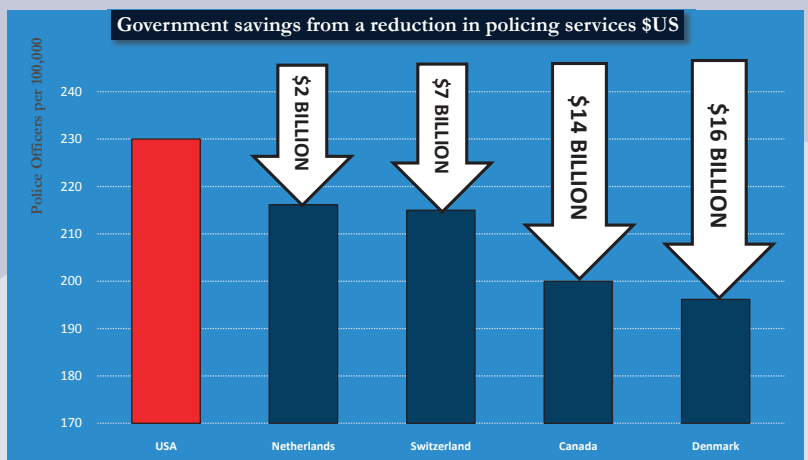
Chart 22

Evidently, this analysis does not advocate wholesale reductions in the employment of police and policing services for the sake of cost only, but to purely show the cost of violence from another perspective. There are positive aspects to policing over and above just arresting criminals. Having a well-funded police force means that proactive activities can be undertaken such as community policing, where the police spend more time in the communities to gain trust and act as a deterrent to crime or become engaged in rehabilitation programs.

Judicial and legal costs

Total costs related to judicial and legal services include all civil and criminal courts and activities associated with courts such as law libraries, grand juries, petit juries, medical and social service activities, court reporters, judicial councils,

bailiffs, the activities of attorney generals, state attorneys and indigent cases.[29] For the purposes of this study judicial expenses of related crimes[30] are calculated on the basis of 30% of the total criminal justice system expenditure. Violent crime, weapon and related property offenses constitute a relatively notable percentage of the total civil and criminal caseload, being approximately 22.4% at the federal level and more at the local and state level. Therefore the 30% figure is a reasonable one to use.

To determine the savings that could result from decreases in the use of the judicial system, a comparison is made to Canada. The U.S. has 37% more violent crimes than Canada; therefore it could be expected that a 37% reduction in judicial costs associated with violence, weapons and related property offenses, could be estimated as the judicial savings

if the U.S. had the same level of peacefulness as Canada.

According to the BJS, total federal, state, local judicial and legal spending in 2005 totaled approximately $53 billion in 2010 dollars. It is therefore assumed that the total judicial and legal costs associated to related crimes is in the region of $16 billion. A 37% reduction in judicial expenditure to bring the U.S. in line with Canada would yield $5.8 billion in savings.

Furthermore, it is worth noting that aspects of judicial spending on criminal cases are proportionally much higher than for civil cases. Both state and local governments carry a large burden of the spending on indigent criminal defenses which requires employment of counsel attorneys, public defenders and court expenses. The resources committed to these functions are therefore much greater for criminal cases. So much so, the BJS found in a 2002 study there is a strong correlation (r=0.635) between general crime rates and judicial expenditure, as states with high crime rates tend to have higher than average expenditures and employment devoted to criminal and civil justice.[31]

Total Aggregated Cost to Society

To illustrate the potential gains that could be made from improving the peacefulness of the U.S., a scenario was envisaged where reductions are made in the homicide, violent crime, and incarceration rates to the same levels as Canada, as outlined in previous sections. In this scenario, the collective economic savings to U.S. society would total $361 billion. One of the interesting facts to emerge from this study is that many U.S. states already have rates of homicide and violent crime lower than those of Canada and their incarceration rates are similar. Reductions in violence to the same level as Canada are therefore achievable and if these reductions could be realised then

substantial savings and additional economic growth would result.

Of the total amount listed in table 7 below, approximately $89 billion can be attributed as savings to government and society. This is composed of the average cost of a violent robbery, the cost of incarcerating an individual, as well as the associated judicial costs and policing services which includes most aspects of police work. As a result, the overwhelming majority of these savings would accrue to state governments.

The additional economic activity of approximately $136 billion would represent an additional economic stimulus to the economy. This additional economic stimulus would have a multiplier effect through the economy and a corresponding job-creation effect. Based on an economic multiplier of one-for-one, the total economic gain would be approximately $272 billion. This is what is referred to as the dynamic peace dividend. The total savings and additional economic activity to flow to the economy would be in the region of $361 billion.

It should be noted that using this model the largest savings and productivity gains come from incarceration. This is mainly due to the fact that excellent statistics are available allowing full costing estimates for this indicator. If better statistics were available for all of the costs associated with violent crime and homicides then their costs would rise, resulting in the proportion of total costs for incarcerations dropping.

Based on the work of Brauer and Tepper-Marlin[32] nominal U.S. GDP in 2008 amounted to $14.4 trillion when actual employment totaled 143.3 million jobs. By dividing the number of people employed by the size of the U.S. economy yields 9,928 jobs for each billion dollar of U.S. GDP. This would mean that the additional economic activity of having a level of peacefulness similar to Canada would generate additional economic stimulus to create approximately 2.7 million jobs. This would have the effect of reducing the unemployment rate in the United States by some 20%, from 8.9% to 7.1%.

Items representing savings to government and society	
Costs associated with violent robbery, homicide, rape and assault	$10,310,152,877
Incarceration cost per prisoner	$64,603,434,784
Police services	$14,439,486,669
Judicial and legal costs of related crimes	$5,825,830,000
Total savings to society	**$89,353,074,330**
Items to generate additional activity – dynamic peace dividend	
Productivity loss from homicide	$16,103,561,475
Productivity loss from rape and assault	$22,100,405,311
Adding prisoners to the workforce	$97,666,954,421
Additional economic activity to society	**$135,870,921,206**
Multiplier effect on general assumption one for one	**$135,870,921,206**
Total savings and additional economic activity	**$361,094,916,743**

Table 7. Total aggregated savings and additional economic potential to society if U.S. had the same violence as Canada

Employment effect of the peace dividend	
Total additional economic activity to society - dynamic peace dividend	$ 271,741,842,413
Equivalent Job Creation Effect	2.7 Million Jobs

Table 8. The employment effect of the dynamic peace dividend from reducing violence to Canadian levels

31 BJS Ibid (2002 page 6).

32 Brauer, J. and Tepper-Marlin, J. (2009). "Defining Peace Industries and Calculating the Potential Size of a Peace Gross World Product by Country and by Economic Sector." Report for Economists for Peace and Security and for the Institute for Economics and Peace.

PEACE IN THE MEDIA

The Institute for Economics and Peace and Media Tenor[33] have jointly combined their IP to analyse the global media coverage of peace. What resulted is the first fact based approach in analysing how accurately the media portrays peace and the violence of nations.

Through the use of statistical analysis selected television networks were examined and the tenor of their coverage was compared to the levels of peacefulness experienced in the countries that were covered. This was achieved by comparing data from the Global Peace Index and Media Tenor's media database. Data from the 149 countries ranked in the 2010 GPI was compared to data from the Media Tenor database which covers 37 television news and current affairs programs from 23 media organisations that are situated on four continents.

The outcome of this analysis helps to better understand the media's coverage of peace and conflict. The aim of this study was to highlight the different coverage patterns between the television networks and then to compare their coverage with an independent yardstick that measures peace to ultimately determine the accuracy of the coverage. The Global Peace Index was used as this yardstick. What is unique about this approach is that, to the best of our knowledge, it is the first attempt ever to take a fact-based approach to analysing the accuracy of the media.

Peace is notoriously difficult to define and measure. The approach that was taken for this study is to define peace as the "absence of violence". This fits neatly with the definition of peace that was adopted by the GPI.

The Media Tenor database was analysed and stories pertaining to topics on Violence[34] were tallied, for examples see table 14 on page 42. They were summarised to give regional and global tallies which could then be compared between different television networks to better understand reporting patterns. Additionally, stories were rated as positive, negative or neutral to better understand the tone of the coverage.

Since, for measurement purposes, conflict and peace can be seen as the inverse of each other, it follows that the ratio of reports on Violence related stories can be compared to the overall number of stories thereby giving a measure of the media's view of the peacefulness of a country. The assumption is that the more violent the country, the more stories there will be on violence as a percentage of total stories. To illustrate the point, Iraq is at the bottom of the GPI and this is reflected by its media coverage where the most newsworthy items are violence related. On the other hand, New Zealand was ranked at the top of the Global Peace Index in 2010 and the media coverage is on stories about what a good holiday destination it is or the high position it

holds on many developmental tables. Although in New Zealand violent crime is slightly higher than in most developed countries, this issue has little coverage by the international media.

The countries were then ranked by the percentage of Violence related stories to total stories and divided into four bands. The Global Peace Index was also divided into four bands so the two sets of data could be compared, as shown in Table 9.

Table 9. Band categories

Global Peace Index (country rank)*		Violence Issues as% of total stories per country	
Band 1	1 – 30	Band 1	< 20%
Band 2	31 – 75	Band 2	21 – 40%
Band 3	76 – 120	Band 3	41 – 60%
Band 4	121 – 149	Band 4	> 60%

A lower GPI rank = more peaceful

Media accuracy could then be calculated based on whether the reporting on Violence for a given country was in a similar range as that country's GPI band. For example, media coverage is considered accurate if the country's banding aligns between the Media Tenor band and the GPI band. By contrast, if the media reports on any given country vary by one band either way then the Violence reporting is considered to be either under or over reported. Under reported being if the Media Tenor band is less than the GPI band and over reported if the Media Tenor band is greater than the GPI band.

This methodology is relatively simple and allows for the identification of whether a TV program's country coverage aligns with the country's relative measure of peace.

The methodology also allows for highlighting countries that attract the greatest level of over or under reporting compared to their peacefulness. It should be noted that at times over reporting can be valid as certain news stories can create a spikes in coverage, which over a longer period of time will not be statistically relevant. Two topics of media coverage, Sports and Natural Disasters, were excluded from the data as both create distortions when looking at the coverage of particular countries. For example, almost all of the coverage by South African TV channels on Australia was focused on Rugby and Cricket.

33 Media Tenor is a leading media monitoring company headquartered in Zurich, Switzerland.

34 A full list of violence topics is included in the "Peace and the Media" White Paper, Institute for Economics and Peace, 2010.

What is of most interest is to understand why a media network over or under reports violence.

Differences in regional coverage can be highlighted by comparing the aggregate coverage of the television networks from one region to another. This methodology also allows for the tracking of changing trends in coverage over time.

Additionally, the study analysed the media's coverage of the factors and structures that are associated with peaceful societies.

Societies generally act on their knowledge and the media is their major source for information on current affairs. The proposition is that unless the media puts some focus on what creates peace then it will be difficult to create it. The factors that create peace are referred to as the Structures of Peace. They are illustrated in Figure 1.[35]

Figure 1.The Structures of Peace
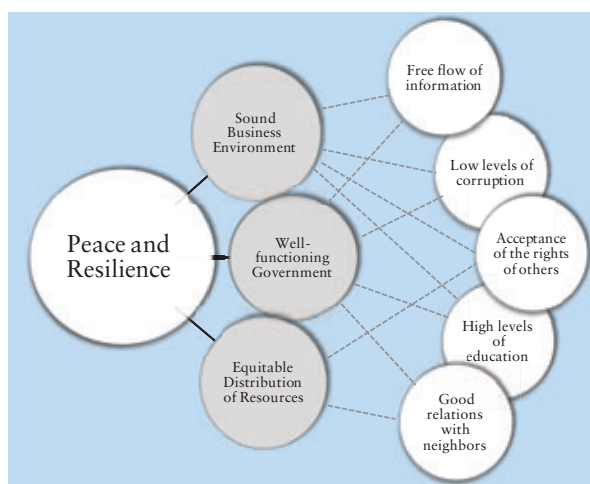
The analysis presented in the next pages is not meant to place any moral judgement on media coverage as it is recognized that the media is driven by a set of market dynamics that include newsworthiness, consumer demand, timeliness and the uniqueness of the event. The media's ability to focus on security issues has in many ways helped to shape a more secure world but peace is much more than just security. Without societies that can build and keep their own peace, troops can never be brought home and large prison populations become the norm.

The study of peace is relatively new and measuring peace is still in its infancy. Therefore the proposition that the media may be able to shape peace by applying coverage to the Structures of Peace is original. A key next step would be to understand how these themes can be covered in a newsworthy way that appeals to the interests of the audience.

Parameters for the Analysis

The Media Tenor data has been divided into two periods, January 2006-December 2007, and January 2008-December 2009. The 2006-2007 data is compared against the 2008 GPI, whilst the 2008-2009 data is compared against the 2010 GPI. This aligns the time periods as in any given year the GPI corresponds with the prior year's events.

Additionally, any local coverage on the country where the television network is domiciled has been excluded; for example, Fox News reports on the U.S., BBC reports on the U.K..

A total of 37 TV programs which cover news and current affairs were analysed for this report, listed in table 10. These programs came from 23 TV Networks.

Table 10. TV programs included in analysis

Media Network	TV Program	Country
ABC	ABC World News	USA
Al Arabiya	Al Arabiya News	Saudi Arabia
Al Jazeera	Al Jazeera News	Qatar
Al Manar	Al Manar SAT	Lebanon
ARD	ARD Tagesschau	Germany
ARD	ARD Tagesthemen	Germany
BBC	BBC1 10o'clock	UK
BBC	BBC2 Newsnight	UK
BBC	BBC World Service The News	UK
CBS	CBS Evening News	USA
CCTV	CCTV1 News Hour	China
CNN	CNN International Desk	USA
Dubai TV	Dubai TV	UAE
FOX	FOX Special Report	USA
ITV	ITV News at Ten	UK
LBC	LBC News	Lebanon
NBC	NBC Nightly News	USA
Nile TV	Nile News Panorama	Egypt
RAI 1	RAI TG1	Italy
RTL	RTL Aktuell	Germany
SAT1	SAT1 18:30	Germany
SF	SF Tagesschau	Switzerland
TF1	TF1 Le Journal	France
TRT1	TRT1 Ana Haber Bülteni	Turkey
TVE	TVE1 Telediario2	Italy
ZDF	ZDF Heute	Germany
ZDF	ZDF Heute Journal	Germany
SABC	SABC News @ One	South Africa
SABC	SABC News @ 10	South Africa
SABC	SABC Afrikaans News	South Africa
SABC	SABC English News	South Africa
SABC	SABC Africa News Update	South Africa
eTV	eTV Prime Time	South Africa
SABC	SABC Zulu/Xhosa	South Africa
SABC	SABC SiSwati/Ndebele	South Africa
SABC	SABC Venda/Tsonga	South Africa
SABC	SABC Sotho	South Africa

35 For a full explanation of these eight structures and how they have been identified refer to the IEP white paper "Structures of Peace", 2010.

Accuracy of Media Coverage

How aligned is the world's media reporting on Violence compared to the relative peacefulness of the countries covered?

Actually, it's more accurately aligned than people would commonly believe.

The starting point for the analysis was to determine how closely the global media coverage of violence matched the measured levels of violence within each country. To accomplish this, the percentage of Violence stories was tallied for all television programs by country, other than for the country in which the television network was domiciled.

It is striking to note how well it aligned, as can be seen from the scatter diagram (Chart 23) where the percentage of stories pertaining to Violence is compared to the peacefulness of each country. The trend line reflects what would be expected. There are however a number of anomalies, some of which are explained below.

Chart 23 illustrates the strong relationship between the Global Peace Index and total media coverage of Violence. It measures how closely the percentage of Violence related TV reports in a given country are related to that country's GPI score. The strong correlation indicates that, as would be expected, less peaceful societies do in fact attract a higher level of reports on Violence related issues.

Chart 23. Level of peacefulness of countries measured against the percentage of TV reports devoted to Violence issues.

Each data point on the chart represents a country, with those towards the bottom of the vertical axis being the most peaceful, and those to the right of the horizontal axis having the highest proportion of Violence reports.
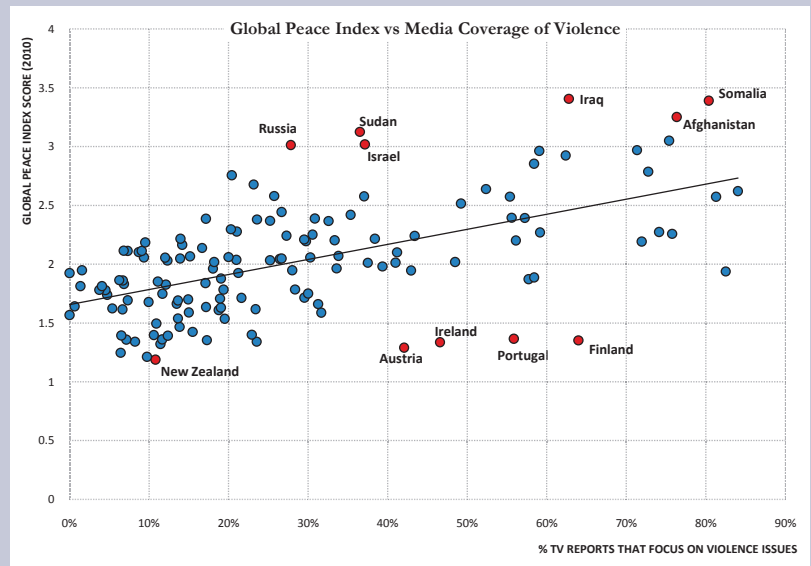

Chart 23

The trend line indicates the general accuracy of coverage, with the majority of the most peaceful countries being in the bottom left hand corner having less than 25% of their coverage related to Violence, while the majority of the least peaceful countries are in the top right hand corner having greater than 50% of their reports on Violence.

While the correlation is generally quite strong (r = 0.56), there are cases where the media reporting does not match the level of peacefulness of the countries. We have analysed some of these countries in more detail to further explore what caused the deviation. It was observed that exceptional events occurring in some countries triggered a sharp spike in violence related coverage causing the country to deviate from the norm.

Austria, Ireland, Portugal and Finland are four very peaceful countries that are outliers on this chart. Despite their high levels of peacefulness in 2008-2009, over half of all TV reports on these countries focused on Violence issues. Further analysis of the data shows that for each of them there was a single specific event that generated most of the additional coverage. In the case of Portugal there was a high volume

of stories on kidnapping about the Madeleine McCann disappearance, while Austria attracted high levels of coverage because of the Josef Fritzl case. Finland experienced a spike due to its gun control debate as a result of the Kauhajoki school shooting, and Ireland attracted a large volume of stories relating to the Northern Ireland conflict.

Russia, Israel and Sudan are identified as another set of outliers. These countries are ranked at 143, 144 and 146 (out of 149) respectively on the 2010 Global Peace Index. Yet, less than 40% of TV reports were related to Violence issues.

