



Peace Means Economic Advantage

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The Single Major Challenge Facing Humanity is Sustainability



- Challenges are global, urgent and require unparalleled co-operation



- ***Peace is the prerequisite*** for solving these problems



Why Measure Peace?



- Never been done before
- Peace is poorly understood
- **Peace should and can be measured**
- Through measuring peace its texture can be analysed

Without measurement, it is hard to know whether our actions are helping or hindering us in achieving our goals



Defining Peace

The perfect state would have no Police, Jails or Crime

Negative peace

Measures

- Crime
- Suppression
- Military
- War



GPI

Positive Peace

Derived through
Statistical analysis of
datasets, indices
and attitudes with
the GPI

GPI 2011 Results

The 10 Most Peaceful Countries

Rank	Country	Score
1	 Iceland	1.148
2	 New Zealand	1.279
3	 Japan	1.287
4	 Denmark	1.289
5	 Czech Republic	1.320
6	 Austria	1.337
7	 Finland	1.352
8	 Canada	1.355
9	 Norway	1.356
10	 Slovenia	1.358

➤ 15  Germany 1.416

GPI 2011 Results

The 10 Least Peaceful Countries

Rank	Country	Score
153	 Somalia	3.379
152	 Iraq	3.296
151	 Sudan	3.223
150	 Afghanistan	3.212
149	 North Korea	3.092
148	 DRC	3.016
147	 Russia	2.966
146	 Pakistan	2.905
145	 Israel	2.901
144	 Central African Rep	2.869

Risers and Fallers



Top 5 Risers

Country	Score, 2011	Ch. In score, 2010-12	Rank, 2011	Ch. In rank 2010-11
Georgia	2.558	-0.412	134	+12
Chad	2.740	-0.224	141	+4
Mongolia	1.880	-0.221	57	+36
Sri Lanka	2.407	-0.215	126	+11
Thailand	2.247	-0.147	107	+19

Top 5 Fallers

Country	Score, 2011	Ch. In score, 2010-11	Rank, 2011	Ch. In rank 2010-11
Libya	2.816	+0.977	143	-83
Bahrain	2.398	+0.429	123	-47
Egypt	2.023	+0.239	73	-25
N. Korea	3.092	+0.236	149	-6
Madagascar	2.239	+0.220	105	-26



Five Year Trends 2007 - 2011

Publication Year	GPI average Score	Countries whose peace increased	Countries whose peace decreased	Countries with no score change
2007	1.94	•	•	•
2008	1.92	68	39	13
2009	1.96	54	76	14
2010	2.02	28	106	10
2011	2.05	51	79	19

**** Peace has Decreased by 4% in last 5 years***



Monetary Value of Peace



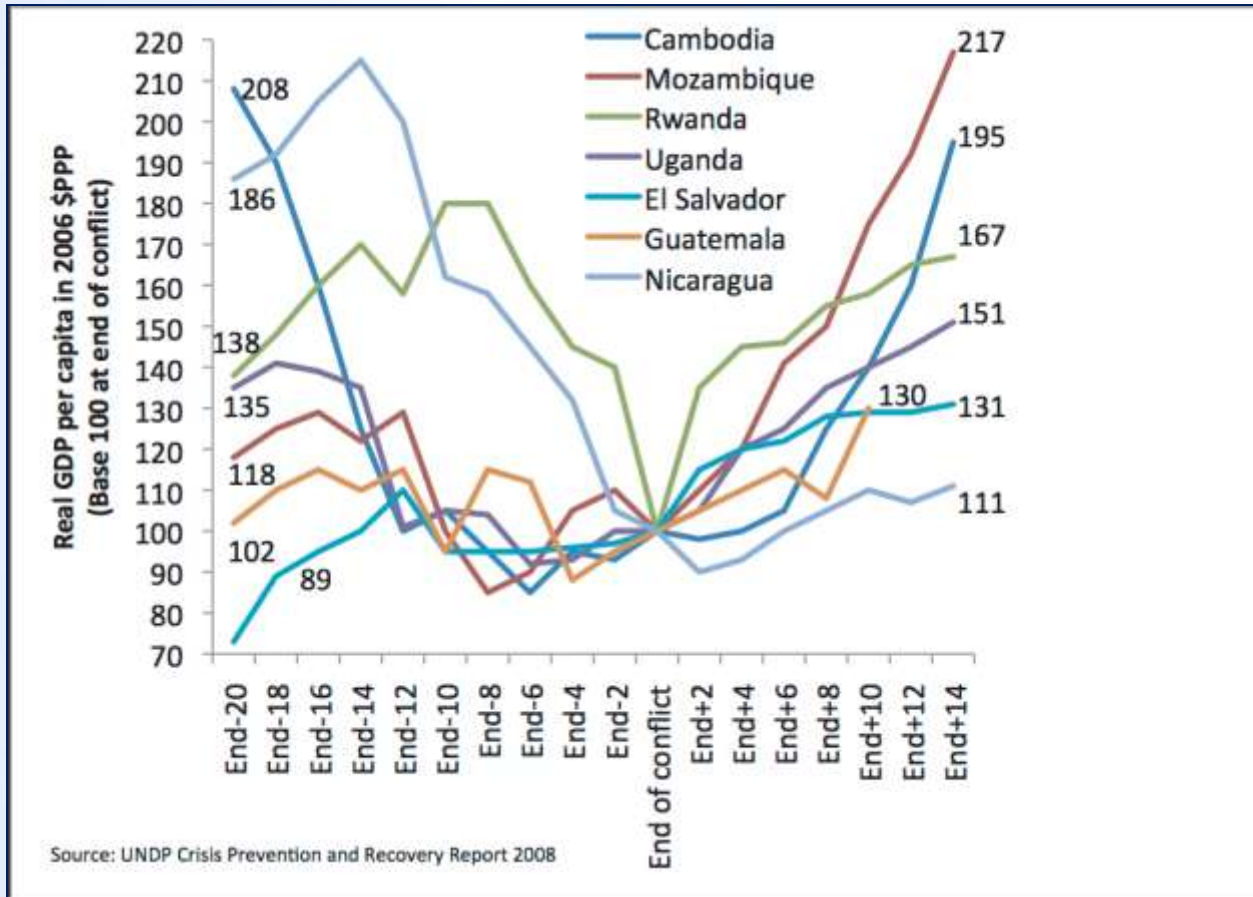
GPI Correlations with Per Capita Income

For every 10 places a country rises on the GPI:

- Per capita income increases by **US\$3,100**
- Consumer spending on **food and non-alcoholic beverages** increases by **US\$132**
- Consumer spending on **leisure and recreation** increases by **US\$144**
- Consumer spending on **household goods and services** increases by **US\$87**
- Consumer spending on **housing** increases by **US\$309**
- Consumer spending on **footwear and clothing** increases by **US\$87**
- Consumer spending on **communications** increases by **US\$42**

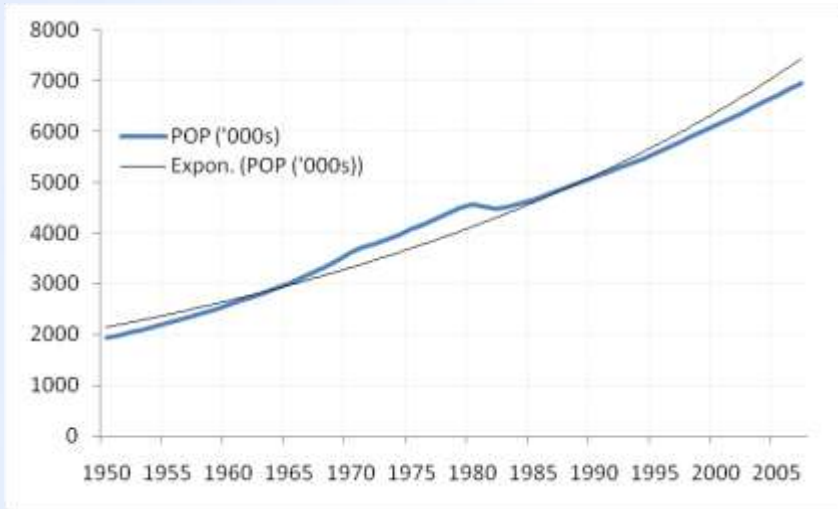


Changes in GDP related to Conflict





The Violence Crisis



The case of El Salvador

Civil war: 1979-1991 (UNDP, 2008)

Data: 1950 - 2007

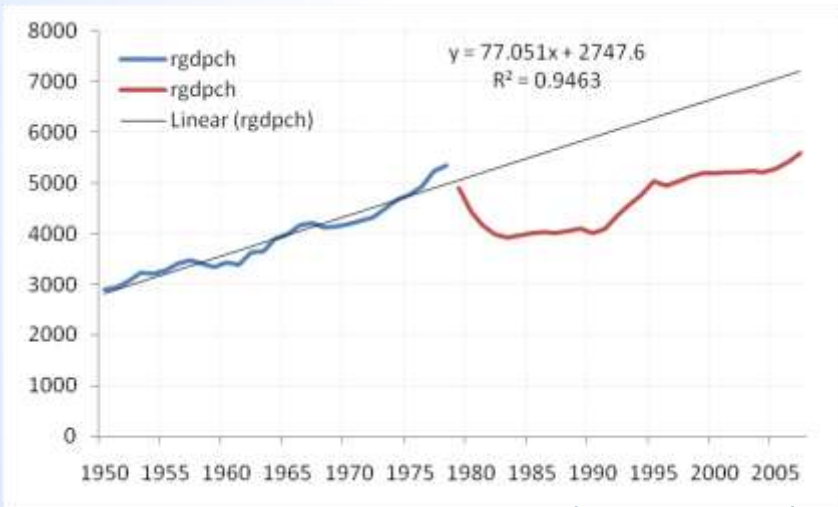
Top panel: population (in '000s)

