



IEP Risk and Peace

Steve Killelea, Executive Chairman
Institute for Economics and Peace

Monday, 18th November 2013
EIB, Luxembourg



Institute for Economics and Peace (IEP)

“The Institute for Economics and Peace is an independent, not-for-profit, research institute dedicated to building a greater understanding of the key drivers and measures of peace and to identifying the economic benefits that increased peacefulness can deliver”

Sydney, New York

Agenda

1. Background IEP and its Work.
2. Linkages - economic growth and violence.
3. Linkages - social institutions and peace.



Many Unprecedented Challenges Facing Humanity



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



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



OTHER PUBLICATIONS FROM THE INSTITUTE FOR ECONOMICS AND PEACE



Pillars of Peace

Institute for Economics and Peace - September 2013
Pillars of Peace is a new conceptual framework for understanding and describing the factors that create a peaceful society.



Global Peace Index 2013

Institute for Economics and Peace - June 2013
The 2013 GPI Report analyses the state of peace around the world, identifying trends in violence and conflict, as well as the key drivers of peace.



United Kingdom Peace Index 2013

Institute for Economic & Peace - April 2013
The UK Peace Index report analyses the fabric of peace in the UK over the last decade and has found that since 2003 the UK has become more peaceful.



Global Terrorism Index 2012

Institute for Economic & Peace - December 2012
The Global Terrorism Index is the first index to systematically rank and compare 158 countries according to the impact of terrorism.



Violence Containment Spending in the United States

Institute for Economic & Peace - September 2012
Violence Containment Spending provides a new methodology to categorise and account for the public and private expenditure on containing violence.



Global Peace Index 2012

Institute for Economic & Peace - June 2012
The Global Peace Index is the world's preeminent measure of peacefulness. This is the 6th edition of the Global Peace Index.



United States Peace Index 2012

Institute for Economic & Peace - April 2012
The 2012 United States Peace Index has found that the U.S. is more peaceful now than at any other time over the last twenty years.



Economic Consequences of War on the U.S. Economy

Institute for Economic & Peace - February 2012
The Economic Consequences of War on the U.S. Economy analyses the macroeconomic effects of U.S. government spending on wars since World War II.



Measuring Peace in the Media

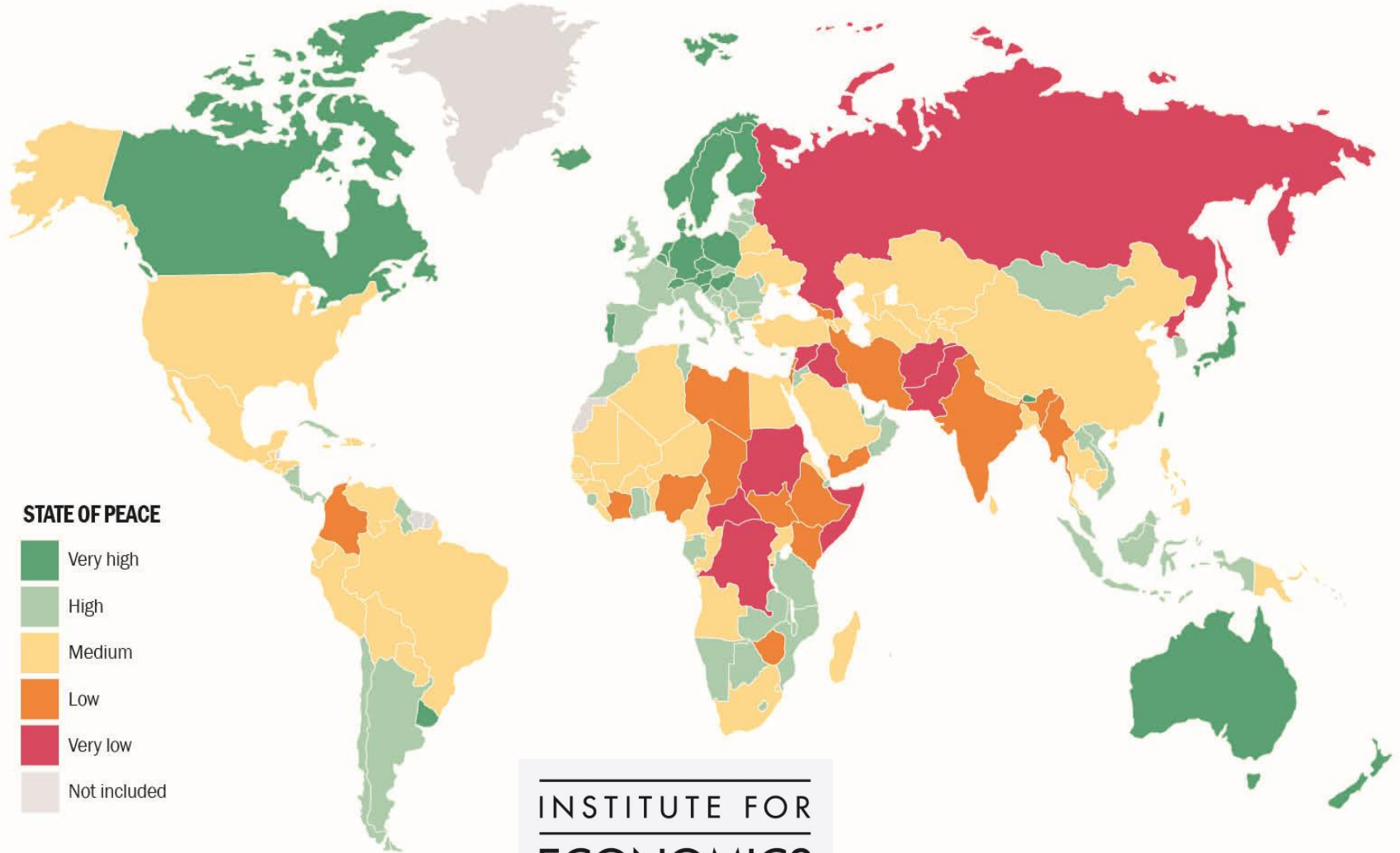
Institute for Economics & Peace and Media Tenor - January 2012
IEP and Media Tenor have jointly analysed global television networks' coverage of peace and violence issues; covering over 160,000 news items from 31 programs.