Israel attracted a large volume of Violence-related reports on topics such as the Palestinian attacks, the occupation of Lebanon, suicide bombings, settlements in Palestinian territory and conflict in general. However, these reports were outnumbered by coverage of topics of state visits, peace negotiations and other human interest stories.

TV reporting on Sudan included significant coverage of war crimes, conflict and ethnic cleansing. As with Israel, these reports were outweighed by coverage of humanitarian missions, peace negotiations, diplomacy and the

International Criminal Court prosecutions relating to genocide and war crimes in Darfur.

Russia's coverage was far more diverse than either Israel's or Sudan's, with a wide range of Violence-related topics covered. Prominent among the Violence reports was coverage on armament, missile defence systems and nuclear weapons. However, there was a much higher volume of reports on non-Violence topics which included coverage on State visits, the election of Dmitry Medvedev in 2008 and domestic and economic policies.

Over and Under Reporting of Violence

It is insightful to identify countries in which Violence is most frequently over or under reported, relative to their Global Peace Index rank.

Chart 24 compares the number of TV programs that over reported Violence on specific counties with the total number of TV programs that covered the country. Countries which had a small number of television programs covering them, such as Finland and Portugal, were not included in this chart so that measurement bias would not affect the sample.[36]

Chart 24. Countries for which Violence issues are most frequently over reported (2008-2009)

In many cases, single specific events are driving this over reporting, and it might be useful to highlight some of these events.

Sixteen of the 18 TV programs covering Greece over reported Violence. The majority of these reports were related to social unrest and demonstrations caused by the country's financial crisis.

Violence in Spain was over reported by 14 of the 19 TV programs, with almost all the coverage being on the Basque separatist movement.

Iran had 11 of the 26 TV programs
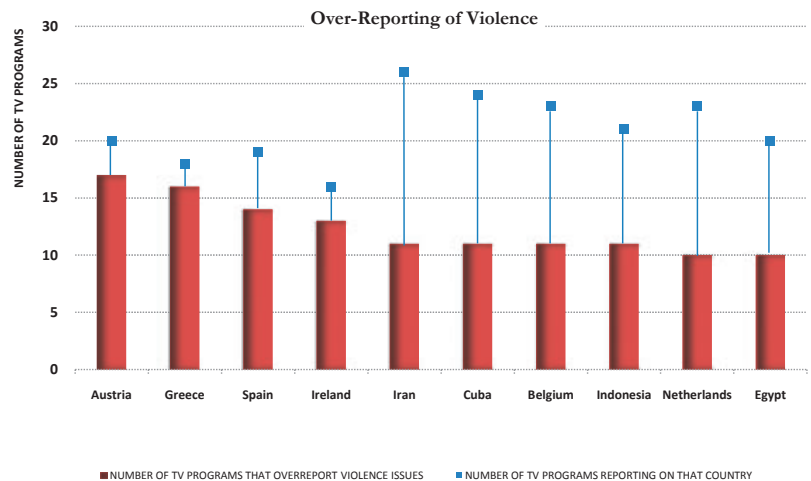
Chart 24
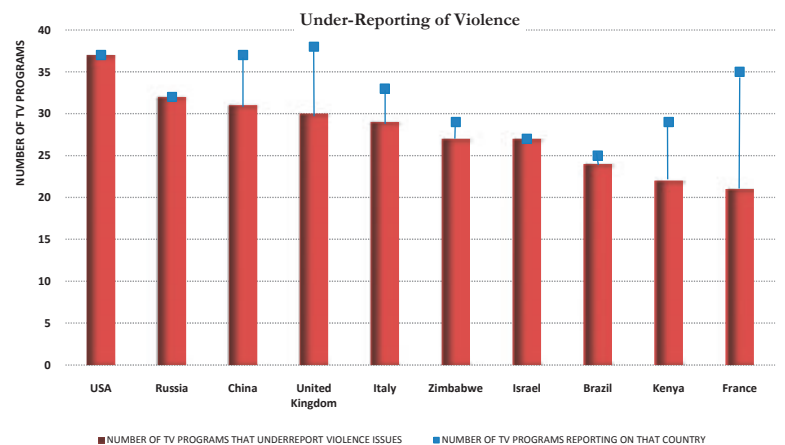
Chart 25

reporting on the country over report Violence and this was mainly due to coverage of the protests resulting from the Iranian elections in 2009.

11 of the 24 TV programs covering Cuba over reported violence with most reports relating to the torture and interrogation of terror suspects.

Belgium attracted media attention relating to the Dendermonde nursery attack in January 2009 while in Indonesia the Violence topics were related to suicide bombings and terrorism.

Over reporting of violence in the Netherlands was primarily a result of the April 2009 attack on the Dutch Royal Family, while in Egypt the topics were dominated by kidnapping and border control.

It is interesting to note that the number of over reports on Violence by television program as a ratio to

the number of programs that cover the country very quickly falls away after the news event. Again this would point to the vast majority of coverage being well aligned with the Global Peace Index.

On the flipside there are some cases of under reporting Violence.

Chart 25 compares the number of TV programs that have under reported Violence compared to the total number of TV programs that covered the country.

Chart 25. Countries for which Violence issues are most commonly under reported (2008-2009)

Television Program Analysis

To further analyse the media's coverage it is useful to understand the differing patterns of television coverage by TV program. Chart 26

36 Please refer to the methodological description on over and under reporting at the beginning of this chapter.

shows media coverage alignment to the Global Peace Index for the 37 TV programs covered in this study.

Chart 26. Percentage of accuracy (alignment with GPI band) of TV reporting

The coverage was considered accurate when the country coverage on Violence from the Media Tenor database was in the same band as the GPI. All of the TV programs included in this graph covered more than 10 countries.

The TV program with the broadest coverage was BBC World Service The News which covered 67 countries.

ARD Tagesschau and SABC Afrikaans had the highest level of alignment with the GPI. ARD Tagesschau aligned at 52%, while SABC Afrikaans aligned at 50%. A number of other TV programs exceeded 45% in their accuracy, these being ZDF Heute Journal, BBC 2 Newsnight, SF Taggeschau, CBS Evening News and ZDF Heute.

Chart 27 ranks the TV programs by their Violence reports as a percentage of total reports, revealing significant variations in reporting patterns.

Chart 27. Percentage of TV reports on Violence, by TV program, 2008-2009

The majority of TV programs reported on Violence less than 40% of the time. However, there are four programs that devote more than 50% of their time to topics of Violence. These are CBS Evening News, Fox Special Report, ITV News at 10 and ABC World News. All of these TV programs are aired in either U.S. or U.K..

Conversely, some organisations spend far more time focusing on other issues, with the South African TV program SABC3 African News Update having the least coverage of Violence at only 4%. This is surprising given most of its coverage
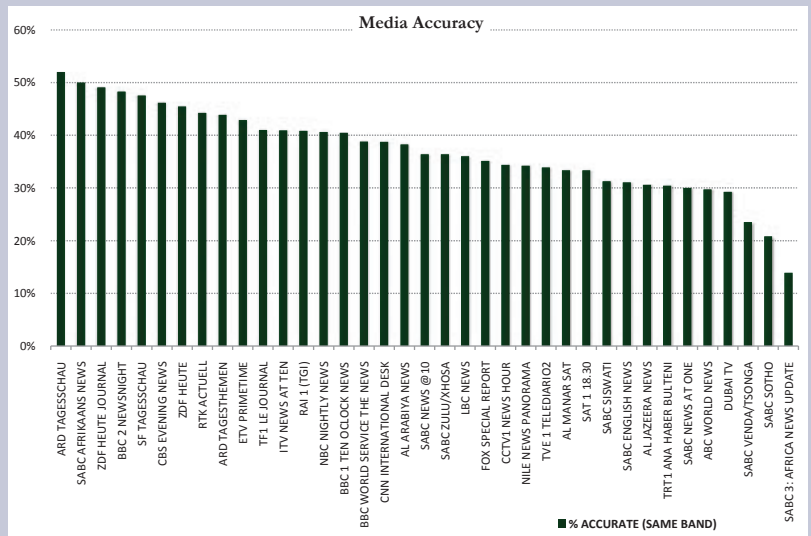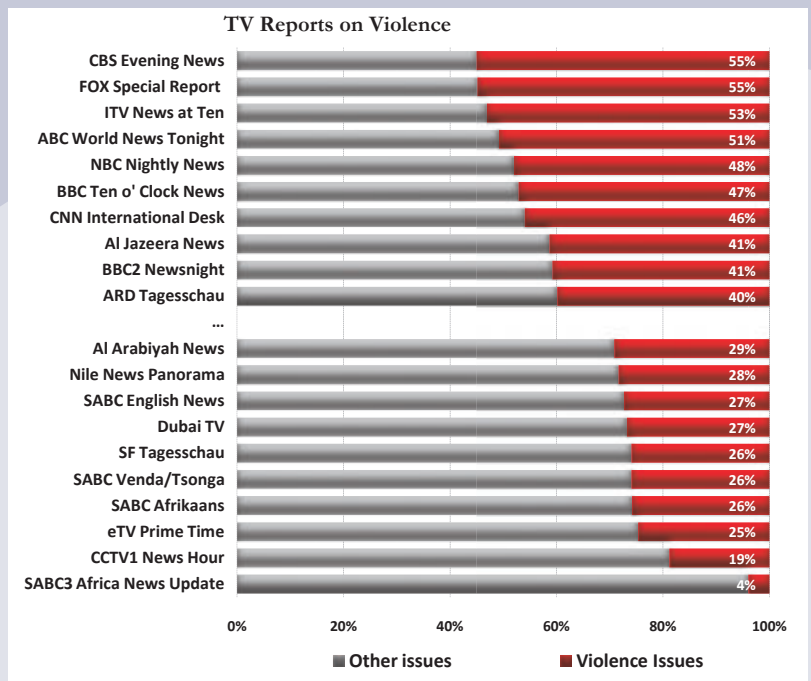
is on the African continent, which according to the GPI is the least peaceful region of the world. One explanation is that the TV network is owned by the South African government and may have an intentional policy applied to its international coverage.

Eight of the 10 TV programs with the highest level of Violence coverage, are from either the United States or the United Kingdom. Their relatively high level of Violence reporting is possibly due to their coverage of the Middle East where they are actively engaged in war.

Interestingly, there is no U.S. or U.K. based TV program amongst the group of Programs which had the lowest levels of reporting on Violence.

Of the 10 TV programs that report the most Violence, five dedicate on average 48% of their total reports to Violence. This compares to the 10 programs with the least coverage of Violence which average 24% of their stories on Violence.

The group of TV programs with the lowest percentage of Violence reports comprises mostly South African and Middle Eastern TV programs.

Chart 26

Chart 27

Media and Peace Reporting

The analysis presented so far has focused on the media's coverage of Violence and has explored its alignment to the Global Peace Index which has been used as a yardstick to tease out how well the coverage matches the peacefulness of the countries covered. The inverse of violence is peace and the next section of the analysis will explore the depth of coverage of topics that are related to peace.

The Global Peace Index has taken a fact-based approach to uncovering the structures that create peace. These factors (referred to as the Structures of Peace) are intuitive and provide a balanced view on what is important in creating a peaceful society. It follows that if a media organisation covers them then it is more likely to focus public opinion on what is important in creating peace.

Topic headings recorded by Media Tenor that correspond with the Structures of Peace are listed below (Table 11), and have been divided into the eight categories.

Table 11. Structures of Peace vs. Media Tenor Categories

STRUCTURE OF PEACE	MEDIA TENOR TOPIC
EDUCATION	Education
FUNCTIONING OF GOVERNMENT	Administrative restructuring
	Elections
	Justice policy
	Leadership changes
	Parliamentary work
	Party politics
	Political relationships
	Social policy & services
	Spending
	Strikes/ Protests
	Budget policy
BUSINESS ENVIRONMENT	Business associations
	Business issues
	Economic policy
	Economic situation
	International trade
	Relationship to business
FLOW OF INFORMATION	Media/ Media policy
	Relationship to the media
	Public opinions
TREATMENT OF THE RIGHTS OF OTHERS	Values/ Ideologies/ Rights
	Minorities & migration
	Religion
	Gender/family
RELATIONSHIPS WITH NEIGHBOURS	Foreign affairs
	Intra-government relations
DISTRIBUTION OF RESOURCES	Salaries/ Wages
	Any stories that specifically mention inequality
LEVEL OF CORRUPTION	Crime (corruption stories)

By categorising topics according to the Structures that build peace it is now possible to further analyse media coverage of these crucial areas. In order to help facilitate an increase in peacefulness, coverage of these topics is essential as it would encourage a more informed global debate.

Chart 28 compares the total television network coverage of topics on Violence to the total television network coverage of topics on the Structures of Peace for 2008 and 2009.

Chart 28. Worldwide TV reports on the Structures of Peace, Jan 2006 – Dec 2009

*Note: The scale of the graph is logarithmic due to the large variance in stories for each category

It is encouraging to find that there are 20% more stories covering topics related to the Structures of Peace than stories that focused on conflict. The analysis was not concerned with whether the reports were positive or negative; rather the emphasis is on the subject matter as that is what will create awareness.

Due to the chart using a logarithmic scale care should be taken when reviewing the numbers. Violence topics ranged from approximately 4,000 stories on military defence to 25,000 stories on crime. However, three topics on Peace had higher coverage than any of the topics on Violence. 'Well-functioning government' and 'business environment' had approximately 50,000 stories, while 'relations with neighbouring countries' had approximately 30,000 stories.

The three topics that had the least level of coverage were 'education', 'equitable distribution of resources and 'corruption'.

A deeper analysis of Peace stories highlights that the largest number of stories was in the "business environment" category with the global financial crisis receiving the most coverage, while the largest number of stories on "well-functioning government" focused on the U.S. elections. Again, whether the coverage was positive or negative is not as important as the public attention that it created. One might wonder, for instance, what would have been the voter participation if there had been no coverage of the U.S. elections.

Chart 29 analyses the 10 least peaceful countries to create a comparison between these nations and the global media coverage.

Chart 29. Ten Least peaceful countries. TV reports on the Structures of Peace, Jan 2006 – Dec 2009

*Note: The scale of the graph is logarithmic due to the large variance in stories for each category
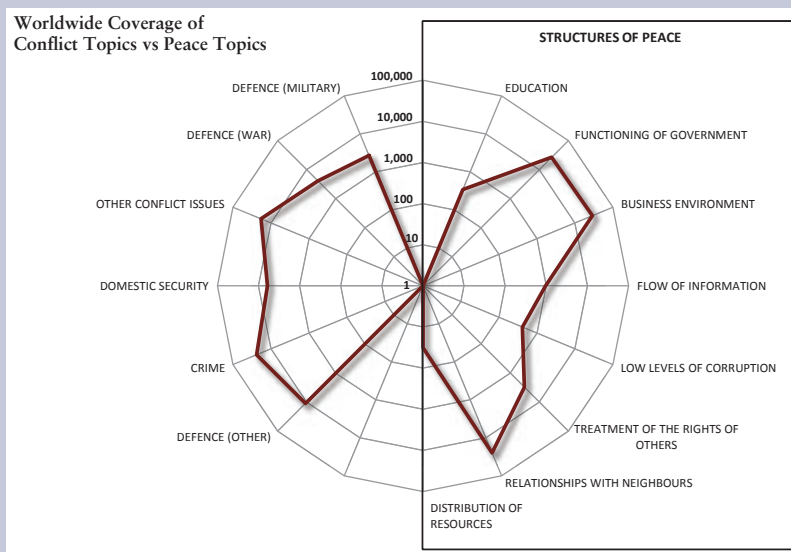
Worldwide Coverage of Conflict Topics vs Peace Topics

STRUCTURES OF PEACE

DEFENCE (MILITARY)
DEFENCE (WAR)
OTHER CONFLICT ISSUES
DOMESTIC SECURITY
CRIME
DEFENCE (OTHER)
DISTRIBUTION OF RESOURCES
RELATIONSHIPS WITH NEIGHBOURS
DISTRIBUTION OF RESOURCES
TREATMENT OF THE RIGHTS OF OTHERS
LOW LEVELS OF CORRUPTION
FLOW OF INFORMATION
BUSINESS ENVIRONMENT
FUNCTIONING OF GOVERNMENT
EDUCATION

100,000
10,000
1,000
100
10
1

Chart 28

10 Least Peaceful Countries: Conflict Topics Vs Peace Topics

STRUCTURES OF PEACE

DEFENCE (MILITARY)
DEFENCE (WAR)
OTHER CONFLICT ISSUES
DOMESTIC SECURITY
CRIME
DEFENCE (OTHER)
DISTRIBUTION OF RESOURCES
RELATIONSHIPS WITH NEIGHBOURS
TREATMENT OF THE RIGHTS OF OTHERS
LEVEL OF CORRUPTION
FLOW OF INFORMATION
BUSINESS ENVIRONMENT
FUNCTIONING OF GOVERNMENT
EDUCATION

100,000
10,000
100
10
1

Chart 29

TV Reports on Positive Peace

Program	Number of reports focused on Peace
SABC English News	61
SABC Venda/Tsonga	44
TF1 Le Journal	40
BBC World Service The News	35
SABC Afrikaans News	31
RAI1 TGI	25
eTV Prime Time	24
Al Jazeera News	24
TVE1 Telediario2	23
ZDF Heute Journal	22
SF Tagesschau	14
CNN International Desk	14
ARD Tagesschau	10

Number of reports focused on Peace

Chart 30

When we turn our attention to the least peaceful countries, we see a different picture. Chart 29 displays the number of reports on the ten least peaceful countries in the 2010 Global Peace Index which are listed in table 12.

As would be expected there is a higher percentage of reporting on Violence related topics, at 75%. Defence (Other) and Crime had by far the largest levels of coverage with both recording approximately 10,000 stories. The distribution of stories across the Violence topics was well spread while the distribution of stories across the Peace topics had a wide variance.
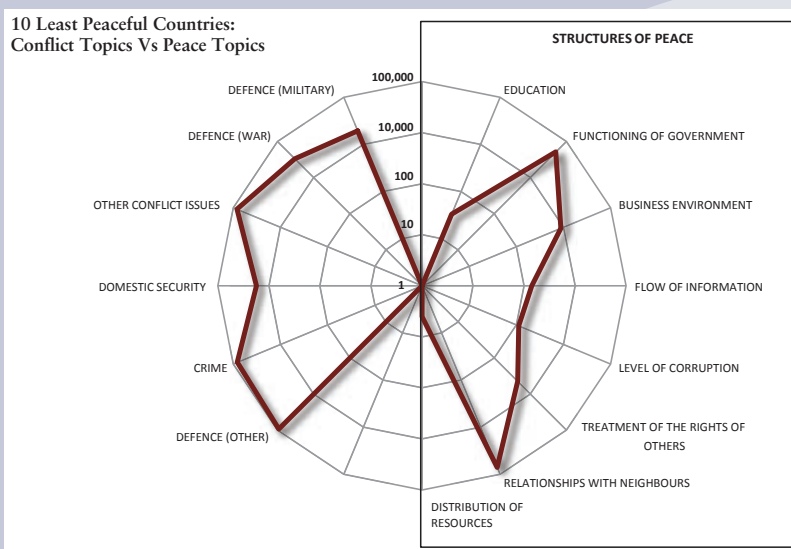
For the 10 least peaceful countries, reports on topics relating to the Structures of Peace are roughly a third of the reports on conflict. 'Functioning of government' and 'relationships with neighbouring states' appear to be adequately covered but there is a relative paucity of reports on 'education', 'equitable distribution of resources', the 'flow of information' and 'corruption'.