Bottom panel: real per capita GDP (I\$)

Base year = 2005

Source: computed from

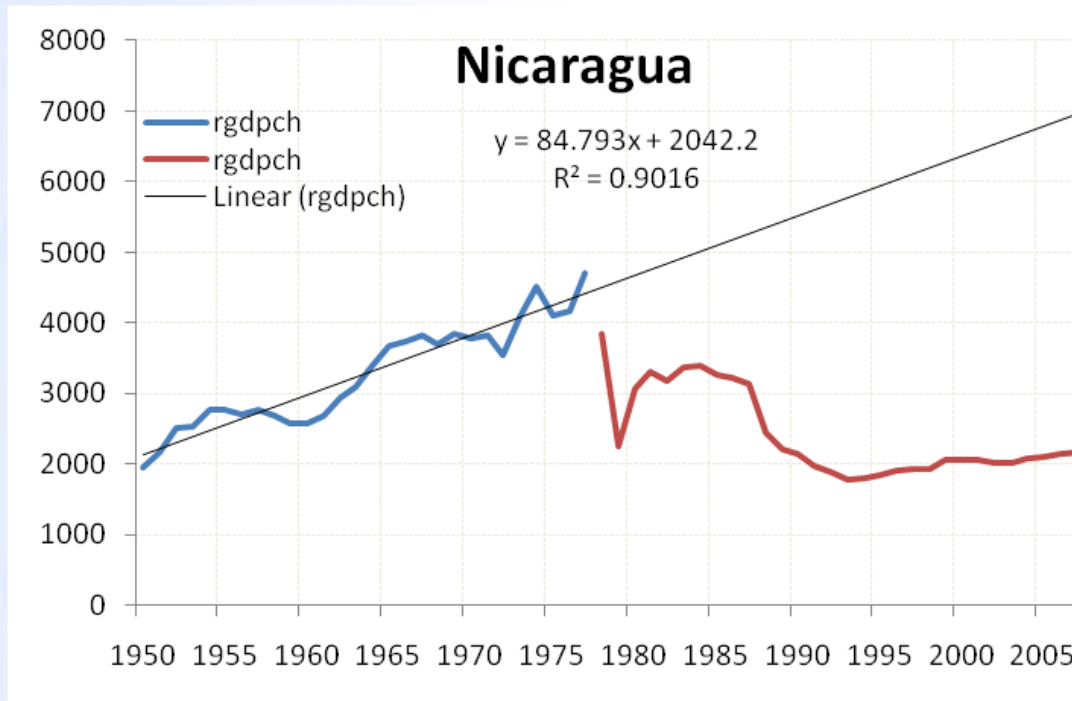
Penn World Tables 6.3



Charts courtesy of Prof. Jurgen Brauer



The Violence Crisis



El Salvador was
“lucky”

=> here is the
case of
Nicaragua

The case of Nicaragua

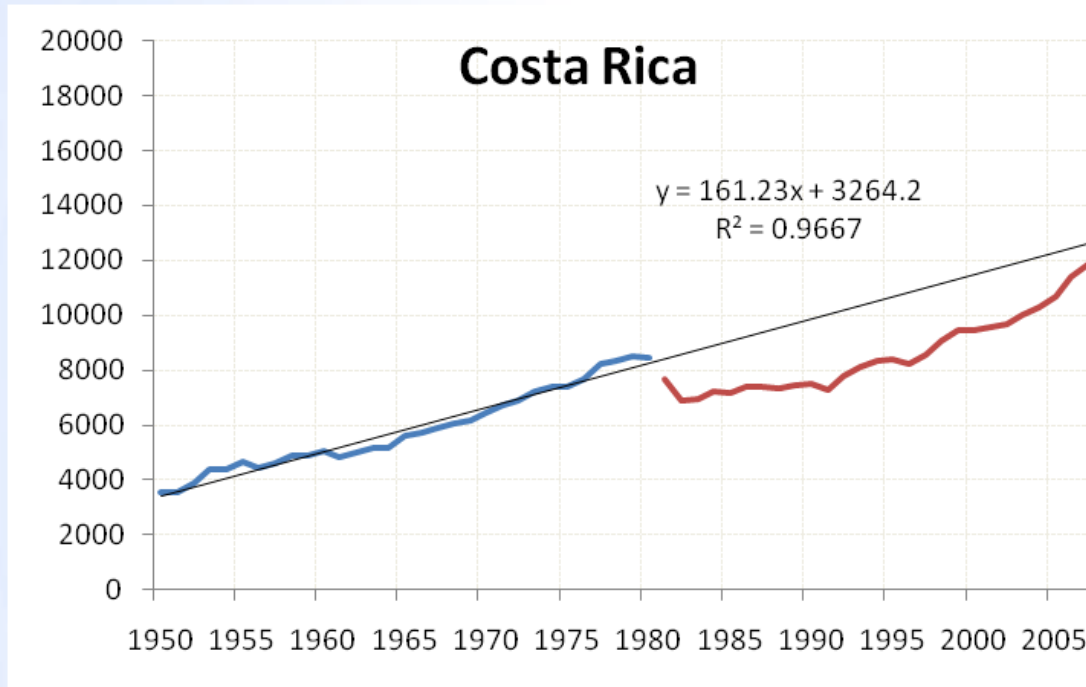
Data: 1950 – 2007; real per capita GDP (I\$); base year = 2005

Source: computed from Penn World Tables 6.3

Chart courtesy of Prof. Jurgen Brauer



The Violence Crisis



And here is the case of a country that had no war

=> but its neighbors did

The case of Costa Rica

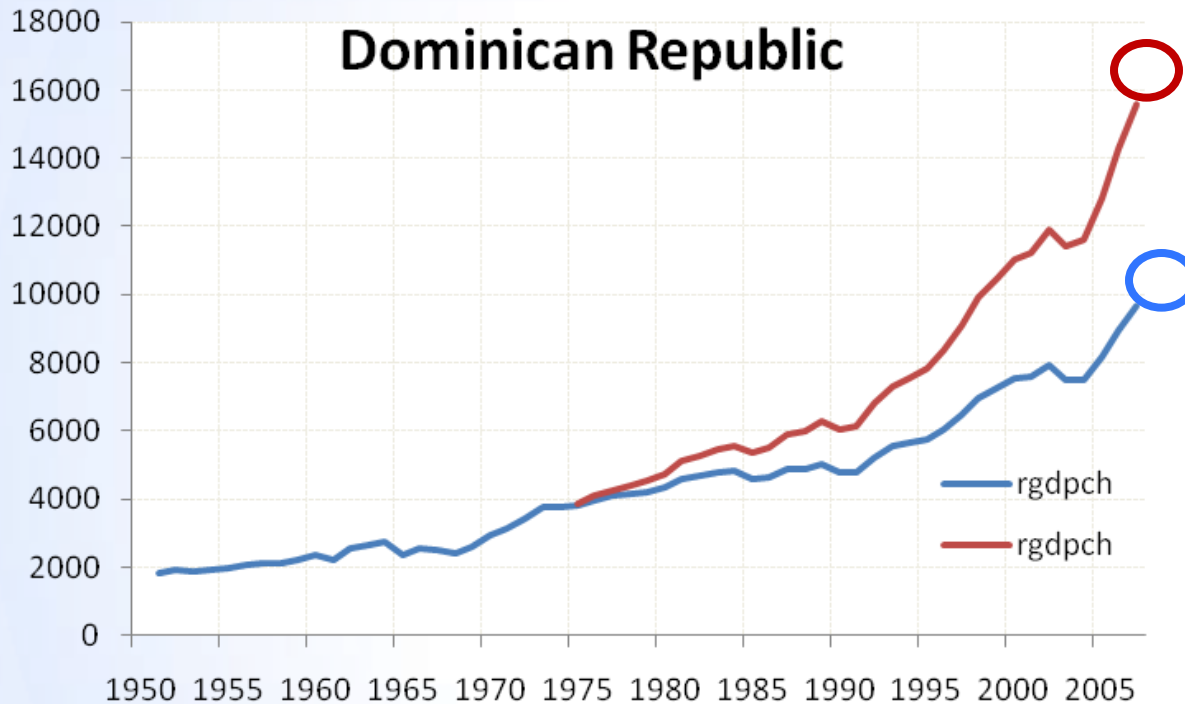
Data: 1950 – 2007; real per capita GDP (I\$); base year = 2005

Source: computed from Penn World Tables 6.3

Chart courtesy of Prof. Jurgen Brauer



The Violence Crisis



Blue line:
ppp-GDP

Red line:
UNODC
projection
assuming that
DOM's homicide
rate were cut in
half (to the level
of Costa Rica's
homicide rate).

The case of the Dominican Republic

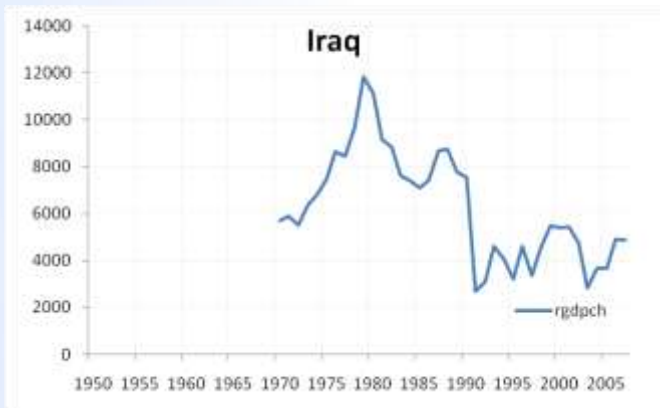
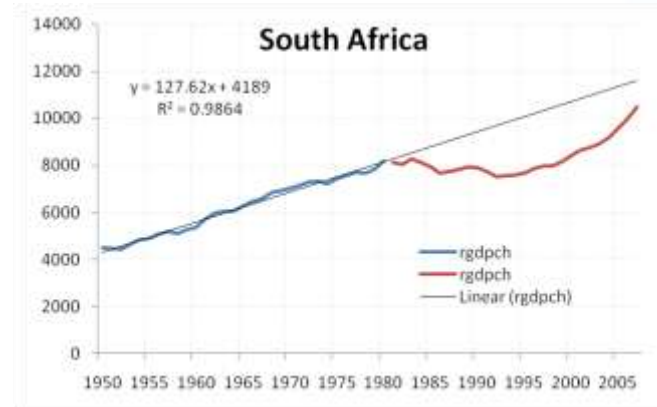
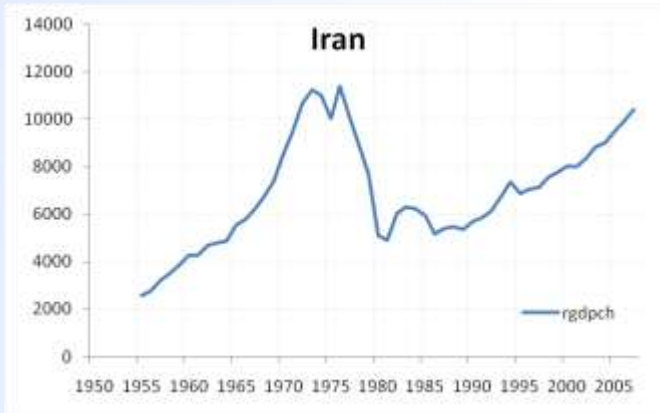
Data: 1950 - 2007; real per capita GDP (I\$); base year = 2005

Source: computed from Penn World Tables 6.3; UNODC (2007)

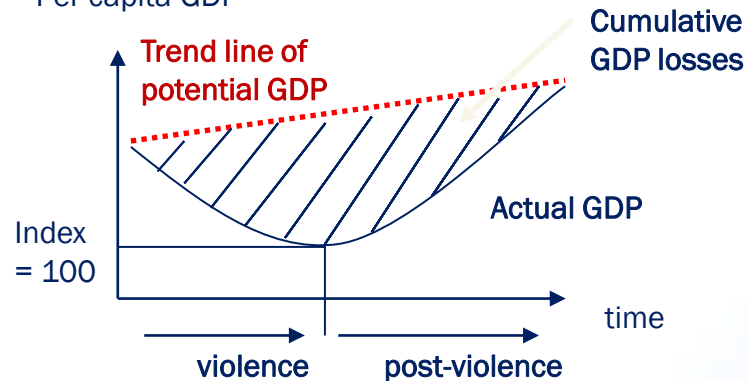
Chart courtesy of Prof. Jurgen Brauer



The Violence Crisis



Per capita GDP



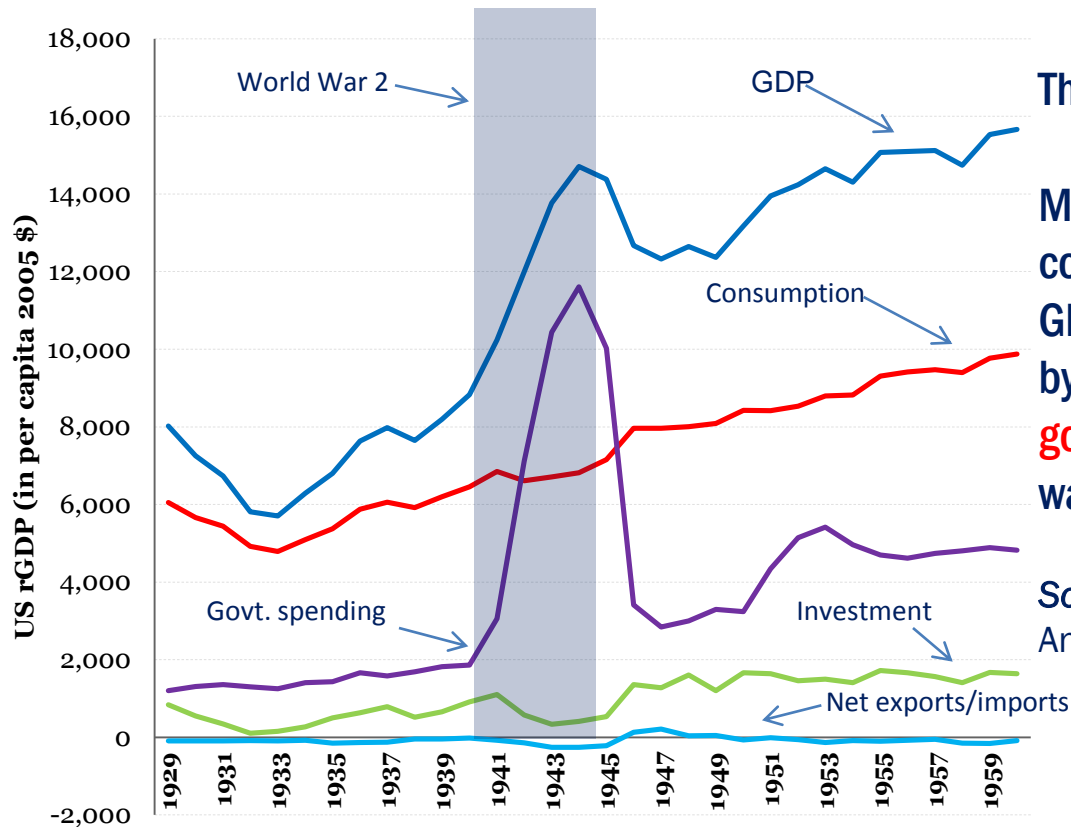
The pothole diagram

Real per capita GDP (I\$); base year = 2005

Source: computed from Penn World Tables 6.3



The Myth of War



The case of the USA in WW 2

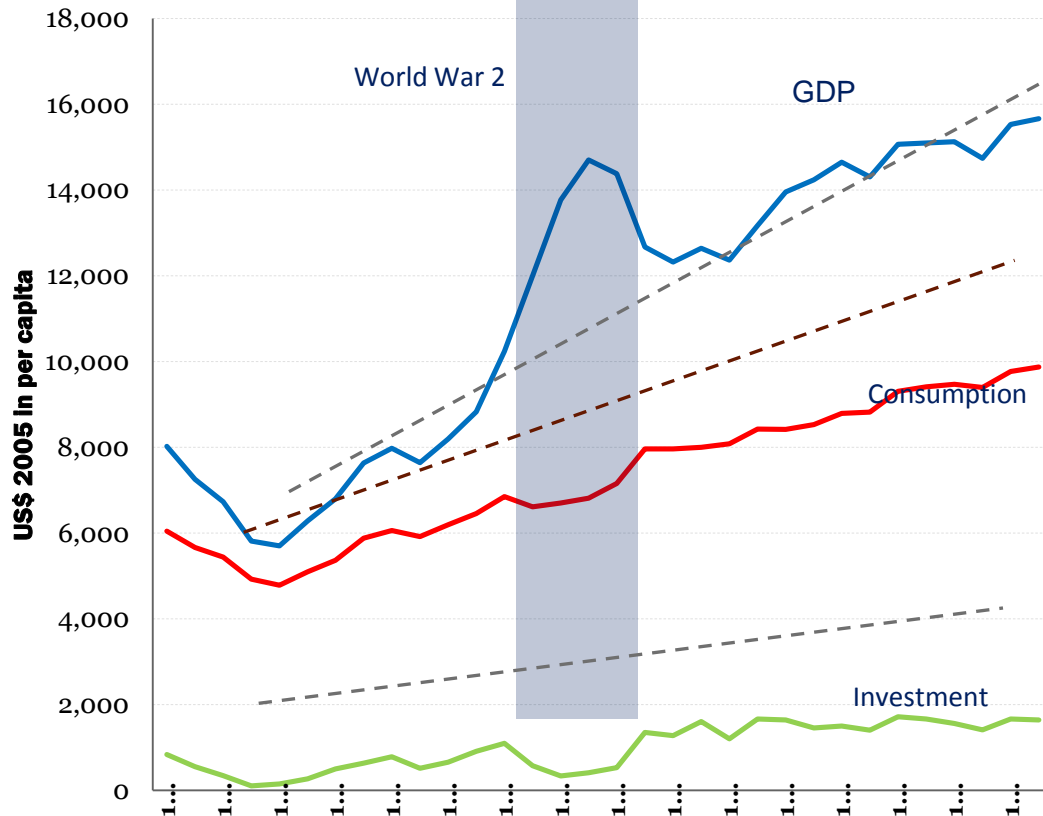
Marked decline in consumption and investment. GDP growth is therefore driven by ...

government spending (which was financed by debt).