Other than Israel, all the countries in the group of the 10 least peaceful countries have high levels of corruption. Without an adequate focus on this topic then building a well-functioning government becomes difficult. Similarly appropriate focus on education is vital to building the right social structures because the citizens of many of the least peaceful countries do not have the knowledge to know what is needed.

Chart 30 analyses the coverage of Peace topics by thirteen TV programs. It only tallies stories where the coverage was positive and not those with a negative or neutral tone. The full list of Peace topics is contained in Table 14 on page 42 and includes topics such as peace negotiations, arms control and human rights.

These results demonstrate that the media perceives positive peaceful events as lacking newsworthiness.

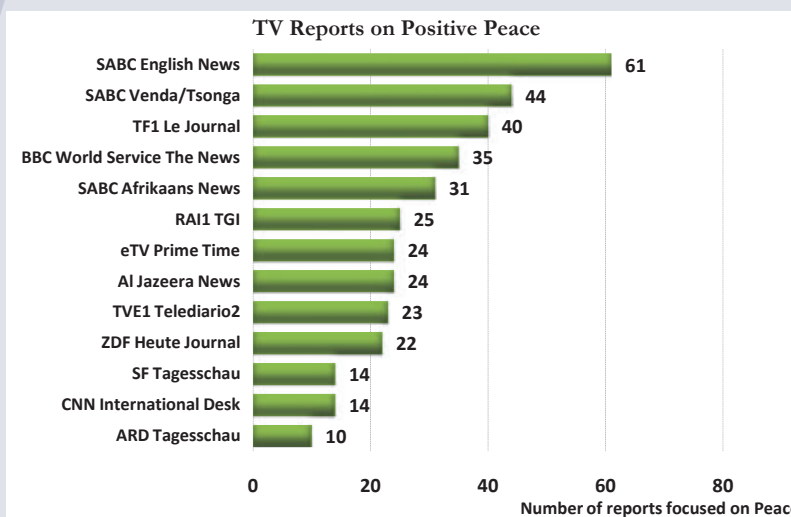*Chart 30. Number of TV reports focused on positive peace by TV program, 2008-2009*

Peace in this context is a large subject and takes into account topics such as well functioning government, please refer to Table 11 for a list of the 30 subjects that are considered peace stories. There is in fact a very low level of coverage of positive peace stories with just 1.6% of the total number of media stories in this study being on positive peace. This may be partly related to what is considered newsworthy with dramatic, high impact events being considered the best. Peace stories generally are not high impact events.

Media Coverage of the Most Peaceful and Least Peaceful Countries

Chart 31 compares the total number of TV reports on the 10 least peaceful countries with the 10 most peaceful countries (table 12) and compares the total number of reports with the number of reports on Violence.

Chart 31. TV reports comparison: focus on most peaceful vs. least peaceful countries, 2008/09

As would be expected, reports relating to the least peaceful countries far exceed reports on the most peaceful countries. The ratio is almost **4 to 1** for reports on the least peaceful countries compared to the most peaceful.

There is approximately a **1 to 5 ratio** of violence to total stories for the 10 most peaceful countries, compared to a **2 to 3 ratio** for the 10 least peaceful countries.

Of the 24,000 stories that focused on the 10 most and least peaceful countries, only 23% referred to the 10 most peaceful nations while the

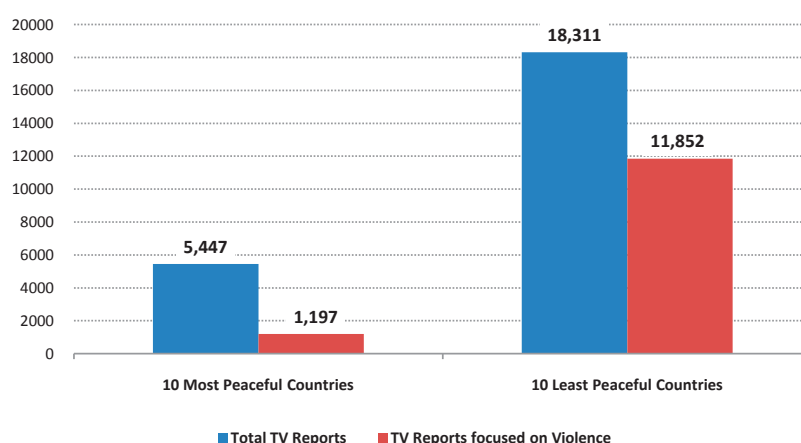Chart 31. TV Reports: Most Peaceful vs Least Peaceful Countries

Chart 31

Rank	Country	Rank	Country
1	New Zealand	140	DR Congo
2	Iceland	141	Chad
3	Japan	142	Georgia
4	Austria	143	Russia
5	Norway	144	Israel
6	Ireland	145	Pakistan
7	Denmark	146	Sudan
7	Luxembourg	147	Afghanistan
9	Finland	148	Somalia
10	Sweden	149	Iraq

Table 12. Global Peace Index 2010: 10 most and least peaceful countries

remaining 77% referred to 10 least peaceful nations. The two sets of countries vary greatly, not only on their levels of peacefulness, but also in terms of their population and economic output.

The 2008 population figures from the World Population Prospects report show that the least peaceful countries have a much larger population coupled with a far smaller GDP than the most peaceful countries. Their combined population amounts to over 500 million, while the most peaceful countries have approximately one third of the population with approximately 170 million people. The combined GDP of the 10 least peaceful countries amounts is $US2.2 trillion compared to $US7.3 trillion[37] for the 10 most peaceful countries. The 10 most peaceful countries have a per capita income

of 10 times the least peaceful countries. This point underscores the economic value of peace.

Not surprisingly, the total TV coverage for the less peaceful countries is higher than for those countries that are relatively at peace. This can be explained by the fact that countries with lower levels of peace tend to have more dramatic newsworthy events, such as Zimbabwe or Somalia compared to say, New Zealand and Norway. In addition, some of the less peaceful countries happen to be very large economies, such as the USA, China or Russia, where their geopolitical influences create a large number of newsworthy topics. This is reinforced by the under reporting of countries that have medium levels of peacefulness and are geopolitically significant such as France, Italy and the UK.

Chart 32 shows the total number of reports for the 10 most peaceful countries, including the proportion of reports dedicated to Violence topics.

Chart 32. TV reports – 10 most peaceful countries, 2008-2009

Once again we encounter Austria and Ireland as having unusually high reports on Violence. With the exception of these two countries, the most peaceful countries on average receive a very low volume of Violence reports.

Japan receives by far the greatest level of coverage, which would be expected given the size of the economy and its geopolitical significance. However, this is still well below the 7,000 reports that were done on Afghanistan.

Chart 33 highlights the media coverage of the 10 least peaceful countries with a breakdown of the number of stories by country.

Chart 33. TV reports – 10 least peaceful countries, reports for 2008-2009

As mentioned earlier this highlights how the least peaceful nations get more coverage than the most peaceful nations with greater than one third of the coverage being on Violence in Afghanistan. What is more interesting is the influence of the Afghanistan war, with over 50% of the coverage in this chart being for just two countries Afghanistan and Pakistan.

The two graphs in Chart 34 depict whether the coverage on each of the countries had a positive, negative or neutral angle/tone.

Chart 34. Comparison of positive, negative and neutral coverage: most peaceful vs. least peaceful countries, media coverage over the 2 years 2008- 2009.
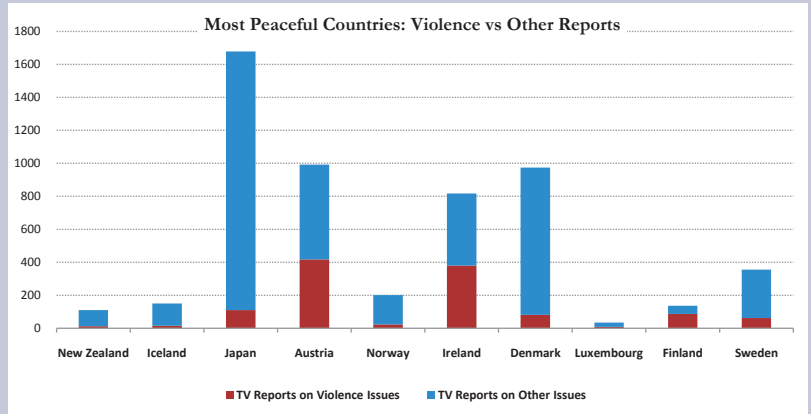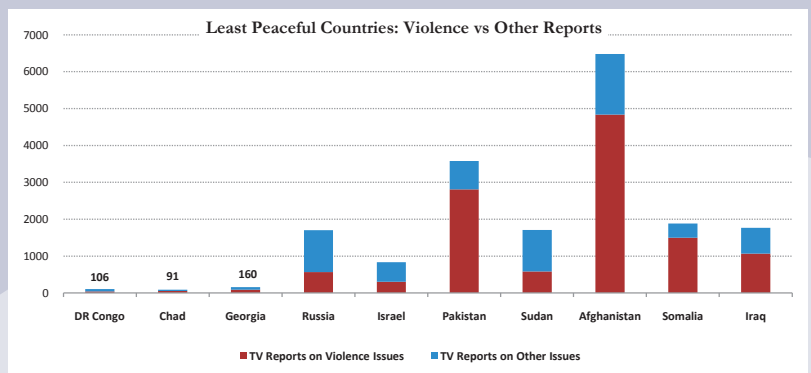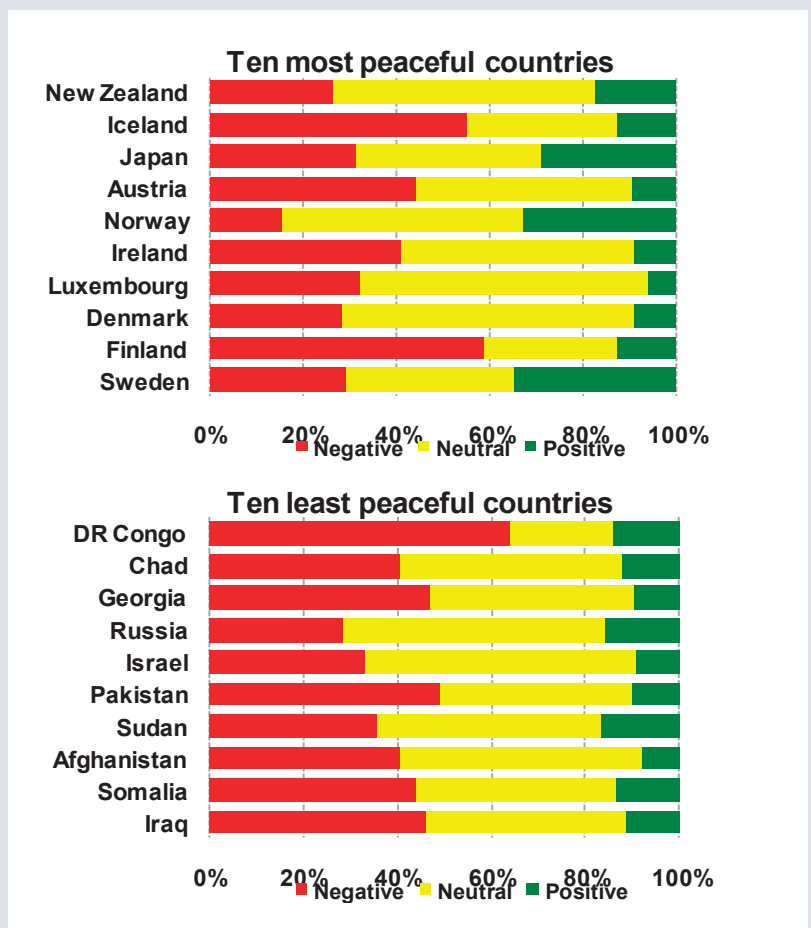

Chart 32

Chart 33

Chart 34

What is intriguing about this set of graphs is that the ratio of positive to negative stories did not vary greatly between the 10 most peaceful countries and the 10 least peaceful countries, with 35% of all stories being negative for the 10 most peaceful nations and 42% being negative for the 10 least peaceful nations.

What varies greatly is the percentage of Violence related stories between the two groups. This would indicate that the tone of the TV reporting remains fairly constant regardless of the country that is being covered in the stories.

It is particularly interesting to note that Finland received almost the same amount of negative coverage as the Democratic Republic of the Congo (DRC), which had the highest level of negative coverage of the 10 least peaceful countries. As discussed earlier, Finland's coverage can be traced to its gun control debate.

Sweden and Norway received the highest level of positive coverage of the 10 most peaceful countries.

Changing Patterns in Reporting

Chart 35 tracks the level of television reporting that has been devoted to covering the 10 countries with the most improved peacefulness on the GPI and the 10 countries whose peacefulness most declined. It shows that media attention is overwhelmingly focused on countries that are becoming less peaceful.

Chart 35. TV reports comparison: countries which have seen the biggest increase/decrease in their peacefulness levels, TV reports for 2008-2009

Less than 12% of the total reports for the 20 countries are devoted to the 10 biggest improvers in peacefulness with 88% of the
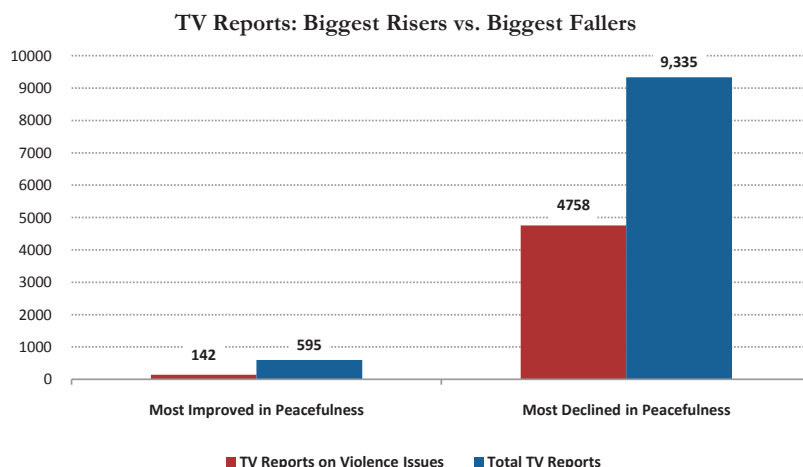
Chart 35

Biggest Risers	2010 GPI rank
Angola	86
Qatar	15
Congo (Brazzaville)	102
Uganda	100
Croatia	41

Biggest Fallers	2010 GPI rank
Pakistan	145
Madagascar	77
Syria	115
Yemen	129
Zimbabwe	135

Table 13. Global Peace Index, most improved in peacefulness and most declined in peacefulness: 2008 vs. 2010

coverage going to the 10 countries that have had the biggest falls in peacefulness. Angola is the most improved of all the countries on the Global Peace Index because of reductions in the number of conflicts fought, low likelihood of violent demonstrations, low military expenditure as a percentage of GDP and number of armed services personnel. Yet there were very few reports by the media on these improvements.

Table 13 lists the countries which have most improved their overall levels of peacefulness – the biggest risers – between 2008 and 2010, along with the countries whose overall levels of peacefulness have deteriorated the most – the biggest fallers. It also shows the 2010 Global Peace Index rank for each country. It is interesting to note that with the exception of Qatar and Croatia, all the "biggest movers" are ranked in the bottom half of the GPI.

Madagascar's fall on the Global Peace Index was driven by rising levels of internal conflict, political instability and homicide. All of these issues were extensively covered by a broad spectrum of media organisations.

Countries that have large falls in the level of their peacefulness have frequent dramatic events occurring such as riots, organised conflict or terrorism, whereas improving levels of peace have fewer dramatic events, other than events such as successful peace negotiations.

Regional Analysis

Examining TV coverage at the country level allows us to compare and contrast specific TV programs. Extending this analysis to the regional level gives us insight into whether any patterns exist across regions, or whether there are clear demarcations between the tenor and tone of coverage across different continents.

As the largest amount of data was available for American, European, and Middle Eastern television networks, these three regions were chosen for the analysis.[38] This coverage looks only at how regional media coverage portrays other regions, and excludes coverage of countries within their own region. All data is taken from the period January 2008 to December 2009.

Chart 36 illustrates the focus of the various regional media, by showing what percentage of total TV reports focus on different regions.

Of special interest is how the three regions cover each other. European TV has a fairly even split between coverage of the Middle East (27%) and North America (29%), whilst American TV programs are much more concerned with events in the

Middle East (40%) compared to Europe (24%), perhaps a reflection of American involvement in the conflicts in Iraq and Afghanistan.

Somewhat surprisingly, Middle Eastern coverage suggests a much stronger interest in European affairs (36%) than events occurring in North America (21%) despite the heightened interest in American domestic affairs during the 2008 U.S. Presidential Election.

Regional Media Analysis: What is the focus of regional reporting?

Of the three regions, American TV Programs are the least likely to be of a positive nature, whilst coverage by Middle Eastern programs is more likely to be positive, and also the least likely to be negative.

Middle Eastern TV programs were most likely to be negative when reporting on Africa or Central America and more likely to be focused on positive events in Oceania and North America.