Source: US Bureau of Economic Analysis



The Myth of War



Trends

GDP returns to pre-war trend

Consumption increases, but well below pre-war trend

Investment flat post WW2



Peace in Strategic Business Analysis

Business and Peace

- Strong correlation with Global Peace Index
 - Per capita income and peace: $r = 0.57$
 - Ease of Doing Business Index: $r = 0.52$
 - Business Competitive Index: $r = - 0.59$
- UN Global Compact Business Survey
 - 80% of senior execs believe markets grow with improved peacefulness
 - 79% think their costs drop with improved peacefulness



Global Monetary Value of Peace

	Global GDP*	Dynamic Dividend	Static Dividend	Total Economic Effect
2006	\$49.45	\$4.30	\$2.18	\$6.48
2007	\$55.85	\$4.86	\$2.46	\$7.32
2008	\$61.37	\$5.34	\$2.70	\$8.04
2009	\$58.25	\$5.07	\$2.56	\$7.63
2010	\$61.96	\$5.39	\$2.73	\$8.12
5 Years	\$286.88	\$24.96	\$12.63	\$37.59

* Global GDP source World Bank, USD, Trillions



Value of Peace, US Industry Breakdown

Sector	Internal pGDP	External pGDP
Agriculture	7.15	6.22
Mining	14.76	12.83
Utilities	13.88	12.07
Construction	26.38	22.94
Manufacturing	74.28	64.59
Wholesale trade	37.14	32.29
Retail trade	40.16	34.92
Transportation and warehousing	18.82	16.36
Information	28.21	24.53
Finance and insurance	48.30	42.00
Real estate, rental, leasing	80.89	70.34
Professional, scientific, technical services	49.69	43.21
Management of companies and enterprises	12.87	11.19
Administrative and waste management services	19.34	16.82
Educational services	6.27	5.45
Health care and social assistance	46.25	40.22
Arts, entertainment, recreation	6.36	5.53
Accommodation and food services	17.97	15.63
Other services, except government	14.82	12.89
Government	83.45	72.57
Total	US\$ 646.96	US\$ 562.60

in US\$ Billion

US sectoral data sourced from the Bureau of Economic Analysis - 2008



Global Monetary Value of Peace

The value of peace to the global economy

- Assuming the world could be 25% less violent, the total additional or redirected economic activity would equal an:

additional US\$2 trillion in 2010

- What could this activity finance?
 - ✓ Millennium Development Goals **US\$60B p.a.**
 - ✓ EU climate change **€48B p.a.**
 - ✓ Japanese Tsunami and Earthquake **US\$235B**
 - ✓ Repay Greece, Portugal and Ireland's debt **US\$700B**
 - ✓ ***One trillion dollars remaining***



Economic Impacts of Peace

- Lower risk
- Lower interest rates
- Lower discount rates on future earnings for investments
- Projects pay off over long periods
- Larger portfolio of investment containing more stable investments



***Long term planning &
increased government spending on infrastructure such
as roads, schools, universities***



The Paradigm Shift

- Peace affects business in its biggest markets
- Most gains in the largest economies
- US, minimum \$1.1 trillion per annum
- Different businesses affected differently by peace
- Business can't build peace but can influence those who can

The Opportunity

- Valuing Peace by industry, market and company
- Relating Peace to the optimum environment for businesses to flourish
- Incorporating Peace metrics into strategic analysis frameworks