European TV programs were more negative than their Middle Eastern counterparts, particularly with regards to Asia and Oceania. European TV reports were most likely to be positive when focused on North America.
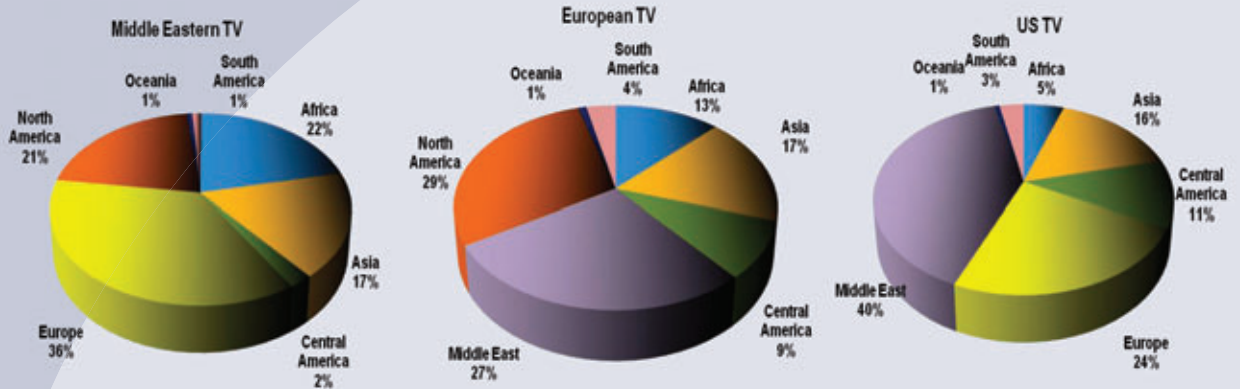

Chart 36. Regional coverage as a percentage of total TV reports: Middle Eastern, European, and U.S. TV
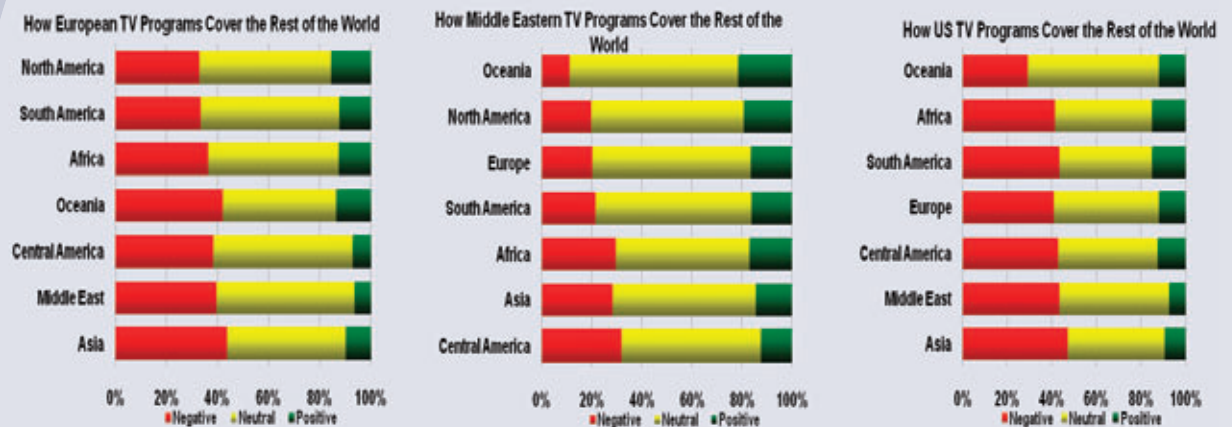

Chart 37. Tone of Coverage by Region: European, Middle Eastern, U.S. TV Programs

38 In total, the coverage of 15 European, 6 Middle Eastern and 5 American TV programs was used.

American TV reports displayed a similar pattern, with high levels of negative coverage of Asia, Africa and the Middle East. However, American television also had a high level of positive coverage of Africa and South America.

Both European and Middle Eastern TV programs were more likely to report positively on North America than other regions, which mirror their low levels of coverage of Violence issues in the US.

By contrast, coverage of the Middle East, by both European and American TV programs, had both a high level of Violence reporting and a high level of negative coverage.

Case Study: Afghanistan

One of the greatest freedoms that humanity can aspire to is to have a free press, because a free press provides the clearest lens through which society can view the events that shape its destiny. The clarity of the media's lens is critical as this creates transparency. Transparency is what allows for the best possible choices by society, whether it's the pricing of a financial instrument or the decision to go to war.

In September 2010, the Afghan President Hamid Karzai made headlines around the world, when he announced plans to create a High Peace Council to pursue peace talks with the Taliban. What is important about this is not whether the announcement was reported positively or negatively in the world's media or that commentators agreed or disagreed with the idea. The key fact is that by merely covering the announcement, the media focused the world's attention on an issue previously not known.

Implicit in this observation is the media's ability to facilitate change. It is not important whether talking to the Taliban about peace is appropriate or inappropriate, but simply by bringing attention to
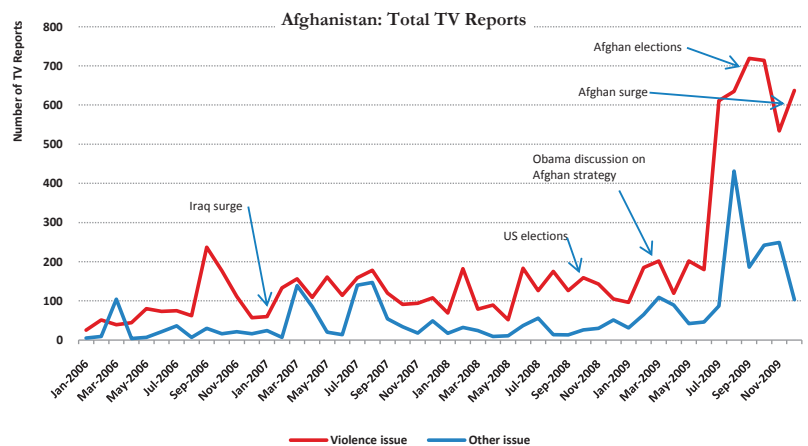
Chart 38

certain issues and events the media can help shape the nature of public discourse.

In this section we analyse the TV coverage of Afghanistan between 2006 and 2010 with the aim of exploring its texture. We have placed a special emphasis on investigating the media's coverage of the structures that create a peaceful society as defined by the Institute for Economics and Peace.[39]

To enable a better debate on how to cover peace we explore two propositions. Firstly, we argue that it is difficult to create peace unless there is adequate attention paid to the appropriate structures that create it. Secondly, as these structures are under-reported in countries that tend to experience higher levels of violence relative to others, we make the case that there is an opportunity for television networks to differentiate themselves from other networks by focusing on these aspects.

It is almost 10 years since the invasion of Afghanistan and the Afghan conflict is still receiving more media attention than any other conflict in the world. As such it provides an excellent case study to examine what are the main topics of focus by the media and to then compare the coverage of these topics to the factors that would help build an internally sustainable and peaceful society.

The media's attention on Afghanistan has intensified in recent years. Chart 38 shows the number of TV reports per month for Afghanistan from all of the 37 TV programs monitored by Media Tenor. The chart compares the number of reports on Violence related topics too all other issues. The period of coverage is between January 2006 and December 2009.

Chart 38. Number of TV Reports on Afghanistan (January 2006-December 2009)

As can be seen in chart 38, there has been a large increase in the total number of reports on Afghanistan since May 2009, with topics of Violence being the major theme of these reports. The peak of the coverage corresponded with the Presidential elections in Afghanistan during August 2009 and was followed by a secondary spike which corresponded with the announcement of Obama's troop surge. Other events have been highlighted on chart 38 to show their impact on the television coverage. It appears that the Iraq troop surge in early 2007 diverted media attention from Afghanistan, while there is a noticeable, though smaller, spike in mid-2009 when President Obama considered his strategic options concerning the Afghanistan conflict.

It is also interesting to compare the total level of coverage of Afghanistan with the coverage of Iraq. Chart 39 compares the total number of

TV reports on Afghanistan and Iraq for the period January 2006 to December 2009.

Chart 39. Number of TV Reports on Afghanistan vs. Number of TV Reports on Iraq (January 2006-December 2009)

As illustrated by chart 39, the focus of media attention turned away from Iraq and moved towards Afghanistan as the Afghani conflict intensified. This corresponded with a decrease in violence in Iraq. There was a slight dip in the volume of TV reports following the spike generated by the Afghani Presidential elections in August 2009. This was followed soon after by another spike in Violence reporting, see chart 38, due to the coverage of Obama's troop surge. Also evident in this comparison are prominent spikes in the coverage of Iraq which correspond with the troop surge in early 2007 and the initial success of the first independent combat operations by the Iraq military in March 2008.

Combined coverage of Iraq and Afghanistan was at its lowest during the U.S. election period in the second half of 2008.
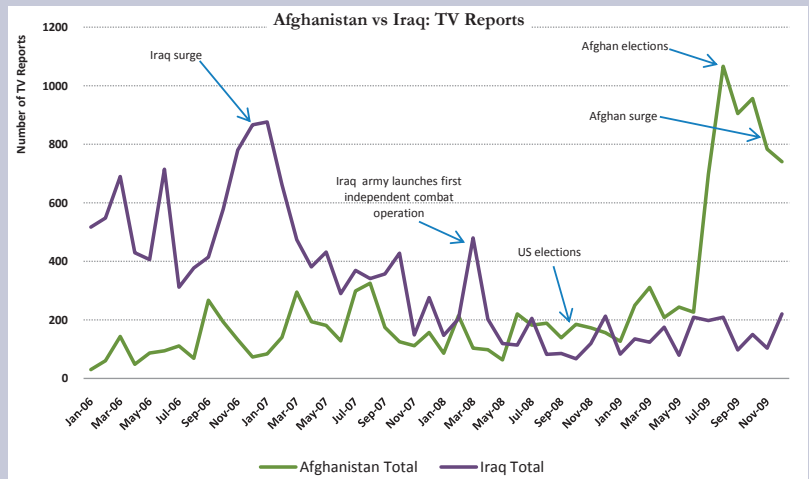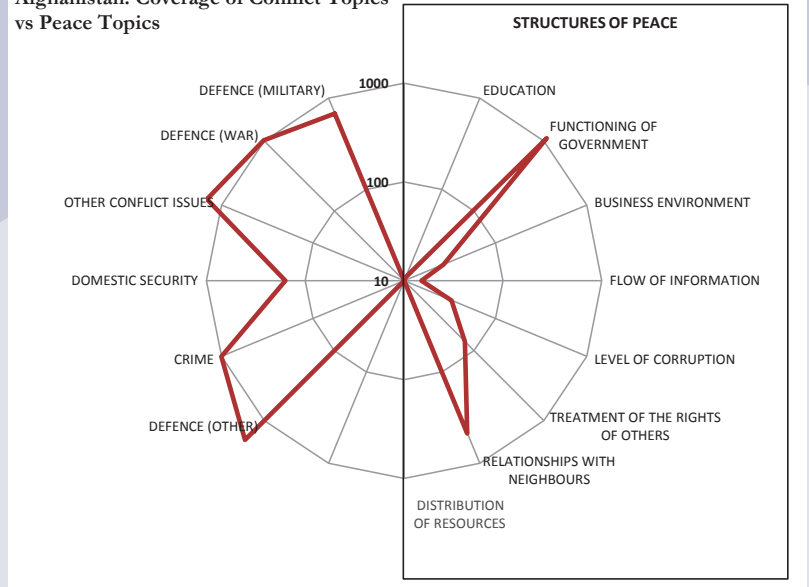
Afghanistan and the Global Peace Index

It is clear that Afghanistan's peacefulness between 2008 and 2010 deteriorated markedly. This can be determined both by its lower ranking in peacefulness as scored by the Global Peace Index and confirmed by the level of media coverage.

This section has been broken up into three parts. The first looks at Afghanistan and its media coverage to better understand how complete the coverage of the Structures of Peace is. The hypothesis is that an effective peace strategy will be articulated by leaders and reported on by the press or the press will push governments to undertake the actions necessary to create a sustainable

Chart 39

Chart 40

peaceful environment. If key structures are not being covered by the media then there is probably little effort in creating the appropriate institutions which means peace will be difficult to achieve. The other two parts cover changes in the coverage patterns of television networks on Afghanistan and analyse the level of coverage over the last three years.

Afghanistan – The Structures of Peace

The Global Peace Index has taken a fact-based approach to uncovering the structures that create peace. These structures are not counter-intuitive and provide a balanced view on what is important in creating a peaceful society. In order

to promote peace, or at least to help facilitate an increase in peacefulness, coverage would need to be given to these structures. This in turn would encourage an informed global debate on the very issues that will help build a stable peaceful society.

The spider diagram in Chart 40 highlights the level of TV coverage in 2008-2009 on Afghanistan that focused on Violence related topics compared to coverage on the aspects that create peace.

Chart 40. TV programs coverage of Afghanistan, 2008-2009.

Note: The scale of the graph is logarithmic due to the large variance in stories for each category

Chart 40 contains the sum of all the television stories from the 37 TV programs covered in this analysis for Afghanistan. The left hand side of the diagram shows the number of stories for the six topics on conflict that have received the most coverage. The right hand side contains the stories that pertain to the Structures of Peace.

It is not surprising that there are a large number of Violence related stories. However, the only topic related to the Structures of Peace that obtained the same high level of coverage was "Well-Functioning Government". The shortcomings of the Afghanistan government have been adequately covered by the media and because of this coverage the general public is relatively literate on how the Afghan government is performing. However, other important aspects of peace such as education or the business environment receive very little coverage. There has been some focus on education especially in relation to the education of girls. This would be represented in the above diagram under the "Acceptance of the Rights of Others" and while equality of opportunity for education between the sexes is very important, there are many other aspects to education which are important and go unreported. Similarly, building a robust business environment is key to building a self-sustaining economy. However, there is little coverage of the Afghan business environment and without a vibrant business environment peace will be difficult to achieve.

Contrasting this diagram with chart 38 on page 38 which shows the same diagram except that the totals are for all the TV reports for all countries, provides a clear understanding of just how little coverage is given to the structures of peace for Afghanistan.

% Change in Violence Reporting on Afghanistan

Chart 41

This analysis will help to create a discussion around the newsworthiness of peace. The concept of peace news coverage is new and with the correct slant may provide a unique differentiator that would improve the newsworthiness of a television network thereby increasing audience numbers. It does not matter whether the coverage is positive or negative what really matters is what topics are covered.

Chart 41. Changes in TV reporting of Violence issues on Afghanistan (2006 – 2007 vs. 2008 – 2009) as a percentage of total reports

In general, the coverage of Afghanistan has been accurate, in terms of reflecting the level of peacefulness as per Afghanistan's Global Peace Index score. However, the increase in the sheer volume of reports was greater than the increase in violence. This highlights the perceived newsworthiness of war.

Of the thirty-four TV programs which had a significant number of reports on Afghanistan for the period 2008-2009, only seven under reported Violence topics. The methodology to measure under reporting and over reporting is explained in the introduction to this section but can be simply described as being where the media coverage of Violence is in a band higher or lower than we would expect based on that country's level of peacefulness as measured by the GPI.

Four of the seven TV programs that under reported on Violence topics for the period 2008-2009 are from TV outlets based in the Middle East. This suggests that not only might specific TV programs be attempting to present different perspectives of Afghanistan, but that regional patterns in reporting might be detectable.

Some increase in the level of positive coverage of Afghanistan may help improve its image to the world, which may in turn lead to an increased desire by the general public to support future peace building efforts. Obviously this does need to be balanced with fact and what the viewing audience does see as newsworthy but the difference in regional media coverage is noteworthy.

In analysing media reporting the assumption has been made that media coverage does in fact shape what society sees as being important. The study and measurement of peace is new. Therefore, if media coverage was to focus on the structures that have been identified as being necessary to create peaceful societies, then

there would be a better chance of achieving the aims of building a safer and more peaceful Afghanistan. This is regardless of whether the tone of the coverage was positive or negative. This is simply because world attention would be brought to important areas of nation building that have not been covered in the past; thereby increasing the focus on what is important for nation building.

What is challenging is to determine how to reframe the news coverage so that it is appealing to the audience but still includes the structures of peace. If a TV network succeeded in achieving this, it would create a unique differentiation from other networks that should result in an increased market share.

Under reporting Violence

To try and determine whether TV programs are covering topics that create peace as well as reporting on Violence we have examined three TV programs in detail: Al Jazeera English, BBC World Service The News and CNN International Desk. All three of these TV programs have an international focus, and all did a significant number of TV reports on Afghanistan in the period 2008-2009. Chart 42 shows not only the number of reports, but also the scope of the topics that were covered by these three TV programs.

Chart 42. TV Reporting on Afghanistan by Topic. CNN International Desk, BBC World Service The News, Al Jazeera News (2008-2009)

Note: The scale of the graph is logarithmic due to the large variance in the quantity of stories on each category

All three TV programs have a similar number of reports on the topics that received the most total coverage. These were warfare,

Afghanistan: Key Topics Covered

■ Al Jazeera News ■ BBC World Service The News ■ CNN International Desk
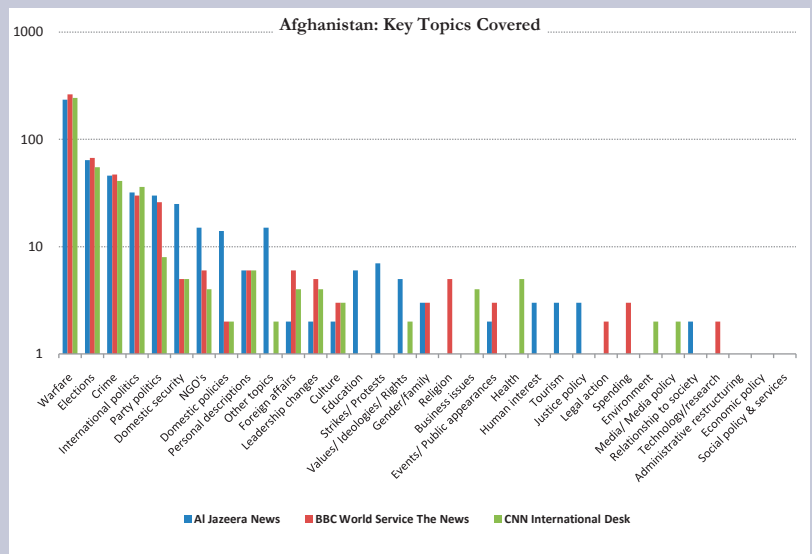
Chart 42

elections, crime and international politics.

Other than the nine topics covered by all 3 programs, there were marked differences in the reporting patterns between the networks. Al Jazeera English had the broadest coverage with 22 topics covered out of a possible 33 listed. This was 4 topics greater than BBC World Service The News and CNN International Desk, which covered 18 topics each.

Aside from the first 4 topics which were covered by all programs, Al Jazeera had the largest number of reports on most other topics. This was particularly notable for domestic security and domestic policies. Al Jazeera was also the only program to have reports focused on topics of education, protests, tourism, human interest and justice policy.

On the other hand, BBC World Service The News covered religion, legal action, spending and research, whilst Al Jazeera and CNN International Desk did not cover these topics.

Contrary to the other two programs, CNN International Desk covered business, health, environment and media relations.

These three networks basically have very similar patterns of reporting, with a different mix for the minor topics covered.

The reason why Al-Jazeera has a richer coverage on Afghanistan may lie in its audience's proximity to Afghanistan and the cultural similarities of its viewers compared to Europe or the US. It can be assumed that its audience has a better grasp of the challenges facing Afghanistan and desires a more nuanced coverage. Regardless of the reasons, Al-Jazeera's coverage certainly does bring a greater focus on the structures that create peace. As stated earlier in this chapter, whether that coverage is positive or negative is not as important as the fact that it is reporting on the issues that will drive long term peace.