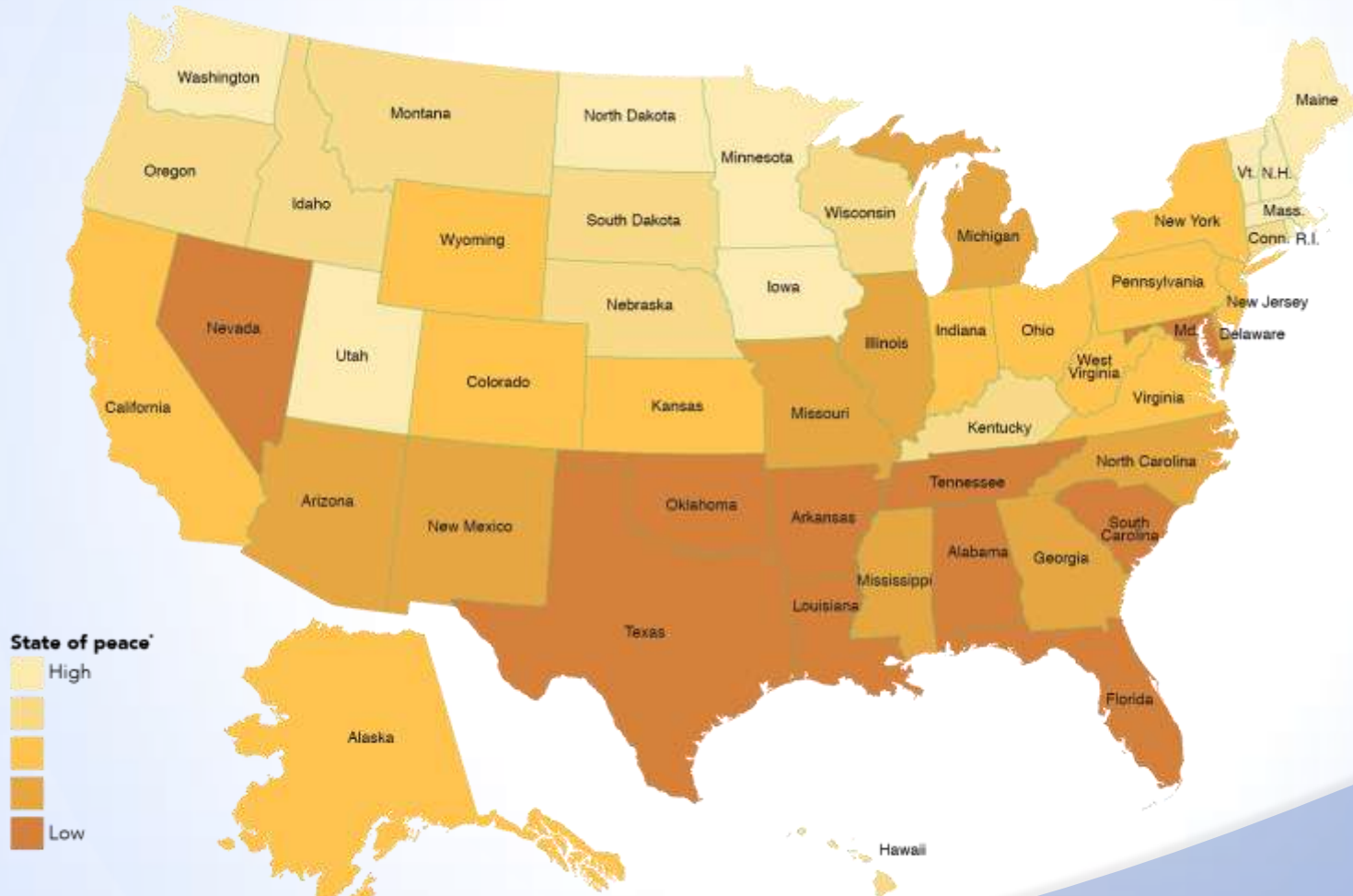
U.S. Peace Index



The Five Indicators

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

National Peace Indices – US Peace Index 2011

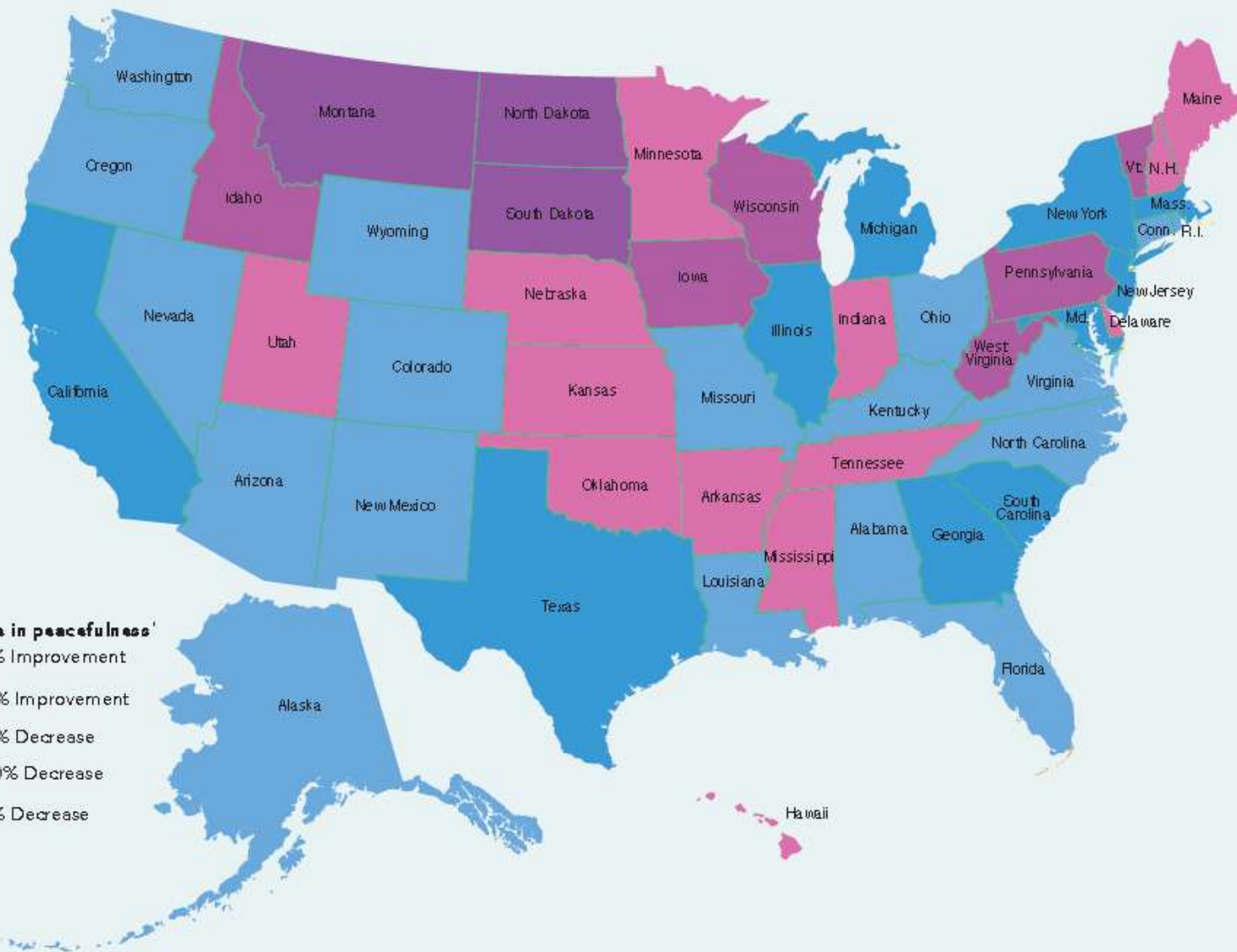


Results of the US Peace Index, 2011



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

% Change in Peacefulness, 1991-2009





Key Findings

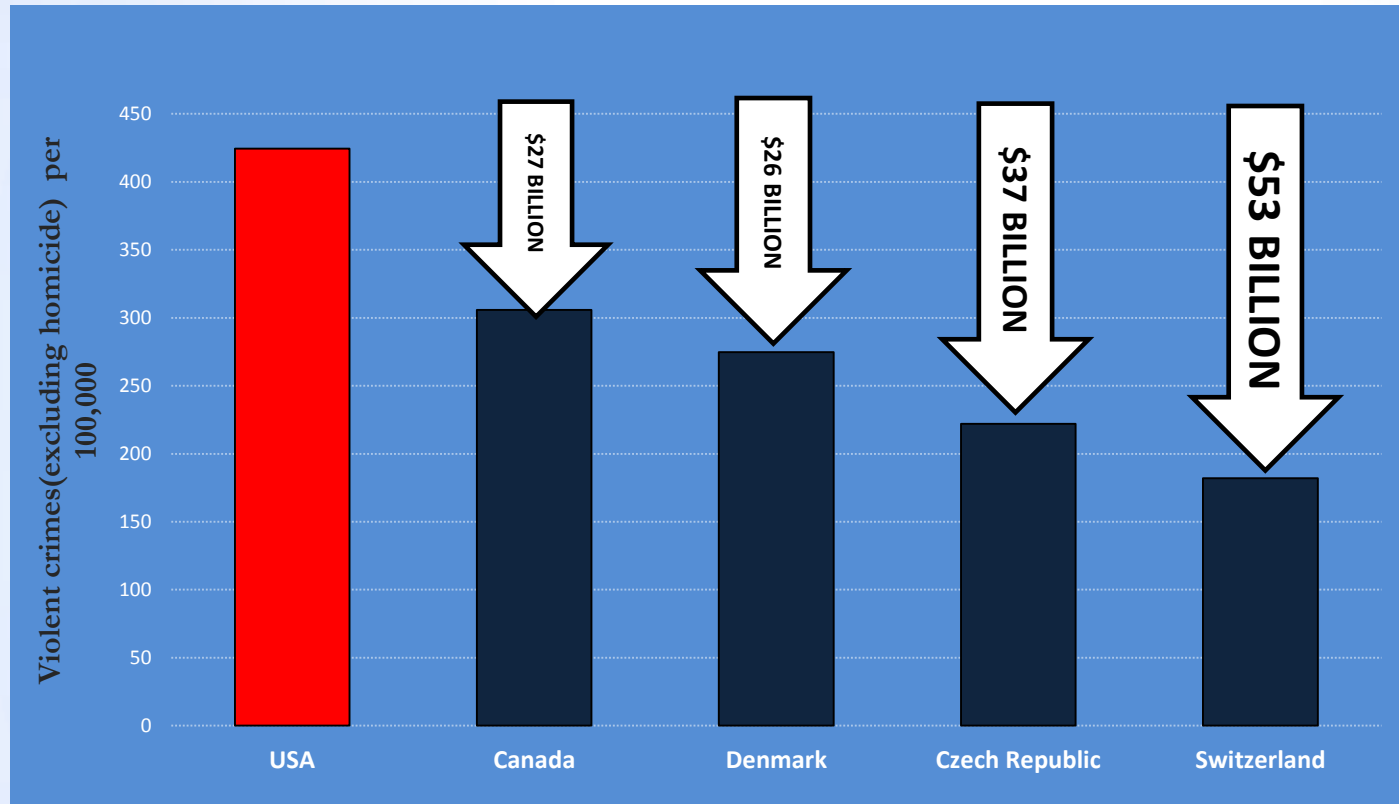
- Since the mid-1990s, the U.S. has become relatively more peaceful, recording an 8% improvement
- **Peace is related to Economic Opportunity, Health and Education**
- The increase in peace has been mostly driven by substantial decreases in violent crime and homicide
- Incarceration has substantially increased over the measurement period
- Most states have improved in peace, but some have become less peaceful
- Peace is not associated with Republican or Democrat States

U.S. Structures of Peace



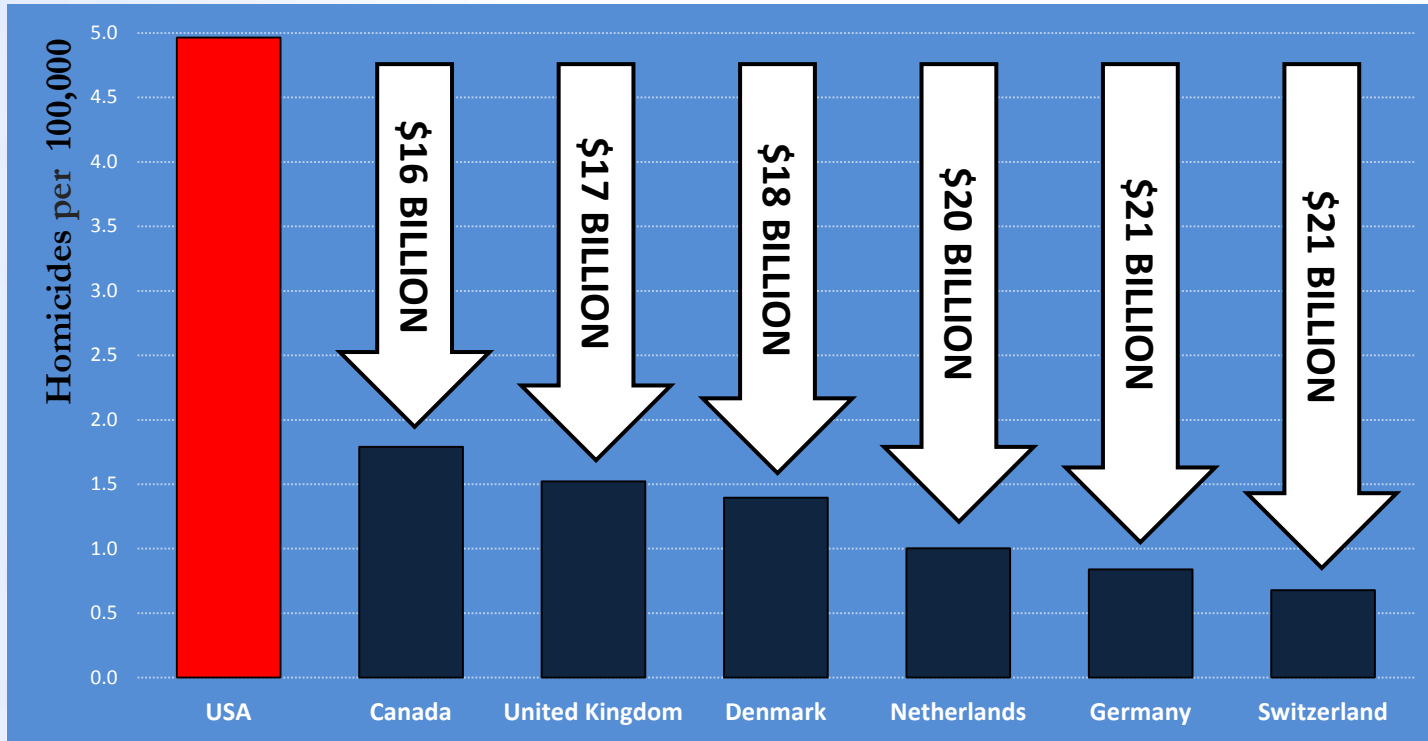
Correlation Coefficients	Overall Score	
Overall Score	1.00	2009 US PEACE INDEX INDICATORS
Overall Rank	0.98	
Number of homicides per 100,000 people	0.83	
Number of violent crimes per 100,000 people	0.80	
Number of jailed population per 100,000 people	0.78	
Number of police officers per 100,000 people	0.40	
Access to weapons of minor destruction	0.53	OBSTACLES TO PEACE
Teenage Pregnancy Rate (2005)	0.74	
Infant Mortality Rate (2005) CDC, NHCS	0.74	
Infant Mortality Rate	0.67	
PEW State of the States - Educational Opportunities	0.65	
Poverty Rate (2009)	0.53	
Household Income GINI (2006)	0.50	
% Adult Obesity (2005-2007 Average)	0.49	
Unemployment Rate (2008)	0.28	
Population (2009)	0.15	
PEW State of the States - Campaign Finance	-0.02	
Average Teacher Salary	-0.07	
Reported Political Affiliation (% Moderate)	-0.09	
Average Teacher Salary (2006)	-0.09	
PEW State of the States - Government Management	-0.21	
Per Capita Disposable Income (2008)	-0.24	
Median Income (2008)	-0.27	
Median Household Income (2009)	-0.30	
Educational funding (per student average)	-0.34	
2008 Election (Voter Turnout)	-0.37	
% of people with undergraduate degree or higher	-0.46	
Gallup State of the States (2009) Wellbeing	-0.48	
Us Human Development Index (2008)	-0.50	PEACE BOOSTERS
Labour Force Participation Rate	-0.61	
High school completion (2008) Census	-0.65	
High School Completion Rate (CPI measure)	-0.67	
Life Expectancy at Birth (2007)	-0.69	
Life Expectancy (2005)	-0.75	
Gallup State of the States (2009) Basic Access	-0.77	