The actual effectiveness of media programs in influencing attitudes is well known. Therefore it is reasonable to assume that focusing on peace will have an influence on future outcomes. Informing the public on what will build long term peace and stability is highly beneficial and in the best traditions of a free press.
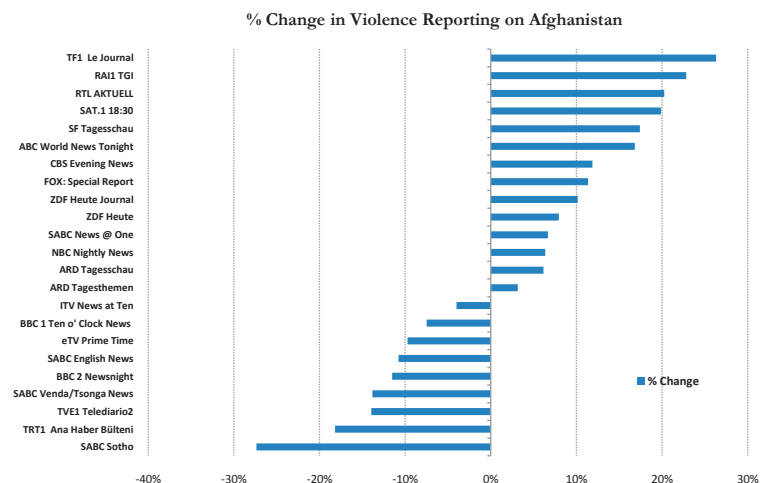
This analysis will help to create a discussion around the newsworthiness of peace. The

concept of peace news coverage is new and with the correct slant may provide a unique differentiator that would improve the newsworthiness of a television network thereby increasing audience numbers. It does not matter whether the coverage is positive or negative what really matters is what topics are covered.

Table 14. Examples of 'Violence', 'Peace' and 'Other' Issues

Violence Issues	Peace topics	'Other' Issues
Demonstrations/Protests	Parliamentary work	Stock markets
Politically motivated crime	Legislative procedure	State visits
Suicide bombing	Education policy	Court cases
Assassinations	Education and demographic development	Conferences/summits
Terrorism	Positive economic outlook	National elections
Kidnapping	Human rights	Currency market
Murder	Peace negotiations	Human interest
Nuclear weapon development	Co-operation of political parties	Animal stories
Conflicts in general	Co-operation of parliament	Awards/ prizes
Negative coverage media freedom	Treaties, agreements	Appointments
Social unrest		Domestic policy
War activities		Economic situation
Civil war		Music
Negative coverage on human rights		Campaigning
Failed elections		International politics
Air strikes		Foreign policy
Oppression of the people by state		Resignations
Insurgency		Film/cinema
War crimes		Committees, events
Violent crime		Economic policy

PEACE AND SOCIAL SUSTAINABILITY

Social sustainability is determined by the strength of the social institutions that enable greater well-being and resilience. This then enables societies to withstand social, economic, political and environmental stresses and shocks.

The concept of social sustainability has increasingly become the focus of intergovernmental organisations, academics, global think tanks, and policymakers within government. While sustainability has for some time been a prominent concept in environmental currents, the social dimension of sustainability has been overshadowed by other economic and environmental aspects. The recent shift of focus to social sustainability is recognition of the interdependent nature of social, economic and environmental factors in determining progress and the importance of social institutions in helping to shape economic, political and environmental outcomes.

This section of the 2011 GPI Discussion paper sets out to explain how the type of environments that shape peace are also the same environments that create the appropriate conditions for social sustainability. This study draws on recently published research from the Indices for Social Development (ISD)[40] to correlate their measures of social sustainability with the GPI. Past research from the Institute for Economics and Peace has used statistical analysis to determine the structures that a society needs to have functioning correctly to create peace. These structures known as the *Structures of Peace*[41] also provide the optimal environment for human potential to flourish.

The concept of social sustainability is highly related to eco-sustainability. It is clear that environmental challenges impinge on a society's ability to maintain cohesiveness. As more stresses are placed on a society the more likely there is to be a breakdown in law and order and the good functioning of government. Social sustainability can be seen as providing the social capital so that societies are more likely to pull together in times of difficulty than to fracture and fight. The level of social sustainability that a society may have will be immensely important in shaping the future trajectory of nations when faced with food shortages, severe climate change or major economic downturns. Social sustainability is also about interdependence. It's the denseness and variety of the interconnections that creates cohesion. The recognition of interdependence is also a key to solving our global environmental sustainability challenges.

The Institute for Economics and Peace believes that knowledge is the key to creating and implementing the right sets of initiatives to solve any problem. The lack of data-driven analysis to uncover the environments that are associated with peace was the primary reason for the creation of the Institute and the Global Peace Index in 2007. If humanity desires peace how can we work towards cementing the optimum level of peace if we do not fully understand it?

This paper shows for the first time that measures of social sustainability are linked to indicators of peacefulness as measured by the GPI. This research shows measures of civic activism, inter-group social cohesion and interpersonal safety and trust as measured by ISD are highly correlated with the GPI.

Social sustainability is measured by five different indicators: Civic Activism, number of Clubs and Associations, Intergroup Cohesion, Interpersonal Safety and Trust, Gender Equality. All these indicators except Clubs and Associations are closely linked to a nation's level of peace.

Societies underpinned by the presence of strong social institutions as measured by these factors are considered *socially sustainable societies* – they are relatively peaceful societies that are more resilient and are better able to withstand external and internal political, economic and environmental shocks.

This then raises the question as to what is the ideal environment that creates a socially sustainable environment.

Prior research conducted by the IEP has determined that there are a set of structures that describe a peaceful environment. The research has shown peace is dependent on the quality of these Structures of Peace which are divided into eight unique parts; being well-functioning government, competitive business environment, equitable distribution of resources, acceptance of the rights of others, good relations with neighbours, low levels of corruption, free flow of information and high levels of formal education. These Structures have been derived from empirical research showing peace is associated with the positive presence of these factors within societies.

This year's analysis on social sustainability fits these informal institutions into the Structures of Peace and discusses their interaction within this model. While perhaps supporting particular structures more than others, it also shows social sustainability is one of several potential drivers and determinants of peace in the complex intermix of social, economic and political factors that create a peaceful environment.

In relation to peace, causal factors are difficult to isolate as many factors simultaneously affect each other and in some instances causality can flow in both directions. This is best exemplified by considering whether peace improves business or whether business improves peace. In a war zone meaningful business development cannot start until the war ends. Therefore peace drives business.

40 Indices of Social Development, URL: http://www.IndSocDev.org/

41 Institute for Economics and Peace (2010) The Structures of Peace, Research Brief, December.

However, in the case of a major economic downturn, business can be seen to drive peace as unemployment and economic deprivation can often lead to rioting and violence. Additionally in many instances virtuous cycles are also formed. Again consider peace and business, while prosperity is improving and economic opportunity is increasing, a more optimistic vision of the future will be possible. This then leads to less likelihood of individuals using violence to achieve their ends, whereas a failing business environment leads to loss of jobs and assets which in turn can lead to alienation and lack of opportunity which can then lead some individuals to violence, particularly if they have experienced violence before.

The approach adopted by the IEP is not to aim at isolating single causal factors that drive peace, but rather through statistical means to holistically describe the environments that are associated with peace. Through focusing on all of these factors as being inter-dependent then a holistic approach can be used to define the optimum conditions that create peace. Additionally, the environment that is optimal for creating peace is also optimal for many other desirable aspects of human activity to flourish, such as the arts or business for example.

In this light, social sustainability forms part of the Structures of Peace where the informal aspects of social sustainability drive accountable and appropriate institutions while these same institutions also change the cultural attitudes that form social sustainability. The interactions are multi-faceted and bi-directional.

Causality can be bi-directional, depending on individual circumstances as well as forming virtuous cycles or destructive cycles.

Furthermore, the Structures of Peace do not act in isolation, to build a peaceful environment many of these factors need to be present. Low measures on any one or two factors will have a significant effect on peace.

This paper also provides two useful case studies on New Zealand and Switzerland. These case studies highlight two nations with ethnic, cultural, religious and linguistic diversity that have high levels of peace and resilience. The two nations are ranked in the top 20 of the GPI and their high levels of peacefulness are underpinned by strong performance in indicators related to the Structures of Peace.

Importance of Social Sustainability

Social sustainability is important because it is about recognising the value of informal institutions and societal attitudes and the role that they play in creating a culture. A socially sustainable society could be characterised by having well-informed citizens who are engaged in community life, trust and treat other citizens with respect, and who are tolerant towards people from other ethnic, religious, and linguistic backgrounds. The attitudes of citizens are important in creating a peaceful society.

One of the key attributes of peaceful nations is that they tend to be more resilient and tolerant societies which are able to adapt and transform to forms of economic, social, political and environmental stress or shock.

Furthermore, tolerant, inclusive, and 'shared'[42] societies which tend to be more peaceful are also more likely to enjoy greater economic wellbeing. Individuals who are ostracised and alienated by parts of a community without access to the same opportunities in education, health and employment, are likely to contribute less economic capital to society. This may also drag economic growth via lower tax receipts, higher unemployment benefits, and may result in more crime and increased costs to the state through higher incarceration.

In the context of the challenges facing the world today, these social factors need to be better understood. Social sustainability will help to provide the underlying social cohesion to avoid societies turning on themselves when faced with major challenges such as major environmental shocks or major economic downturns. Over the next 50 years environmental degradation, climate change, over-population and increased likelihood of natural disasters will create substantial additional social stress. It is interesting to note that some societies can withstand major shocks. These societies tend to rally together in time of crisis.

Two highly peaceful societies that have recently had major external shocks and have recovered with little violence are Iceland and Japan. Iceland suffered one of the worst economic collapses during the global financial crisis while Japan, recently experienced massive earthquakes and a tsunami. The two case studies contained in this paper demonstrate that high levels of ethnic, cultural and linguistic diversity do not preclude the development of highly peaceful societies, and that the presence of formal and informal institutions that ensure well functioning governments, equitable sharing of resources and sound business environments is ultimately vital to creating the optimal environment for human potential to flourish.

In the past there was little hard data available for measuring social sustainability, however over the last couple of years new studies have emerged that have helped to further the understanding of this important subject. The recent release in 2011 of composite indices measuring types of social institutions by the International Institute of Social Studies (ISS) titled

42 Club de Madrid – Definition of a Shared Society is ' a society in which individuals share an equal capacity to participate in economic, political, and social opportunities regardless of their religion, ethnic or linguistic group, and where as a consequence relations between groups are peaceful and without conflict'.

Indices of Social Development (ISD) and the Club de Madrid's *Shared Societies* Index are valuable tools to study social sustainability. These tools have also been used to map social sustainability into the *Structures of Peace*.

Defining Social Sustainability

The concept of social sustainability has increasingly become the focus of intergovernmental organisations, academics, global think tanks, and policymakers within government. While sustainability has for some time been a prominent concept in environmental currents, the social dimension of sustainability has been overshadowed by its economic and environmental aspects. The recent shift of focus to social sustainability is recognition of the interdependent nature of social, economic and environmental factors in determining progress and the importance of social institutions in shaping economic, political and environmental outcomes.

Social institutions are the informal norms, rules, behaviours, and habits that underpin human relations in society. They play a significant role in determining the development of economic and political outcomes and the resilience of society when confronted with various social, economic and political shocks. Social institutions can be defined by the levels of trust between individuals, the levels of inter-group cohesion, the degree and type of associational life, the number of civil society organisations and the forms of community activities for instance. They can be important for facilitating a community that is more engaged with itself and its institutions which in turn leads to more accountable political systems and a more heightened sense of justice. The strength of the social institutions is also important in facilitating greater psychological health throughout a community.

Seen in this light, well-functioning social institutions potentially play a very significant role within society; however what is most important is to understand the best environment for these values and attitudes to flourish. Prior research conducted by the IEP has identified particular formal and informal structures in society which foster the conditions for a more peaceful, open, educated and equitable society. Societies that share these characteristics tend to have well-informed citizens who help facilitate a more tolerant, adaptable and resilient nation. These societies can collectively better manage problems peacefully and are better positioned to learn and adapt to new social challenges. They tend to be more tolerant societies and are likely to have lower levels of social exclusion and be more accepting of ethnic and religious minorities. These

peaceful societies are therefore less likely to alienate and are more likely to function co-operatively in times of crisis.

While a range of organisations have previously provided extensive data on measures broadly categorised under the titles of social institutions, values and attitudes, it is difficult to measure qualitative information of this kind across all the nations of the world. The composite indices used in this study are seen as the best composite proxies available for social sustainability and are measured across a significant number of nations.

Structures of Peace

Analysis of the Global Peace Index in the past five years has consistently shown that the most peaceful societies also have a higher per capita income, high levels of well-being, more freedom, better sustainability, and appear to have a more equitable distribution of social spending. These are the material factors which foster the creation of a more peaceful society. And it is with these '*Structures of Peace*' that we can begin to understand how to build more peaceful and flourishing societies. The 8 Structures relate to economic circumstances, to standards of governance and to social and cultural attitudes. They have been derived by a fact-based approach establishing statistically significant and common elements amongst the world's most peaceful societies.

The 8 Structures of Peace are:

1. **Well-functioning government**
2. **Sound business environment**
3. **Equitable distribution of resources**
4. **Acceptance of the rights of others**
5. **Good relations with neighbours**
6. **Free flow of information**
7. **High levels of education**
8. **Low levels of corruption**

These Structures of Peace are interdependent and positively reinforce each other. In other words, the absence of any one imperils the creation of a more peaceful society.

In this context, the aspects of social sustainability that proved to be statistically significant would fit into the structures of *Acceptance of the rights of others and Good relations with neighbours*. It is also important to understand in this model that social sustainability also affects all of the Structures of Peace as well as all of the Structures of Peace affecting the measuring of social sustainability. The effects are bi-directional and highly coupled with many interactions to form outcomes. The strength of the effect of any institution or attitude will vary depending on individual circumstances.

Indicators of Social Sustainability

While there are many ways social sustainability can be developed, the Structures of Peace are a useful taxonomy to conceptualise how social sustainability can be developed and or undermined. Without the sound functioning of these structures, it is difficult for societies to be peaceful or resilient and for its citizens to live secure and prosperous lives.

Historically it has been difficult to get hard data on social sustainability. However, very recently the task of measuring social development and various informal social institutions across nations has been greatly assisted by the Indices of Social Development (ISD)[43] published by the International Institute of Social Studies. The ISD brings together 200 indicators from 25 reputable data sources for 193 countries over the period of 1990 to 2010. It is broken into five dimensions of social development, all of which can be usefully correlated and be comparatively analysed with the Global Peace Index. These are:

- Civic Activism
- Clubs and Association
- Intergroup Cohesion
- Interpersonal Safety and Trust
- Gender Equality

Each category of social development is defined by the ISD as follows:

Civic Activism refers to the social norms, organisations, and practices which facilitate greater citizen involvement in public policies and decisions. These include access to civic associations, participation in the media, and the means to participate in civic activities such as nonviolent demonstration or petition. Civic engagement is essential in ensuring that public institutions function in an accountable and transparent manner, with participation and representation for all.

Clubs and Associations measures the extent to which there is a rich local associative life within towns, neighbourhoods and villages. Such ties are essential in ensuring that individuals who fall on hard times do not also 'fall through the cracks', and in securing individuals' wellbeing through a system of social relations and a community of identity.

Intergroup Cohesion measures the extent to which there is social cohesion between defined religious, ethnic, and linguistic groups, without degeneration into civil unrest or intergroup violence.

Interpersonal Safety and Trust measures the extent to which there is social cohesion between strangers, as manifested through bonds of trust, reciprocity, and absence of criminal intent. In a society with high interpersonal safety and trust, violent crime is rare and people do not have to fear the violation of their personal and property rights.

Gender Equality measures the extent to which women have equal opportunities as men in the fields of education, employment, in the home, and in political life.

Shared Societies project and the Club de Madrid

Preliminary work by the Club de Madrid on its *Shared Societies* project also provides a new cross country data source for social institutional research. By compiling several sources ranging from World Values Survey to the Minorities at Risk project, Civicus, Afrobarometer, Latinobarometer, Asian Barometer, Gallup World Poll including data from the GPI, a *Shared Societies Index* has been developed. This can quickly capture to what extent individuals in various nations 'share an equal capacity to participate in economic, political and social opportunities regardless of their religion, ethnic or linguistic group and where relations are peaceful'. By using a matching percentiles methodology, the *Shared Societies Index* can aggregate different data sets and compile them into a single index score.

It correlates very strongly with the overall GPI at r=0.74 and even stronger with the internal GPI score at r=-0.76. Enabling comparison with 156 nations, it matches the GPI on global coverage and is a suitable proxy for social sustainability.

The Global Peace Index Correlates to Measures of Social Sustainability

All but one of the factors identified as proxies for social sustainability correlate with the GPI. Clubs and Associations was the only factor not to correlate.

The strongest correlating factor is Intergroup Cohesion at r= -.80, followed by the Shared Societies Index and Civic Activism.

For all five indicators of social sustainability, the correlation was stronger with the GPI internal peace score, especially for the Interpersonal Safety and Trust measure.

Societies with a more vibrant community life, good relationships between different ethnic groups, high levels of trust and feelings of personal safety, and high levels of gender equality, tend to be more peaceful. This conclusion can be drawn on the basis of a combination of quantitative, qualitative and survey based data. Of the five social measures, 'Clubs and Associations' has the lowest correlation with the GPI.

43 Indices of Social Development, URL: http://www.IndSocDev.org/

Table 15. The GPI correlates strongly with indicators of social sustainability

	Correlation with Overall GPI Score	Correlation with GPI Rank	Correlation with GPI Internal Peace Score
Institute for Development Studies - Intergroup Cohesion	-0.80	-0.75	-0.79
Club de Madrid Shared Societies Index	-0.74	-0.74	-0.76
Institute for Development Studies - Civic Activism	-0.61	-0.63	-0.67
Institute for Development Studies - Gender Equality	-0.53	-0.52	-0.58
Institute for Development Studies - Interpersonal Safety and Trust	-0.50	-0.51	-0.66
Institute for Development Studies - Clubs and Associations	0.09	0.13	0.12

Table 16. Indicators of social institutions also correlate with several GPI indicators

	ISD Civic Activism	ISD Clubs and Associations	ISD Intergroup Cohesion	ISD Interpersonal Safety and Trust	ISD "Gender Equality	Club de Madrid Shared Societies Index
OVERALL SCORE	-0.62	0.08	-0.80	-0.51	-0.53	-0.75
OVERALL RANK	-0.63	0.12	-0.75	-0.51	-0.52	-0.74
Internal Peace	-0.67	0.11	-0.79	-0.67	-0.58	-0.77
External Peace	-0.09	-0.05	-0.36	0.24	-0.09	-0.23
Perceptions of criminality in society	-0.44	0.07	-0.58	-0.62	-0.31	-0.53
Number of internal security officers and police per 100,000 people	-0.09	-0.29	0.02	0.04	-0.05	-0.10
Number of homicides per 100,000 people	-0.46	0.17	-0.40	-0.76	-0.28	-0.49
Number of jailed population per 100,000 people	-0.02	-0.17	0.14	-0.02	0.32	0.09
Ease of access to weapons of minor destruction	-0.55	0.15	-0.53	-0.61	-0.42	-0.54
Level of organised conflict (internal)	-0.55	0.10	-0.69	-0.41	-0.52	-0.62
Likelihood of violent demonstrations	-0.54	0.00	-0.66	-0.47	-0.48	-0.60
Level of violent crime	-0.49	0.20	-0.53	-0.65	-0.37	-0.55
Political instability	-0.71	-0.05	-0.55	-0.30	-0.62	-0.69
Respect for human rights	-0.58	0.12	-0.69	-0.48	-0.52	-0.65
Volume of transfers of major conventional weapons, as recipient (Imports) per 100,000 people	0.22	0.05	0.10	0.30	0.02	0.18
Potential for terrorist acts	-0.27	0.22	-0.71	-0.08	-0.52	-0.44
Number of deaths from organised conflict (internal)	-0.19	0.11	-0.75	-0.22	-0.40	-0.47
Military expenditure as a percentage of GDP	-0.25	0.02	-0.17	0.19	-0.20	-0.25
Number of armed services personnel per 100,000 people	-0.14	0.04	-0.12	0.15	-0.01	-0.12
UN Funding	-0.29	0.08	-0.16	-0.19	-0.18	-0.23
Aggregate number of heavy weapons per 100,000 people	0.12	-0.22	0.15	0.40	0.14	0.14
Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people	0.42	0.08	0.13	0.19	0.31	0.43
Military capability/sophistication	0.39	0.01	0.06	0.36	0.12	0.26
Number of displaced people as a percentage of the population	-0.14	-0.06	-0.49	-0.13	-0.19	-0.32
Relations with neighbouring countries	-0.52	-0.07	-0.41	-0.03	-0.33	-0.53
Number of external and internal conflicts fought	0.09	-0.01	-0.21	0.17	0.05	-0.06
Estimated number of deaths from organised conflict (external)	0.26	0.12	-0.02	0.11	0.12	0.25

The identified social sustainability indicators have been correlated with each of the GPI indicators in order to analyse in greater detail where the statistical relationships exist. Somewhat expected is the strong correlation between internal GPI indicators and social sustainability. Perceptions of criminality in society are correlated to ISD's intergroup cohesion, interpersonal safety and trust measures as well as the Club de Madrid Shared Societies Index. This shows that measured perceptions of crime are lower in environments where ethnic and sectarian tensions are also lower.

Likewise, levels of violent crime, political instability, level of organised conflict and likelihood of violent demonstrations tend to be much lower when there are higher levels of civic activism, intergroup cohesion and gender equality.

The second strongest relationship between a single GPI indicator and a social sustainability indicator is the number of deaths from organised conflict and intergroup cohesion, again this demonstrates the linkage between violence and social cohesion. The number of homicides per 100,000 people and interpersonal safety and trust also correlated strongly.

Chart 43. Societies with lower discrimination and where citizens accept the rights of other ethnic groups tend to be more peaceful

According to the Indices for Social Development, 'intergroup cohesion refers to relations of cooperation and respect between identity groups in a society.' More than half of the indicators making up the Intergroup Cohesion measure are qualitative survey questions on acceptance of other ethnic groups and attitudes about perceived discrimination on the basis of ethnicity, nationality or immigration status. Other measures that are surveyed include level of religious tensions, number of violent
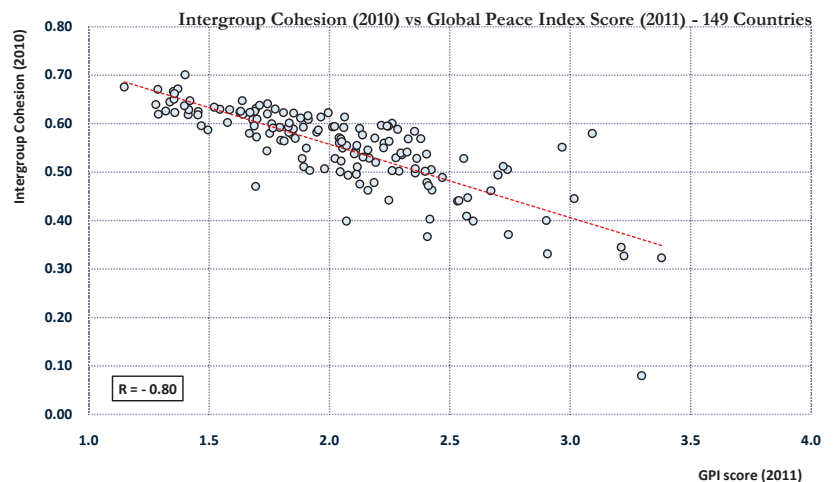
Chart 43
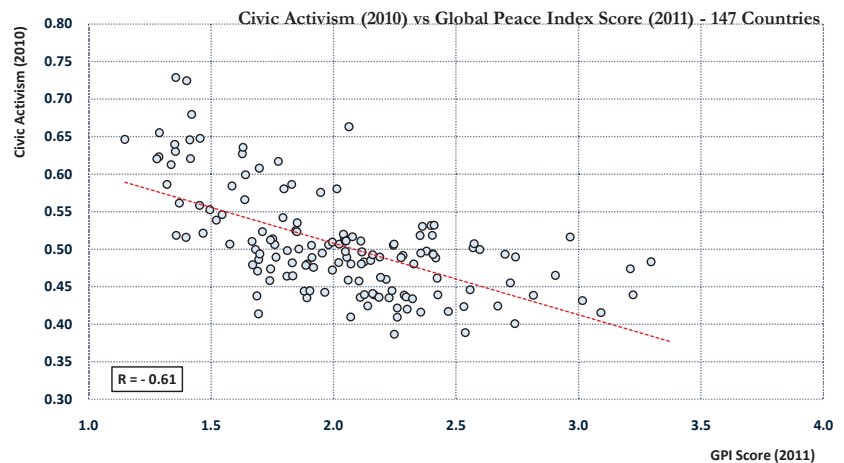
Chart 44

riots, and likelihood of violent acts. Where there is low trust between ethnic groups and sentiments of unfair treatment peace is unlikely to flourish and the formal institutions of the nation are less likely to be able to facilitate a more tolerant nation.

Where this cooperation totally breaks down, there is the potential for conflict such as ethnically or religiously motivated killings, targeted assassination and kidnapping, acts of terror such as public bombings or shootings. These violent acts are evidently debilitating upon the growth and development of a society.

Chart 44. Nations with better informed and active citizens tend to be more peaceful

Civic activism refers to a mix of quantitative, qualitative and survey based measures of civic participation, focusing on the ability of citizens to not only be informed about the actions of their governments, but also their ability to demand representation and hold their governments accountable. Some of the measures used include the proportion of people who have listened to news broadcasts several times in the last week, the number of radios and newspapers per capita, and the number of INGOs with members in a given country.

In this sense civic activism is not about direct political action, but rather measuring if citizens have the means to remain well informed. This can be seen as an important precursor for people to then use

this information in their daily lives so they can have informed interpersonal conversations and be able to understand, and if necessary, complain or voice concerns about services or democratic processes.

A high level of civic activism is important because effective governance is best achieved by both responsive governments and citizens who are actively engaged. According to the ISD, countries with a strong culture of civic participation are more likely to have 'effective service delivery, reduced corruption, and faster and more equitable economic growth'. The strength of these relationships with other related proxies for the structures of peace also bear this out.

Chart 45. High levels of trust within society is closely associated with Peace

The Interpersonal Safety and Trust measure examines the relationship between strangers in a society, and the impact that the level of trust has on the level of social cohesion. Societies with a greater level of trust between citizens will have more vibrant group associations, faster economic growth, and more efficient public institutions.

Although the Interpersonal Safety measure has a statistically significant correlation with the GPI as a whole, the correlation is much stronger with the Internal Peace GPI score.

Chart 46. Societies that guarantee gender equality tend to be more peaceful

The Gender Equality measure combines quantitative, qualitative and survey based measures of gender equality in public, at work, and in private. Data is available for a large number of countries on indicators such as CIRI rating of women's social and economic rights, the percentage of the labour force that is female, and the ratio of females to males in primary,
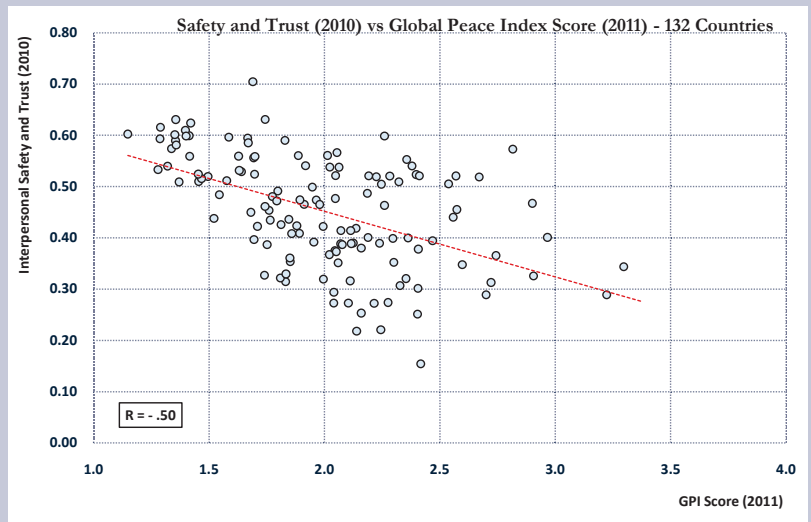
Chart 45
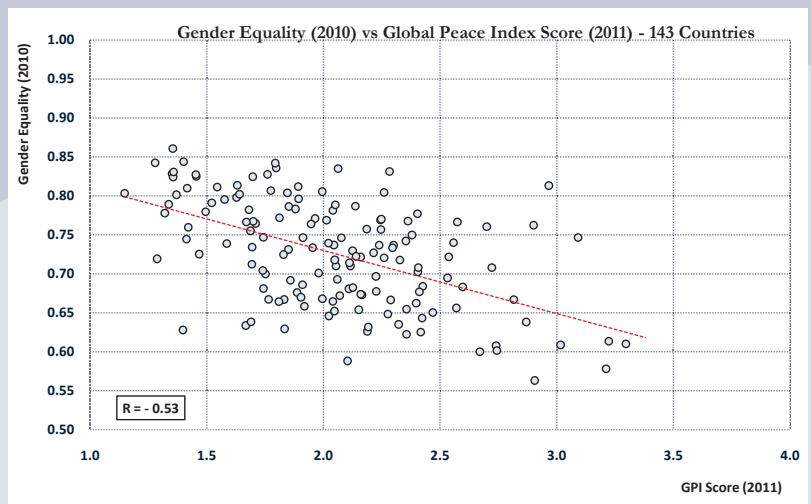
Chart 46

secondary, and tertiary schooling. Data is available for a smaller number of countries on attitudes towards women in the workplace, and the importance of education for girls. A society with higher levels of gender equality will have citizens 'better able to fulfil their potential in life and make the most of their skills and capabilities', and will benefit from the resulting increase in productivity.

Structures of Peace and Social Sustainability

To further understand the relationships between the *Structures of Peace*, the GPI and the social sustainability indicators from ISD the following analysis has been

performed to inform us of the types of environments associated with peace and how informal and formal institutions relate to each other.

The tables below show the correlation coefficients between the indicators of social cohesion and the Structures of Peace. The selected measures for social sustainability were correlated with each of the Structures of Peace. This can be seen in tables showing indicators for each of the eight structures of peace and relevant correlations between them and the selected indicators of social sustainability.

Well-functioning government

Indicator	Correlation to GPI Score	Civic Activism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
Political Democracy Index	-0.62	0.52	0.09	0.46	0.19	0.67
PDI - Electoral process	-0.47	0.41	0.03	0.34	0.04	0.62
PDI - Functioning of government	-0.63	0.49	0.15	0.48	0.30	0.60
Freedom House - Political Rights Index	0.57	-0.45	-0.05	-0.43	-0.17	-0.58
WGI - Regulatory quality	-0.68	0.50	-0.02	0.54	0.51	0.55
WGI - Voice and accountability	-0.66	0.53	0.02	0.50	0.26	0.63
WGI - Political stability	-0.67	0.32	-0.22	0.64	0.40	0.49
WGI - Governance effectiveness	-0.63	0.47	-0.01	0.48	0.64	0.51
Legatum Prosperity Index – Governance	0.72	-0.61	-0.04	-0.56	-0.64	-0.55
WGI - Rule of law	-0.69	0.49	-0.03	0.55	0.61	0.53

Well-functioning government has many correlating factors with social sustainability. Good government can be seen as a driver for social sustainability as good policies would aim at being as inclusive as possible and would provide the services that created an environment that allowed for social sustainability to strengthen. Similarly, citizens that are well informed and proactive help to drive a government that is responsive to their needs. Social sustainability can be seen as a set of values. These values are not only within the citizens of a society, they also pervasive through the members of government, therefore strong social values will mean that policy makers are more likely to pass policies that enhance social sustainability even when they are not cognizant of the meaning of social sustainability. Therefore well-functioning government and social sustainability form a virtuous cycle where both drive each other.

Sound business environment

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
World Bank - Ease of Doing Business	0.55	-0.41	0.07	-0.48	-0.59	-0.58
WEF - Global Competitiveness Report	0.52	0.56	-0.01	0.46	0.70	0.46
GDP per capita	-0.58	0.60	0.10	0.49	0.60	0.43
Legatum Entrepreneurship and opportunity	0.67	-0.64	0.15	-0.61	-0.61	-0.69

Both the civic activism and interpersonal safety and trust indicators of social cohesion have a strong relationship with the measures of a sound business environment, correlating with all available indicators. Interpersonal Safety and Trust correlated with all four measures of a sound business environment. This may point to a relationship between safety and trust and a reduction in dysfunctional relationships within businesses thereby improving efficiency which lowers business transaction costs.

Equitable sharing of resources

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
Human Development Index	-0.57	0.45	-0.22	0.55	0.63	0.68
Gallup Food Security	0.49	-0.26	0.34	-0.31	-0.63	-0.37

The Human Development Index (HDI) is most strongly correlated to the GPI score followed by the Gallup food security poll which questions people if they have been unable to afford food in the past year (for 2009-2010). All three measures of the Gini coefficient, the HDI and Gallup food security question correlate with interpersonal safety and trust, while also showing stronger correlations to the internal GPI score. Intergroup Cohesion is also linked to the HDI but not to the Gini coefficient. Notably, Gallup food security does correlate at r=0.59 with the internal GPI score.

Acceptance of the rights of others

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
Legatum - Personal freedom	0.66	-0.57	-0.08	-0.62	-0.30	-0.56
Legatum - Social capital	0.46	-0.51	-0.04	-0.42	-0.48	-0.51
ISD - Civic activism	-0.41	1.00	0.07	0.39	0.36	0.38
Political participation	-0.50	0.51	0.13	0.34	0.18	0.63
Political culture	-0.66	0.50	0.20	0.51	0.39	0.49
Civil liberties	-0.56	0.45	-0.05	0.42	0.09	0.63
Hostility to foreigners/private property	0.64	-0.34	0.02	-0.56	-0.40	-0.48
Escola de Pau Human Rights Index	0.76	-0.35	0.16	-0.73	-0.17	-0.57
ISD - Intergroup Cohesion	-0.80	0.39	-0.18	1.00	0.39	0.58
Gallup - Personal Economy Series	-0.04	0.09	0.33	-0.09	0.07	-0.17
Women in parliament	-0.28	0.26	0.15	0.21	0.13	0.37
ISD - Gender equality	-0.53	0.38	-0.15	0.58	0.28	1.00

The Acceptance of the rights of others is an important Structure of Peace and has the largest number of indicative indicators associated with social sustainability. This Structure of Peace covers human freedoms and societal attitudes towards others. 'Others' refers to relations between the citizens within the nation and their attitudes towards various ethnic, religious or socio-economic groups. Several of the ISD indicators of social sustainability are indicators of the acceptance of the rights of others.

The Escola de Pau Human Rights Index measures nations' ratification of universal human rights conventions and violations of humanitarian and human rights law, and correlates very strongly with the GPI. Notably, human rights correlate strongly with intergroup cohesion. Civic activism also has a statistical relationship with political participation, political culture, and Legatum's social capital and personal freedom measures.

Good relations with neighbours

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
The extent of regional integration	0.63	-0.63	0.02	-0.50	-0.26	-0.54
Exports + imports% of GDP	-0.11	0.00	-0.10	0.08	0.10	0.06
Foreign direct investment flow	-0.15	0.07	0.07	0.16	0.08	0.07
Net migration (% of the total population)	-0.30	0.25	0.12	0.19	0.41	-0.04
ISD - Interpersonal safety and trust	-0.50	0.36	-0.08	0.39	1.00	0.28

The Good relations with neighbours structure refers to both a nation states' relation with a neighbouring country as well as relations at the interpersonal and regional level. It therefore encompasses both formal and informal institutions. Three factors correlate with extent of regional integration being civil activism, intergroup cohesion and gender equality.

Free flow of information

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
Freedom of the Press	0.56	-0.36	-0.06	-0.43	-0.11	-0.40
Number of visitors as% of domestic population	-0.40	0.22	-0.12	0.33	0.40	0.27
Gallup - Access to the Internet	-0.56	0.48	-0.18	0.50	0.64	0.47

Freedom of information has many positive flow-on effects for society. Freedom of the press from Reporters without Borders correlates with the GPI as does the percentage of society with access to the internet.

While not apparently linked to measures of social sustainability, freedom of the press is also correlated with the democratic electoral process, political instability functioning of the government, civil liberties, corruption perceptions and respect for human rights. This demonstrates how freedom of the press is heavily dependent on the establishment of formal structures, regulation and rules.

PEACE AND SOCIAL SUSTAINABILITY

High levels of education

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
Current Education spending (% of GDP)	-0.35	0.24	-0.03	0.27	0.10	0.29
Primary school enrolment ratio (% Net)	-0.44	0.17	-0.07	0.41	0.43	0.55
Secondary school enrolment ratio (% Net)	-0.48	0.36	-0.28	0.51	0.61	0.66
Higher education enrolment ratio (% Gross)	-0.47	0.47	-0.23	0.47	0.45	0.71
Mean years of schooling	-0.53	0.38	-0.18	0.46	0.49	0.66
Adult literacy rate (% of pop over 15)	-0.43	0.29	-0.26	0.47	0.42	0.70
HDI Education Index	-0.46	0.34	-0.23	0.50	0.46	0.73

Effective educational institutions play an important role in bolstering peace. Citizens who are well educated are better able to make informed decisions; this in turn helps to improve the tolerance and understanding between different groups and nations. What has been shown in prior GPI research is that mean years of schooling is the most important factor in determining peace, whereas education spending as a percentage of GDP is not as strongly correlated. While it is well known data for educational attainment is not always reliable because of varying country reporting standards, the data is based on the best available resources. Gender equality is strongly linked to all educational factors except for current education spending as a percentage of GDP.