Peace Dividend from Lower Violent Crime



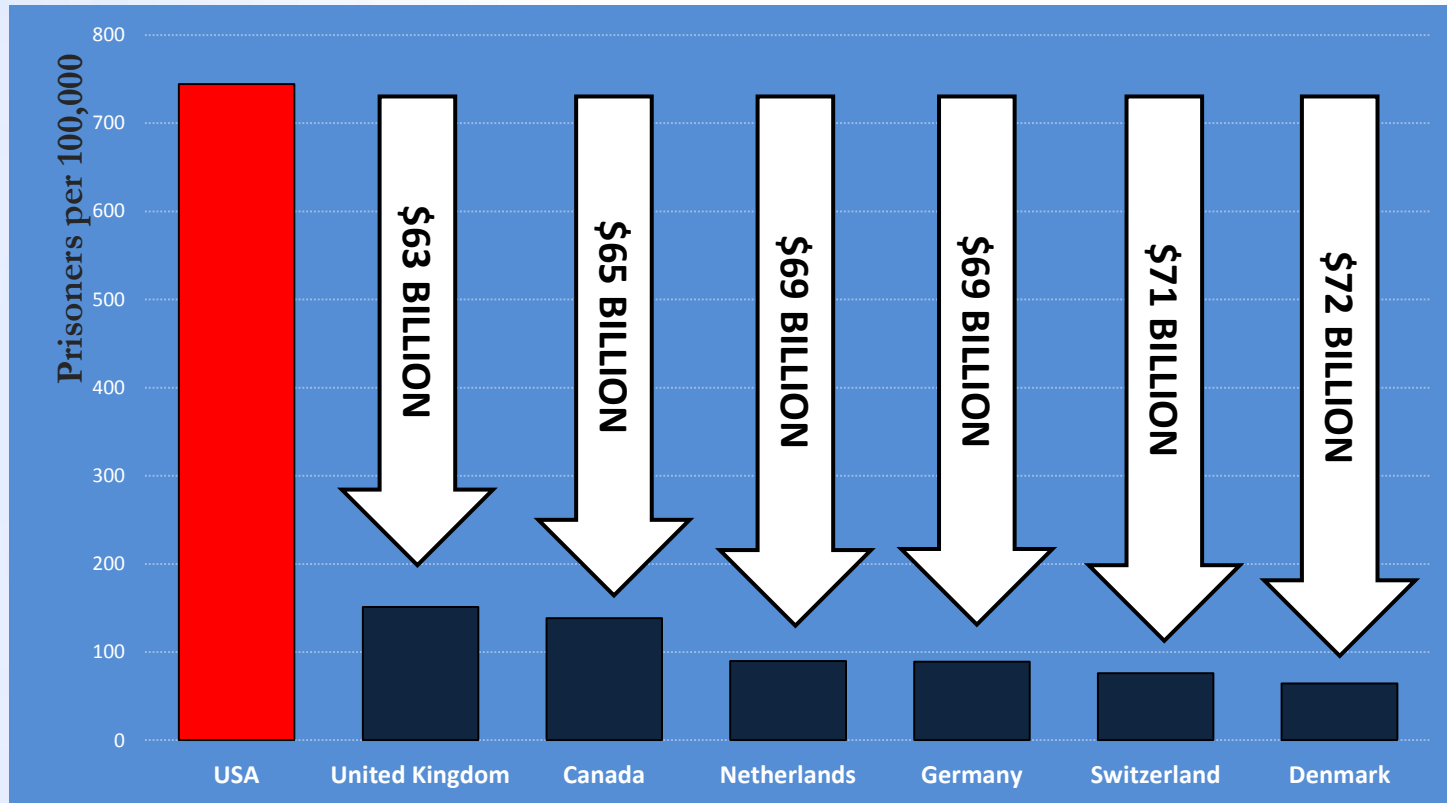
Includes potential medical costs as well as lost productivity

Peace Dividend from Lower Homicide



If the U.S. had lower rates of homicide it would save these corresponding amounts of lost productivity

Peace Dividend from Lower Incarceration



Only represents the direct cost of correctional services.
Lost productivity from lost work days totals \$195 billion.

Total Economic Value of Peace in the US if Violence was at the Level of Canada



Items representing savings to government and society	
Medical costs associated with violent robbery, homicide, rape & assault	\$10,310,152,877
Total cost of Incarceration	\$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	
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

➤ **Additional economic activity of US\$271 billion could generate up to 2.7 million jobs**



Peace and Human Potential

Military Expenditure - slowing growth



Global military expenditure fell to 2.6% of GDP in 2010, down from 2.7%

Country	% of GDP	Billions \$US
United States	4.7	687
United Kingdom	2.5	61
France	2.7	57
Germany	1.4	47

Country	% of GDP	Billions \$US
China	2.2	114
Russia	4.3	52
Iran	2.8	10
North Korea	25% (est)	5
Syria	3.8	2

* Source SIPRI – 2010, US excludes Afghanistan and Iraq



What Constitutes Defence?

- Relations with neighbouring states have improved 3 of the last 4 years
- Conventional military spending of West far exceeds that of its competitors
- 10 year war on terror yet potential for terrorist attacks is increasing
- Peace has declined globally over the last 5 years
- Defence spending declining accelerated by budget constraints

What is needed is a new paradigm for creating peace

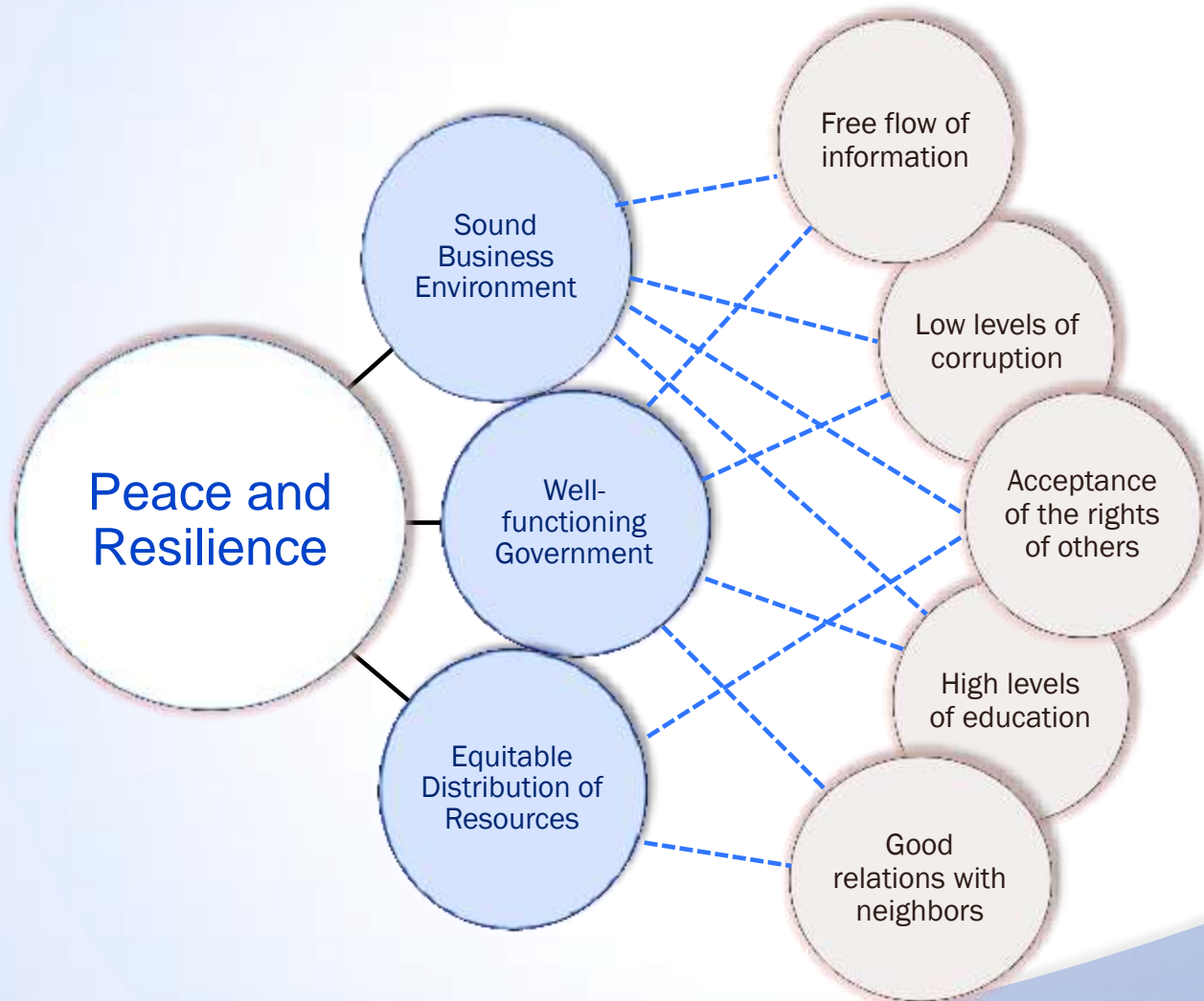
Creating an Environment for Maximising Human Potential