United States Peace Index Education correlations

Indicator	Correlation to USPI Score
% With at least high school diploma (2009)	-0.63
High school graduation rate (2007)	-0.72
PEW State of the States - Educational Opportunities	0.57

The relationship between peace and education was further established in the national level study of peace in the United States where education emerged as one of the strongest correlating socio-economic factors in the U.S Peace Index.[44] This however was recorded against a different set of education indicators than are available at the global level.

Low levels of corruption

Indicator	Correlation to GPI Score	Civic ctivism	Clubs and Associations	Intergroup Cohesion	Interpersonal Safety and Trust	Gender Equality
WGI - Control of corruption	-0.63	0.50	0.02	0.48	0.61	0.46
Transparency International - Corruption Index	-0.71	0.58	0.04	0.57	0.61	0.53

The two measures of low levels of corruption correlate strongly with civic activism, interpersonal safety and trust intergroup cohesion and gender equality. This reinforces the notion that corruption and social sustainability are inter-linked. Civic activism positively correlates with perceptions of corruption from Transparency International's Corruption Index, showing lower levels of corruption perception is linked to citizen activism, their use of media and ability to engage in democratic processes. This highlights one of the many virtuous cycles of peace, as where corruption is lower citizens are more likely to be better engaged and informed of democratic process which helps further drive down corruption. The correlating relationship was also found between intergroup cohesion and interpersonal safety and trust as well as gender inequality.

44 The United States Peace Index was released by the Institute for Economics and Peace on April 6 2011. Report and maps are available here: http://www.visionofhumanity.org/info-center/us-peace-index/

Social Sustainability and the Economics of Peace

Social sustainability underpins the economic benefits of peace in several ways. Four ways in which social sustainability aids economic development are explained below:

1. reducing transaction costs
2. promoting collective action
3. preventing capital disaccumulation
4. improving allocative efficiency

By providing the informal institutions, attitudes and behaviours that underpin trust, the acceptance of the rights of others and good relations with neighbours, social sustainability can help reduce violence and the costs associated with violence.

Reducing transaction costs

Transaction costs are those costs which occur in the process of making economic exchanges, for example, the cost of enforcing contracts, placing advertisements, gathering information and so on. In societies where there are low levels of trust and cooperation between different groups, the cost of doing business between groups increases, and the likelihood of intergroup cooperation decreases. Societies with greater levels of trust will have fewer costs associated with policing, crime prevention, and other costs associated with enforcing contracts.

This is seen in the size of violence containment industries and the cost to government of incarceration, and running legal systems to cope with criminal justice.

Promoting collective action

Societies with greater levels of cohesion and trust will be more likely to work together towards achieving common goals, in particular the provision of public goods. For example in societies with greater levels of trust and a more encompassing common identity, citizens are more likely to come together to campaign for services such as public education, infrastructure and healthcare. This is partly why peaceful countries tend to have more equitable forms of public spending.

Preventing capital disaccumulation

Long run economic growth depends on capital accumulation, that is, increasing productivity or/and in economic terms increasing the volume of land, labour, entrepreneurship and physical capital. Tensions and conflicts between groups reduce the rate of productivity and capital accumulation and may even lead to its destruction. Societies with lower social cohesion are more likely to see people move elsewhere in search of opportunity "brain drain", whilst destructive friction between individuals and groups will lead to less efficiency thereby affecting the overall society.

IEP research has focused significantly on these issues in its prior research. It shows nations that experience violence can take many years to recover in production, consumption and overall economic growth.

Improving allocative efficiency

Allocative efficiency is the measure of the benefit or utility derived from a proposed or actual selection in the allocation or allotment of resources, therefore an economy is allocatively and socially efficient when resources are used to maximize the benefit to the society as a whole. However, where social cohesion is lacking, resources will not be distributed efficiently. For example, if one group discriminates against another by refusing to do business with it, or denying employment to members of a certain group, there is a productivity loss to the economy as a whole. Similarly, discrimination against minority groups in terms of access to education will prevent such groups from realizing their full potential, leading to lower levels of human capital.

Ultimately in this situation business loses out, and will be reflected in lower business profits, lower competitiveness and smaller markets.

Case Studies and the Structures of Peace

The tables shown on pages 54 show the percentile rank each of the case study nations are in for each Structure of Peace. The lower percentages reflect higher relative world rankings in comparable global indices, the lower the percent, the 'better'. On average, New Zealand is in the top 10 ranks for all structures, while Switzerland is on average in the top 17 for all structures. This reinforces the aforementioned correlations which show that nations that achieve strong outcomes in these areas will also tend to have more peaceful and resilient societies. The case studies will outline in qualitative detail how they also maintain social sustainability in the context of their diverse local situations.

PEACE AND SOCIAL SUSTAINABILITY

Well-Functioning Government

	New Zealand - World Rank	Switzerland - World Rank
Political Democracy Index (PDI)	5/154	8/154
PDI - Functioning of government	=6/154	=6/154
WGI - Regulatory quality	3/154	11/154
WGI - Voice and accountability	8/154	3/154
WGI - Political stability	15/154	7/154
WGI - Governance effectiveness	6/154	5/154
Legatum Prosperity Index - Governance	4/108	1/108

Sound Business Environment

	New Zealand - World Rank	Switzerland - World Rank
WGI - Rule of law	3/154	10/154
World Bank - Ease of Doing Business	2/148	25/148
WEF - Global Competitiveness Report	22/128	1/128
GDP per capita	24/147	4/147
Legatum Prosperity Index - Entrepreneurship and opportunity	14/108	11/108

Equitable sharing of resources

	New Zealand - World Rank	Switzerland - World Rank
Human Development Index	3/144	12/144
Gender inequality	5/124	9/124
Indices of Social Development - Gender equality	3/149	55/149

Acceptance of the rights of others

	New Zealand - World Rank	Switzerland - World Rank
Legatum Prosperity Index - Personal freedom	3/108	18/108
Indices of Social Development - Civic activism	15/148	3/148
Political participation	2/154	8/154
Political culture	11/154	2/154
Civil liberties	1/154	13/154
Hostility to foreigners/private property	=1/5 score	=1/5 score
Importance of religion	=1/5 score	=1/5 score
Escola de Pau - Human Rights Index	1/143	12/143
Indices of Social Development - Intergroup cohesion	13/150	10/150

Good relations with neighbours

	New Zealand - World Rank	Switzerland - World Rank
The extent of regional integration	59/154	27/154
Indices of Social Development - Safety and trust	35/133	4/133

Free flow of information

	New Zealand - World Rank	Switzerland - World Rank
Freedom of the Press	8/154	1/154
Gallup - Access to the internet	1/154	108/154

High levels of education

	New Zealand - World Rank	Switzerland - World Rank
Mean years of schooling	3/153	40/153

Low levels of corruption

	New Zealand - World Rank	Switzerland - World Rank
World Governance Indicators – Control of corruption	2/154	10/154
Corruption Index – Transparency International	1/154	8/154

New Zealand – A Peaceful, Diverse and Resilient Nation[45]

To further the understanding of peaceful nations and the type of social and economic conditions that characterise them, case studies have been done on two peaceful and resilient nations, New Zealand and Switzerland. These countries were chosen because they both had culturally and linguistically diverse societies yet both had the ability to achieve high levels of peace. The aim of these studies was to further understand the factors that are associated with peace when viewed through the lens of the Structures of Peace.

New Zealand ranks second on the 2011 Global Peace Index. For the past five years it has always ranked in the top five and is characterised by exceptional performance in all of the structures of peace. These two case studies demonstrate that ethnic and linguistic diversity do not necessarily lead to low levels of peace.

New Zealand's demographics

New Zealand's population is 4.35 million. The majority of New Zealanders are of European descent (Pakeha), with smaller proportions of Maori, Pacifika, Asian and 'Other'. Eighty per cent of New Zealanders are monolingual, with English as their only spoken language. According to the national census, one in seven people are of Maori decent.

There are approximately 900,000 overseas-born immigrants, making up 23% of the population, up from 18% in 1996. Traditionally the majority of immigrants have come from England and Ireland due to preferential immigration policies. However repeal of country-of-origin laws in 1987 has seen large increases in the numbers of immigrants from other areas.

New Zealand's identity

Many argue Non-Maori today see Maori identity, culture, and attitudes towards history as positive. This is reflected in widespread acceptance of biculturalism within government circles, the incorporation of Maori symbols in national events such as the performance of haka at rugby games, and support for the inclusion of Maori language in schools. The national anthem is now sung in both Maori and English.

New Zealand is highly urbanised with an urbanisation rate of 86% is only two percent less than Australia which is the most highly urbanised country in the world, and is forecast to reach 90% by 2045. This is significantly higher than the 74.9% average for developed countries.

What are the characteristics of Structures of Peace in New Zealand?

Well-Functioning Government in New Zealand

Political system

New Zealand scores extremely well in international indices representing quality of governance.[46] It has a liberal parliamentary democracy, with Queen Elizabeth II as head of state represented by Governor-General Sir Anand Satyanand. A house of representatives is elected once every three years, with universal suffrage for all citizens over 18 years of age. The current government is led by the centre-right National Party, loosely supported by the indigenous rights Maori Party. New Zealand was the first country in the world to give women the right to vote.

Trust in government and political authority

Most social surveys indicate that New Zealand citizens vest considerable trust in political institutions and leadership. Independent government institutions such as the Office of the Controller and Auditor-General, the Electoral Commission and the Police Conduct Authority have been established to ensure accountability and transparency. Their audit and investigatory powers contribute towards clear, effective operation of government by holding officials accountable to the people.

There are also extremely strong values and political sanctions against the use of violent means for political purposes further helping generate trust in public institutions and a willingness to explore peaceful parliamentary means to achieve political change. Relatively high levels of trust in elected leaders and non–elected officials in relation to local and national problem solving is seen to be a key driver of New Zealand's well-functioning governance and high levels of peacefulness.

New Zealand's sound business environment

New Zealand ranks well in a number of indices measuring business performance within nations including a 3rd ranking in the World Banks' Ease of Doing Business Index; and a rank of 22nd in the World Economic Forum's Global Competitiveness Report.

Economic performance

New Zealand GDP for 2009 was $126.7 billion (current $US, 2009)[47] or $29,352 per capita (PPP), 26th in the world using the latest available data.

Economic background

The wide-ranging deregulation of New Zealand's economy in the 1980s and 1990s, which saw the privatisation of state-controlled companies, promotion of foreign direct investment (FDI) and elimination of currency controls, was one of the most comprehensive

neoliberal reforms in the world. New Zealand today has a well developed open-market economy. New Zealand is ranked 23rd out of 139 countries for competitiveness,[48] and 3rd in the world for economic freedom behind Singapore and Hong Kong.[49]

New Zealand performs especially well in measures of quality of formal institutions and protection for investors, ranking best in the world or very highly compared to other countries.[50]

Legislative measures such as the Financial Advisers Act (2008) and Financial Service Providers Act (2008) regulate the investment sector, requiring registration of financial operations and providing protection for investors, a key ingredient in promoting productive investment.

Employment

New Zealand has the 12th lowest unemployment rate of the 34 OECD countries. Unemployment was 6.8% over the December 2010 quarter, below the mean of 8.6% for the OECD.

Equitable sharing of resources in New Zealand

A low unemployment rate also has some influence on the degree of equity amongst a nation's population.

Gender equality

Overall New Zealand is ranked #5 on the most recent gender equality figures, slightly behind the Scandinavian countries, indicating a relatively good division of resources between men and women based on economic achievement, education, political representation and health outcomes.[51] Women continue to drive many of the campaigns for social, economic and political equality and they have played critical roles in the New Zealand peace movement over the past ninety years.

Acceptance of the rights of others

Maori-Non-Maori[52] relations

As mentioned in the introduction, there is a high degree of biculturalism and acceptance for Maori cultures within the more dominant non-Maori racial group. This is evidenced by numerous social features including the fact that New Zealand's national anthem is now sung in both Maori and English.

As a unique vehicle to enshrine the rights of others, the Treaty of Waitangi/Te Tiriti o Waitangi, signed in 1840, enshrined the concept of a formal partnership between Maori and the European settlers, although its principles were frequently breached by the colonial government. New Zealand is perhaps the only former European colony that continues to recognise a treaty with indigenous peoples as its foundational document.[53] The majority of New Zealanders accept the signing of

the Treaty as the most important event in the country's history, regardless of whether they identify as Maori or Pakeha.[54]

After a rise in protest activities and violence by Maori activists in the 1960s and 1970s the government established the Waitangi Tribunal, the purpose of which is to investigate and make recommendations on claims brought by Maori relating to principles of the Treaty.[55] Since 1975 it has made over 100 reports assessing the validity of claims and making recommendations for compensation, which have resulted in almost NZ$1 billion being paid in settlements by the New Zealand government to date.

Human rights

New Zealand has a good reputation and long tradition of promoting human rights domestically and internationally. The egalitarian impulse that everyone deserves an equal opportunity in life shapes government policy and public attitudes on what those human rights should be. New Zealand played a lead role in the deliberations on the Universal Declaration of Human Rights, and advocated including economic, social and cultural rights as well as civil and political rights.[56] New Zealand established a comprehensive welfare system early, later strengthening it in the 1930s. The New Zealand Human Rights Commission (NZHRC), that holds an 'A' rating from the International Co-ordinating Commission of National Human Rights Institutions, is tasked with promoting human rights and encouraging harmonious relationships between different sectors of society.

Religious freedom

Religious freedoms are protected through the Bill of Rights Act and the Human Rights Act. New Zealand is a secular nation, meaning that no religion or system of belief is held superior to any other. The Bill of Rights Act (13) guarantees that "Everyone has the right to freedom of thought, conscience, religion or belief"; the Human Rights Act ensures that no-one may be discriminated against based on religious belief.

At the signing of the Treaty of Waitangi a verbal agreement was made between Maori and the Crown that religious diversity and equality would be respected, including traditional Maori beliefs.

Good relations with neighbouring states and regional peacefulness

International military relations

Of special importance to government policy is New Zealand's leadership role in the South Pacific. As well as being the second largest country in terms of economy and population in the region, New Zealand is home to

48 The World Economic Forum (2011). *The Global Competitiveness Report*, 2010-2011, Schwab, K. (ed.)

49 Fraser Institute (2010). *Economic Freedom of the World*.

50 For instance, New Zealand ranks in the top 10 in all World Governance Indicators.

51 Hausman, R., Tyson, L. & Zahidi, S. (2010). *The Global Gender Gap Report*. World Economic Forum: Geneva.

52 Pakeh is a Maori term for New Zealanders who are not of Maori blood lines. They are mostly descended from British and to a lesser extent Irish settlers of the nineteenth and twentieth centuries.

53 Liu, Wilson, McClure and Higgins, (1999). "Social Identity and Perceptions of History: Cultural Representations of Aotearoa/New Zealand", *European Journal of Social Psychology*, 29.

54 Liu et al. (1999).

55 *Watangi Tribunal, Te Ropu Whakamana i te Tiriti o Waitangi*, http://www.waitangi-tribunal.govt.nz

56 United Nations Human Rights Council. (2009) *Universal Periodic Review: New Zealand*. A/HRC/W. G6/5/NZL/1.

large populations of Pacifika peoples[57], in some cases in larger numbers than remain in the islands. New Zealand recognises the necessity to maintain stability in the region both as a responsibility as a regional power and a self-interested policy. New Zealand remains active as a part of the Pacific Islands Forum and is responsible for the defence of Tokelau, the Cook Islands and Niue. The New Zealand Defence Force is expected to provide aid to Pacific nations in the event of humanitarian crises or natural disasters. The overall strength of bonds with neighbouring Pacific states is an important part of New Zealand's peacefulness, as regional integration and good diplomatic relations are correlated with a decreased chance of armed conflict occurring.[58]

International organisations

New Zealand was a founding member of the United Nations and took part in writing its charter. Today its commitment to the international rule of law remains strong. New Zealand personnel are currently engaged in 12 peacekeeping missions, including significant involvement in Timor-Leste. New Zealand's active engagement in the UN and commitment to the international rule of law is a driver of New Zealand's good international relations and reputation as a peaceful player on the world stage. New Zealand is one of a select group of countries that maintains full payment of its UN levy for peacekeeping operations.

Free flow of information fosters social sustainability

New Zealand possesses a vocal, independent civil society and a high level of freedom of the press backed up by its 1990 Bill or Rights which guarantees the right to freely seek and express information. It was ranked 8th in the world in 2010 for press freedom by Reporters Without Borders, and has consistently been in the top 20 countries since it was included in the Press Freedom Index in 2003[59]; annual surveys by Freedom House also place New Zealand amongst the top countries in the world for media freedom.[60]

High levels of participation in education and a resilient, sustainable society

Retention in schooling

Education is compulsory in New Zealand between the ages of 6 and 16, although most children start school at age 5. The truancy rate in 2006 was 2.3%, a slight increase from 2.1% in 2004, with significant increases for those who are in Year 11 or above. In 2006 the rate of students staying until age 17 was estimated to be 71.1%. The figure is lower for males than females and lower for Maori and those from a lower socioeconomic background.

Educational achievement

In 2007 66% of school leavers had a secondary school qualification. This figure has been trending upward, signalling positive effects for New Zealand's youth. The figure is slightly lower for Maori, Pacifika and male students and those from lower socioeconomic schools.

Although New Zealand's educational data are good when benchmarked against the OECD, the presence of systematic disparities between non-Maori and Maori/Pacifika students warrants further attention amongst policy makers.

Low levels of corruption

New Zealand is consistently ranked by Transparency International's Perceptions of Corruption Index as being 'Least Corrupt', and surveys have found that even if New Zealanders have negative experiences with government institutions, they normally attribute these to the incompetence of the individual and do not lose faith in the government as a whole.[61]

How can New Zealand further improve its peacefulness?

New Zealand is forecast to become more ethnically diverse over the next twenty years which may pose challenges particularly in the areas of inequality and marginalisation.

New Zealand has a higher level of violent crime and incarceration that most other highly peaceful nations. Without addressing the root causes of criminality and insecurity the government risks spending more and more money that could be put to more productive use in other areas of society without seeing the anticipated results.

In order to maintain its high standing and reputation as a peaceful country New Zealand needs to address issues of inequality and marginalisation. Especially notable are the inequalities and lack of achievement that are transmitted through family circumstances, resulting in problems for future generations of ill-health, criminality, violent behaviour, lack of economic achievement and so on. However, without addressing current issues drawn out by this analysis of the social, economic, governance and cultural structures of peace, New Zealand may face decreasing levels of peacefulness in future.

Switzerland[62] – A Peaceful, Religiously and Linguistically Diverse Nation

Switzerland is ranked 16th on the 2011 Global Peace Index. It has a highly decentralised system of governance and significant language diversity with four major linguistic groups and two principal religions all of which have managed to coexist in relative harmony for the last 200 years.

57 People of Pacific Island decent.

58 Institute for Economics and Peace (2010a). Peace, *Wealth and Human Potential*. http://www.economicsandpeace.org/Education/Resources.

59 http://www.rsf.org

60 du Fresne, K. (2005). *The Right to Know: news media freedom in New Zealand*. Newspaper Publishers Association: Wellington.