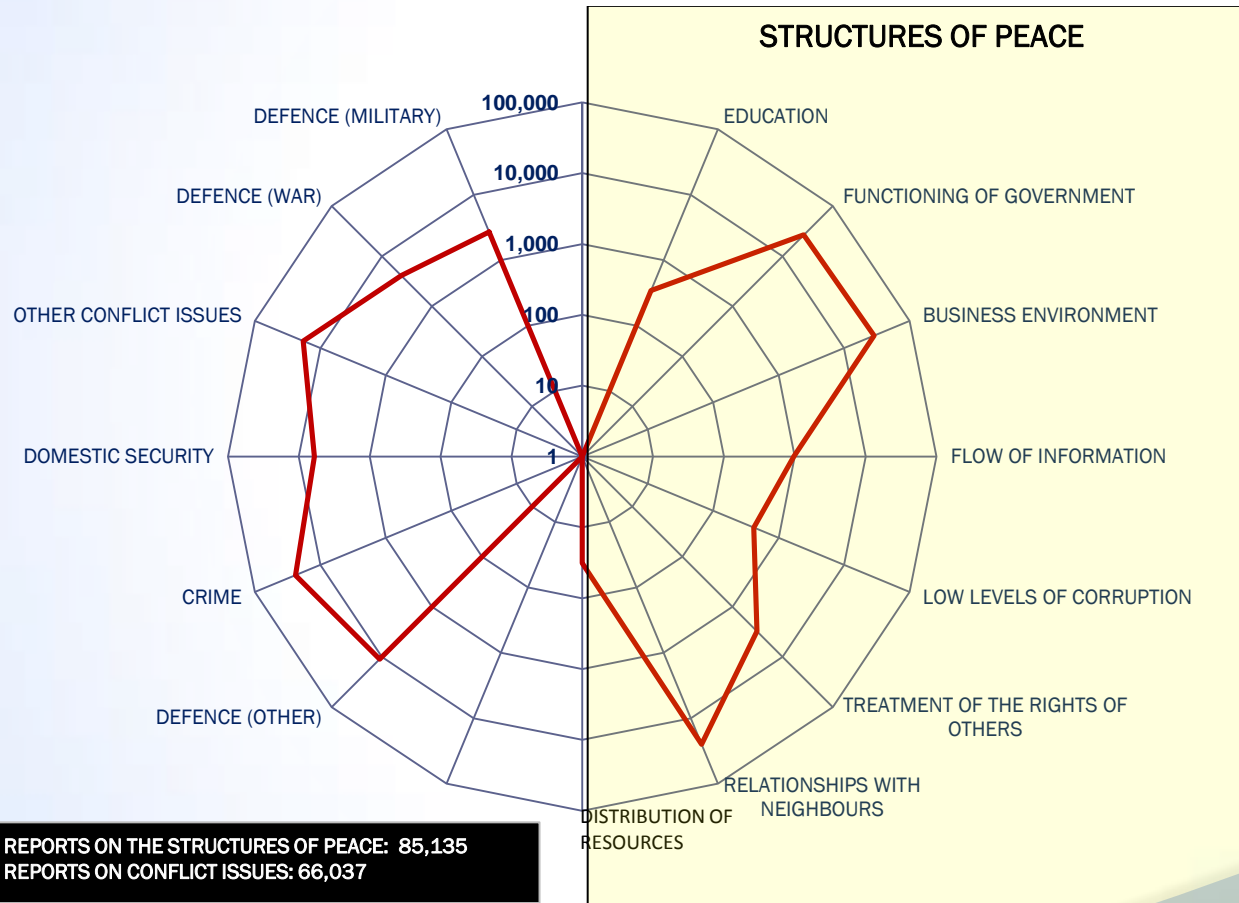
- Hundreds of data sets correlated with GPI
- Strong statistical relations with:
 - *environmental performance*
 - *economic performance*
 - *good governance*
 - *well functioning governmental institutions*
- Output describes a set of attitudes and structures to create a peaceful environment
- Peace is a proxy to describe an optimal environment for human potential to flourish
- Peace the optimal way to Brand a Country

** Countries that are positively perceived by the citizens of other countries correlates at 0.88 with GPI*

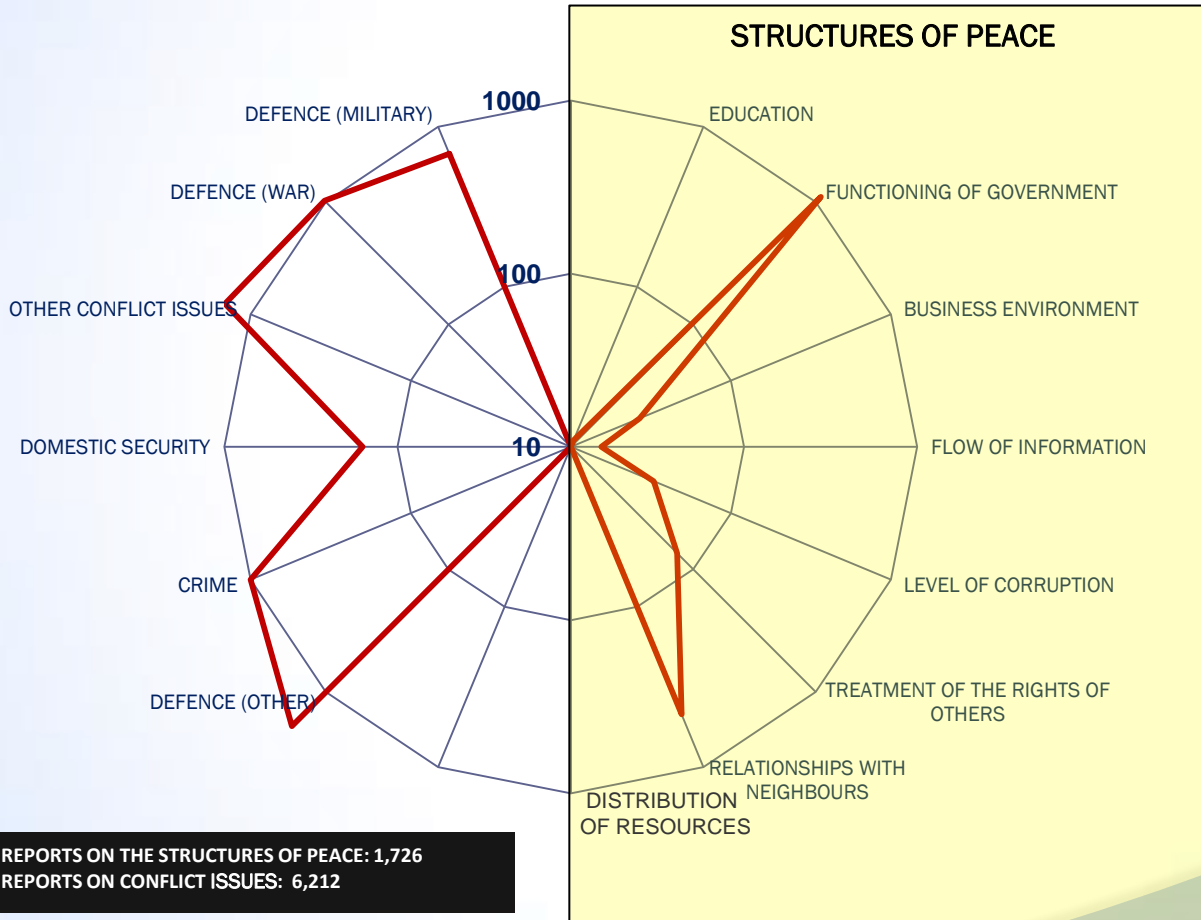
The Structures of Peace



Worldwide: Coverage of Conflict Topics vs. Peace Topics



Afghanistan: Coverage of Conflict Topics vs. Peace Topics



TOTAL REPORTS ON THE STRUCTURES OF PEACE: 1,726
 TOTAL REPORTS ON CONFLICT ISSUES: 6,212

Structures of Peace & Social Sustainability



- Deteriorating environment, over-population or economic shocks stress societies
- Resilience is the ability to recover from shocks
- Peaceful societies seem to manage better
 - ❖ **Japan** – earthquake and Tsunami
 - ❖ **Iceland** – Global Financial Crisis
- Social sustainability can be measured by the strength of social norms.