61 Cullen & Reilly, (2007). "Information Privacy and Trust in Government", *Journal of Information Technology and Politics*, 4(3)

62 This case study is an extract of a larger study commissioned by IEP and completed by National Centre for Peace and Conflict Studies, University of Otago in April 2011.

This case study examines Switzerland's relatively sustained peacefulness through the lens of the Structures of Peace.

Well-Functioning Government in Switzerland

The Swiss political system is characterised by various democratic features that have endured for many years. Since the mid-1800s, Switzerland has enjoyed its status as a federal republic, with 26 autonomous, decentralised cantons making up the Swiss State. Switzerland has a bicameral parliament called the Federal Assembly, which is made up of the Council of States and the National Council. Members of the National Council are elected by popular vote on a basis of proportional representation to serve four-year terms.

An organizing principle for this decentralised arrangement was the fact that, for all these years, each of the cantons could "live and develop according to its own culture, history, language and religion."[63] Switzerland has long been acknowledged as being a "composed nation".[64]

As well as allowing various ethnic, linguistic and religious groups to retain aspects of their identity, the decentralised system in Switzerland has the added benefit of fostering beneficial competition between cantons. The system allows Swiss citizens to "vote with their feet"[65] That is to say, having seen a range of policy decisions in various cantons, citizens can in fact move to a different canton if they do so choose.

The Swiss have also long been acknowledged as having a strong belief in direct democracy. The opportunity to make use of referenda has been a part of the Swiss system for over one hundred years. Referenda and public initiative have frequently been made use of in the years since 1848. Proposed areas of change range from education, culture and media through to national defence, economy, and the environment. Referenda give the Swiss a sense of national ownership, and foster a trust in the functioning of their political system.

A Sound Business Environment

Switzerland has a strong economy and sound business environment. In surveys and reports conducted by the World Economic Forum, the Wall Street Journal, and Ernst and Young, Switzerland has ranked as the most competitive country worldwide, the freest economy, and the top choice for Foreign Direct Investment, respectively.[66] The GPI identifies a sound business environment as being a significant Structure of Peace, and Switzerland is globally considered a good place to do business.

The role that foreign investment has played, and continues to play in the Swiss economy is vital and clearly would not continue if faith in the quality of the business environment deteriorated. Thanks to its stability, and to its neutrality in foreign affairs, Switzerland is seen as an attractive prospect for overseas investors and business-people, and continues to prosper in this area. Switzerland is regarded as having a high "capacity for innovation, sophisticated business culture, high level and patents and efficient labour market".[67]

Additionally, the Swiss labour market combines one of the highest participation rates in the OECD with low unemployment. The economy is further buoyed by the fact that the Swiss Franc is one of the world's leading currencies. It is freely convertible and widely used as an investment, borrowing and reserve unit.

Equitable sharing of resources – provides upside for future peacefulness

Switzerland ranks well on the United Nations' Gender Inequality Index.[68] The Index considers five indicators before ranking each country: labour force participation, education attainment (secondary level and above), parliamentary representation, adolescent fertility, and maternal mortality.[69] Of the 169 countries considered, Switzerland was ranked 4th in terms of gender equality.

Political representation of women is unequal but comparatively high with 29.5% represented in the National Council, 21.2% serving on their Cantonal Executive, and 25.6% members of their Cantonal Parliament.[70]

Areas of inequality remain. The labour force participation rate in 2008 was 76.6% for females, compared to 87.8% for males. In terms of education, 62.9% of females had at least a secondary school education in 2010, whereas 74.5% of males had at least that level.

Good relations with neighbours

Commitment to international humanitarianism and armed neutrality

Armed neutrality is an unusual feature of Switzerland's international profile. In some areas this policy helps to strengthen its Global Peace Index ranking but in other areas, such as the availability of weapons, it is possible that future abuse of such readily available weapons may have an impact.

Conscription has been a part of Swiss culture for many years, and remains a significant part of Swiss life. Able-bodied men and women who volunteer must complete 260 days of service, a training period of 124-145 days, and 6-7 retraining courses, each lasting 19 days at a time.[71] These soldiers are traditionally required to keep their guns at home, seeing as Switzerland has no real standing army. This has resulted in approximately

63 Fleiner, Thomas. "Recent Developments of Swiss Federalism" *The Journal of Federalism* Vol. 32, No. 2 (Spring 2002) p. 99 Available on http://publius.oxfordjournals.org/content/32/2/97.full.pdf+html (accessed February, 2011).

64 Ibid.

65 Frey, Bruno S. and Iris Bohnet. "Switzerland: A Paradigm for Europe?" *European Review* Vol. 3, No. 4 (1995) p. 289 Available on http://journals.cambridge.org/action/displayFulltext?type=1&fid=5304324&jid=ERW&volumeId=3&issueId=04&aid=5304316&bodyId=&membershipNumber=&societyETOCSession (accessed February, 2011).

66 Economist Intelligence Unit. Country Commerce: Switzerland. (New York: EIU, 2010) p. 14Available on http://web.ebscohost.com/ehost/pdfviewer/p

67 Ibid.

68 United Nations. "Human Development Reports: The Gender Inequality Index (GII)" (New York: United Nations, 2010) Available on http://hdr.undp.org/en/statistics/gii/ (accessed March, 2011).

69 Ibid.

70 Office Fédéral de la statistique. *Mémento statistique de la Suisse* 2010, 2010, p. 48

71 Mannitz, Sabine. *The Normative Construction of the Soldier in Switzerland: Constitutional Conditions and Public Political Discourse.* (Frankfurt: PRIF, 2007) Available on http://cgi.hsfk.de/fileadmin/downloads/Switzerland_9.pdf (accessed March, 2011) downloads/Switzerland_9.pdf (accessed March, 2011)

two million weapons being kept in Swiss homes. In addition to this, roads and bridges are mined, and weapons caches are stored in the hills surrounding Switzerland. While valuing their isolationist view and their independence, the Swiss recognise that they occupy a strategic place on the continent: they are at the heart of Western Europe.

Switzerland places a strong emphasis on good relations with neighbouring states and maintains a non-aligned status. Further supporting its relations with neighbours and the international community, Switzerland has also lent its support to the Geneva Convention, a code which governs the humanitarian treatment of war victims. As well as this, it is active in many aid-related missions, such as those in Haiti and Pakistan. The Swiss help with "deployment of specialists, through material assistance or through financial contributions."[72] All of this helps Switzerland to be seen as a responsible and compassionate global citizen, and aids in its perception as a peaceful nation.

Free flow of information

The diversity of the Swiss media coupled with affluence, near universal literacy, and direct civic engagement has been fertile ground for a highly competitive and largely independent press.[73] Moreover, because of the regional affiliations to neighbouring countries, there is a large foreign press contingent present.

The Swiss Broadcasting Code, specified in the Declaration of Duties and Rights of Journalists, states:

The right to information, to free speech and criticism is one of the basic human rights. The duties and rights of journalists derive from the public's right to know facts and opinions. The responsibility of journalists towards the public has priority over any other responsibility, particularly the responsibility to their employers and the state organs.[74]

This freedom ensures that they can continue to safeguard the rights of Swiss citizens in regards to freedom of information and transparency.

Low Levels of corruption

In 2010, Switzerland ranked 9th in Transparency International's Corruption Perceptions Index. This reflects the Swiss commitment to political stability, regulations governing conflicts of interest, and solid, functioning public institutions.

Switzerland also performed well in the 2006 Bribe Payers Index, also administered by Transparency International. In this study, the Swiss were ranked the most effective at preventing bribery from taking place in their companies.

In spite of its history of secretive banks, there are mechanisms in place to ensure that transparency is maintained in public institutions. Additionally, the principle of making decisions only once consensus has been reached, contributes towards transparency and accountability. Seeing as all parties take part in the decision making, they must all have access to information held by the administration.

Acceptance of the rights of others

Switzerland's multiple official languages, different religions and increased levels of immigration all support the fact that there is a relatively high acceptance of the rights of those from varied social groups.

Language and religion

Statistics taken from the Swiss Census in 2000 show that German is the most commonly spoken language in Switzerland, with 63.7% of people considering it their first language. French is still widely spoken, with 20.4% calling it their mother tongue, while Italian and Romansh, the other official languages account for just 6.5% and 0.5% of the population, respectively. 9% of the population consider non-official languages to be their native language.

The two main religions are still Roman Catholicism and Protestantism. While Catholicism has decreased slightly, 41.8% of the population still considers it to be their religion. Similarly, Protestantism has decreased in popularity, but is still the religion of 33% of the population. Minority and new religions are increasing, such as Islam, Buddhism and Orthodox Christianity.

Religious groups share similar values, such as the education of the younger generation in the ways of their faith and the celebrations of holidays on the religious calendar.

Fortunately for Switzerland's social integration and support for the rights of others, the geographic segmentation of those who speak a certain language does not match that for religious beliefs. That these cleavages cross-cut one another means that there are both German-speaking Catholics, and French-speaking Catholics and German-speaking Protestants, and French-speaking Protestants. The opportunities for cross-cutting social-networks in Switzerland are many. Sustained contact between these diverse groups is a positive step in sustaining greater levels of understanding between social groups.

Immigration

As mentioned above, Switzerland is noticing a marked increase in the number of immigrants arriving in the country, seeking a home, a job, and a place to raise a family. *Mémento statistique de la Suisse* 2010, the report issued by the Office Fédéral de la statistique (OFS) charts the movements of these people, showing that in 2008, over 20% of the resident population was of a foreign

72 Federal Chancellery. "Solidarity with People in Need." Available on: http://www.ch.ch/

73 Press Reference. Switzerland. Available on: http://www.pressreference.com/Sw-Ur/Switzerland.html (accessed March, 2011)

74 Ibid.

nationality.[75] In short, of a population of just under 8 million, 1,763,600 were immigrants. These immigrants came mostly from European countries, such as Italy, Germany, Portugal, Serbia and Montenegro, France, Turkey and Spain.

Marriage patterns prove to be quite significant for Switzerland's social and immigration profile. Marriage accounts for a large percentage of both internal migration and immigration. In 2008, the OFS registered a total of 41,534 marriages in Switzerland. Of these, around 15,000 took place between one Swiss citizen and one foreigner. Just over 5,000 took place between two foreigners.[76] It is reasonable to expect that of these marriages, some will have involved inter-cantonal movement, and some will have involved one spouse leaving their homeland to join another in Switzerland.

While these statistics in themselves do not necessarily point towards an explanation of peacefulness between ethnic groups, the possible motivations behind them do. High levels of immigration reflect good relations with neighbouring states and a degree of tolerance towards foreigners even if there are notable exceptions to this generalisation.

High levels of Education

Participation rates in primary and secondary education

Through playing a role as a valuable tool for socialisation and transferring of shared values, behaviours, and beliefs, education is a critical driver of peace in Switzerland. However, just as health-care, social welfare and taxes differ between the decentralised cantons, so does education. Differences occur in almost every aspect: the number of years of compulsory schooling, curriculum details and language of instruction.

Summary

Despite its significant diversity, Switzerland is a highly peaceful nation. Whilst the Global Peace Index does not measure levels of domestic violence or self-inflicted violence there do appear to be some problems regarding these issues, overall the country continues to deal with its diverse ethnic, linguistic and religious differences in a socially sustainable way. The recent referendum resulting in the ban on minarets triggered claims of xenophobia and it is important the country handles these issues in a less divisive way in the future.

75 Office Fédéral de la statistique. Mémento statistique de la Suisse 2010 (Neuchatel: OFS, 2010) p. 7Available on http://www.bfs.admin.ch/bfs/portal/fr/index/dienstleistungen/publikationen_statistik/statistische_jahrbuecher/taschenstatistik.html (accessed February, 2011)

76 Office Fédéral de la statistique. Mémento statistique de la Suisse 2010, 2010, p. 6

APPENDIX A

Sources of the secondary indicators for the United States Peace Index

Factor	Year	Source
Unemployment Rate	2009	Bureau of Labor Statistics, Geographical Profile of Employment and Unemployment
Life Expectancy at Birth	2007	Social Science Research Council, American Human Development Project
Teenage Death Rate	2007	Annie E. Casey Foundation , "Kids Count National Data"
GSP Per Capita	2009	Bureau of Economic Analysis, Gross Domestic Product by State
% With Diabetes	2008	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
% Adult Obesity	2008	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
Infant Mortality Rate	2007	Centers for Disease Control and Prevention, "Deaths: Final Data for 2007"
Teenage Pregnancy Rate	2008	Centers for Disease Control and Prevention, "Births: Final Data for 2008"
High School Graduation Rate	2009	Digest of Education Statistics, National Centre for Education Statistics (2009)
2008 Election (% Voted Republican)	2008	Federal Electoral Commission, 2008 Official Federal Presidential Election Results
2008 Election (% Voted Democrat)	2008	Federal Electoral Commission, 2008 Official Federal Presidential Election Results
Gallup State of the States, Wellbeing	2009	Gallup, State of the States
Gallup State of the States, Basic Access	2009	Gallup, State of the States
Reported Political Affiliation (% Conservative)	2009	Gallup, State of the States
Reported Political Affiliation (% Moderate)	2009	Gallup, State of the States
Reported Political Affiliation (% Liberal)	2009	Gallup, State of the States
% Without Health Insurance	2008	Kaiser Family Foundation, Kaiser State Health Facts, http://www.statehealthfacts.org
2008 Election (Voter Turnout)	2008	McDonald, Michael P. "Voter Turnout 1980-2010" United States Election Project <http://elections.gmu.edu/index.html>
Average Teacher Salary	2009	National Education Association. "Rankings and Estimates" (2009)
Educational funding (per student average)	2008	Public Education Finances Report, U.S. Census Bureau (2008)
U.S. Human Development Index	2008	Social Science Research Council, American Human Development Project
PEW State of the States - Government Management	2008	The PEW center on the states, Grading the States
PEW State of the States - Educational Opportunities	2008	The PEW center on the states, grading the states (2008)
PEW State of the States - Campaign Finance	2008	The PEW center on the states, Grading the States
% of Children with Immigrant Parents	2005-2006	Urban Institute, "Children of Immigrants: National and State Characteristics, Urban Institute"
Labor Force Participation Rate	2009	U.S. Census Bureau , American Community Survey
Median Income	2008-2009	U.S. Census Bureau, American Community Survey
% Children in Single Parent Families	2009	U.S. Census Bureau, American Community Survey
Armed Forces Participation Rate	2009	U.S. Census Bureau, American Community Survey
Household Income Gini Coefficient	2008	U.S. Census Bureau, American Community Survey
% With at least High School Diploma	2009	U.S. Census Bureau, American Community Survey
% Bachelor's Degree or Higher	2009	U.S. Census Bureau, American Community Survey
Household Income Gini Coefficient	2009	U.S. Census Bureau, American Community Survey
% Individuals with home internet access	2009	U.S. Census Bureau, Current Population Survey
Population	2009	U.S. Census Bureau, Population Estimates
% Households in Poverty	2009	U.S. Census Bureau, Small Area Income and Poverty Estimates

APPENDIX B

Sources used to identify the structures of peace

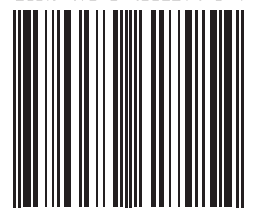| Indicator	Source
Exports + Imports% of GDP	Economist Intelligence Unit
Foreign Direct Investment (flow)% of GDP	Economist Intelligence Unit
The extent of regional integration	Economist Intelligence Unit
Hostility to foreigners/private property	Economist Intelligence Unit
Importance of religion in national life	Economist Intelligence Unit
Willingness to fight	Economist Intelligence Unit
Nominal GDP (US$PPP bn)	Economist Intelligence Unit
Nominal GDP (US$bn)	Economist Intelligence Unit
GDP per capita	Economist Intelligence Unit
Unemployment%	Economist Intelligence Unit
Political Democracy	EIU Democracy Index
Electoral process	EIU Democracy Index
Functioning of government	EIU Democracy Index
Political participation	EIU Democracy Index
Political culture	EIU Democracy Index
Civil liberties	EIU Democracy Index
Gini Index	Human Development Index, UNDP
Women in Parliament	Inter-Parliamentary Union
Press Freedom Index	Reporters without Borders
Corruption Perceptions Index	Transparency International
15-34 year old males as a% of adult population	UN World Population Prospects
Gender ratio of population: women/men	UN World Population Prospects
Current education spending (% of GDP)	UNESCO
Mean years of schooling	UNESCO
Adult literacy rate (% of pop over 15)	UNESCO
Number of visitors as% of domestic population	UNWTO Compendium of Tourism Statistics
Net Migration (% of total population)	World Bank, World Development Indicators
Primary school enrolment ratio (% Net)	World Bank, World Development Indicators
Secondary school enrolment ratio (% Net)	World Bank, World Development Indicators
Higher education enrolment (% Gross)	World Bank, World Development Indicators
Life expectancy	World Bank, World Development Indicators
Infant mortality per 1,000 live births	World Bank, World Development Indicators
Gender Gap Index	World Economic Forum
Public Debt as% of GDP (CIA)	Central Intelligence Agency
Shared Societies Index	Club de Madrid
Escola de Pau Human Rights Index	Escola de Cultura de Pau
% of the population undernourished	FAO
Political Rights Index	Freedom House
Gallup Food Security (2008-09)	Gallup
Gallup - Personal economy series	Gallup
Gallup - Local Economic Opportunism (Better)	Gallup
Gallup - Local Economic Opportunism (Same)	Gallup
Gallup - Local Economic Opportunism (Worse)	Gallup
Gallup - Internet Access	Gallup
Gallup - Importance of Religion	Gallup
Gallup - Safety	Gallup
Institute for Development Studies - Civic Activism	Institute for Development Studies
Institute for Development Studies - Clubs and Associations	Institute for Development Studies
Institute for Development Studies - Intergroup Cohesion	Institute for Development Studies
Institute for Development Studies - Interpersonal Safety and Trust	Institute for Development Studies
Institute for Development Studies - Gender Equality	Institute for Development Studies
GDP per capita, PPP US$ (IMF) 2009	International Monetary Fund
Legatum Index - Governance	Legatum
Legatum Index - Entrepreneurship and Opportunity	Legatum
Legatum Index - Personal Freedom	Legatum
Legatum Index - Social Capital	Legatum
Sustainable Society Index	Sustainable Society Foundation
Human Development Index (2010)	United Nations
Average Annual Population Growth 2010 - 2015%	United Nations
World Governance Indicators - All 6 indicators averaged	World Bank
World Governance Indicators - Regulatory Quality	World Bank
World Governance Indicators - Voice and Accountability Index	World Bank
World Governance Indicators - Political Stability and absence of violence	World Bank
World Governance Indicators - Governance Effectiveness	World Bank
World Governance Indicators - Rule of Law	World Bank
World Governance Indicators - Control of Corruption	World Bank
Ease of Doing Business Index	World Bank
Income Distribution	World Bank
Geniune Savings	World Bank
Global Competitiveness Index	World Economic Forum

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