“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.”

Structures of Peace and Social Sustainability



Measures of Social Sustainability:

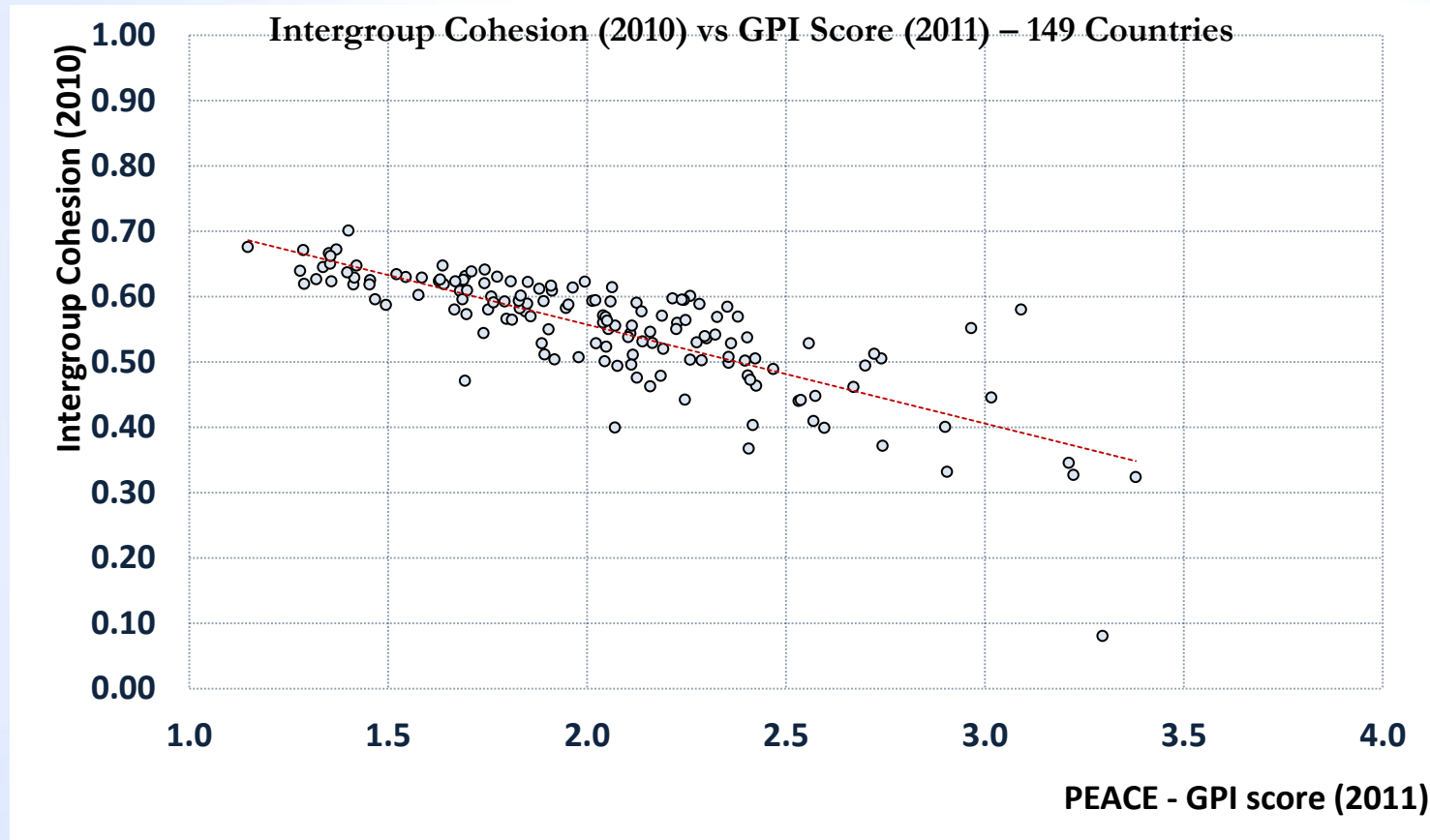
- **Civic Activism** – social norms, organisations and practices that facilitate citizen involvement in public policies and decisions
- **Intergroup Cohesion** – social cohesion between defined religious, ethnic and linguistic groups
- **Interpersonal Safety and Trust** – social cohesion and trust between strangers and levels of criminal intent
- **Gender Equality** – extent to which women have equal opportunities as men

Social Sustainability and Peace Correlate



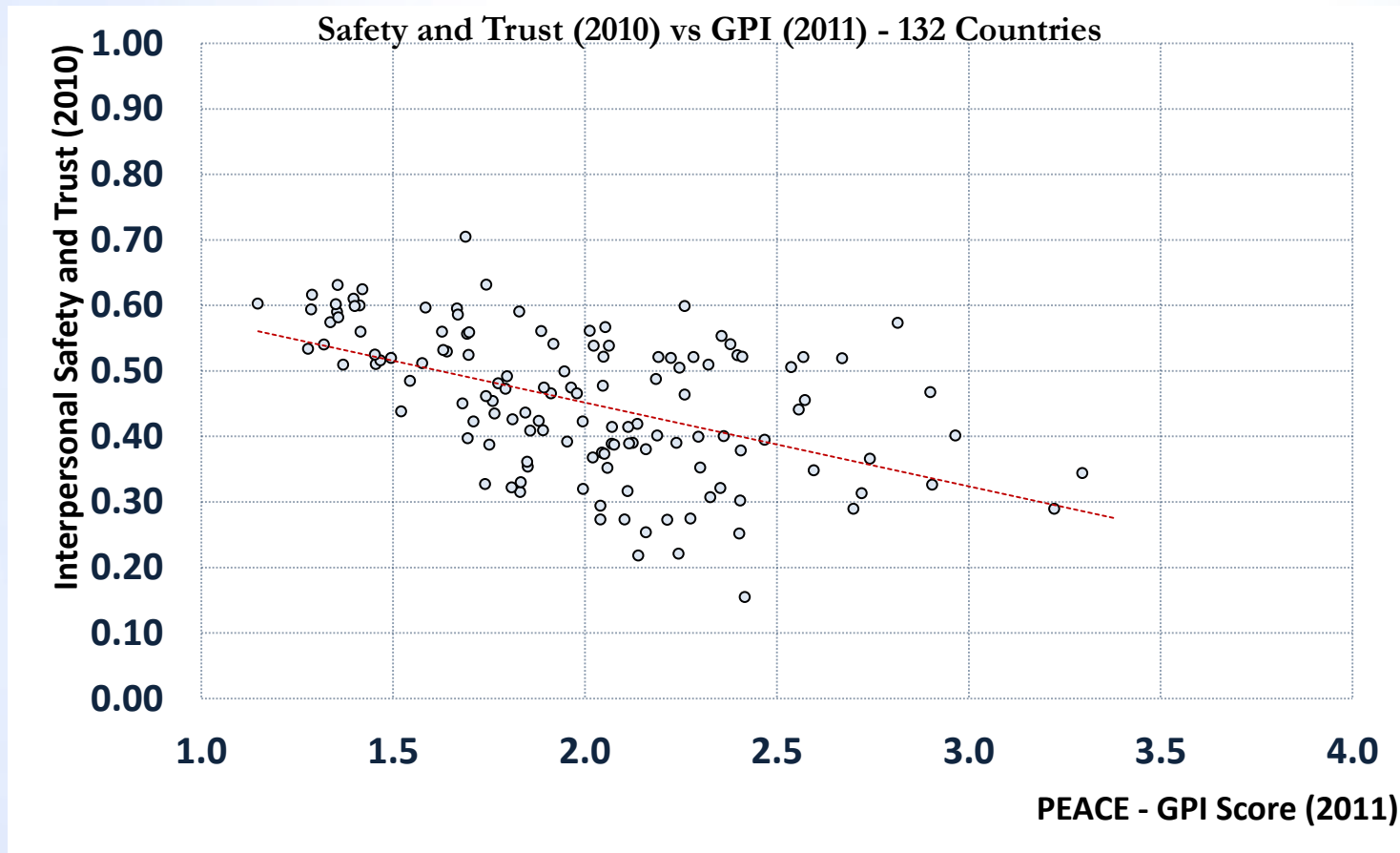
	Correlation with Overall GPI Score	Correlation with GPI Rank	Correlation with GPI Internal Peace Score
Intergroup Cohesion – Indices of Social Development (ISD), Institute of Social Studies	-0.80	-0.75	-0.79
Club de Madrid Shared Societies Index	-0.74	-0.74	-0.76
Civic Activism – ISD	-0.61	-0.63	-0.67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

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



Correlation $r = -0.80$

High levels of trust within society is closely associated with Peace



Correlation $r = -0.50$



Summary

- Peace is poorly understood
- Peace is good for most forms of Business
- A World that is **25%** more peaceful would yield **\$2 trillion**
- Peace is optimal for Human Potential to Flourish
- Peace Provides Resilience
- World has become slightly less Peaceful in last 5 years



INSTITUTE FOR
ECONOMICS
& PEACE

“Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living. We have grasped the mystery of the atom and rejected the Sermon on the Mount”. OMAR BRADLEY (1893-1981) US general