Holding G8 Accountability to Account

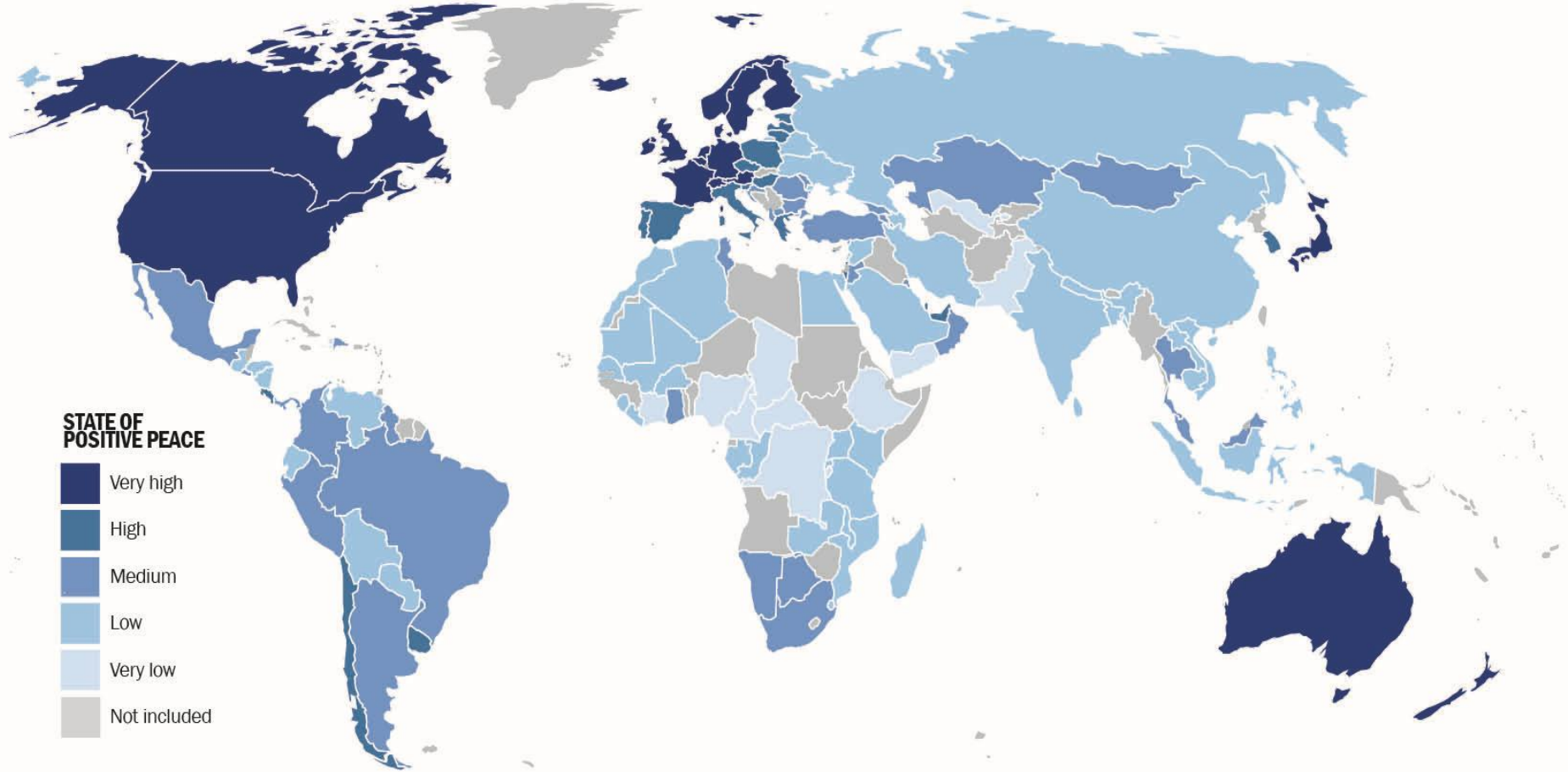
Jeffery Sachs, Earth Institute and Steve Killelea, IEP - September 2010
A critical analysis of the G8's internal accountability mechanism and the failure of the G8 to meet self-determined deadlines for aid relief donations in Africa.

The Global Peace Index (GPI) – the world's leading measure of peace, updated yearly

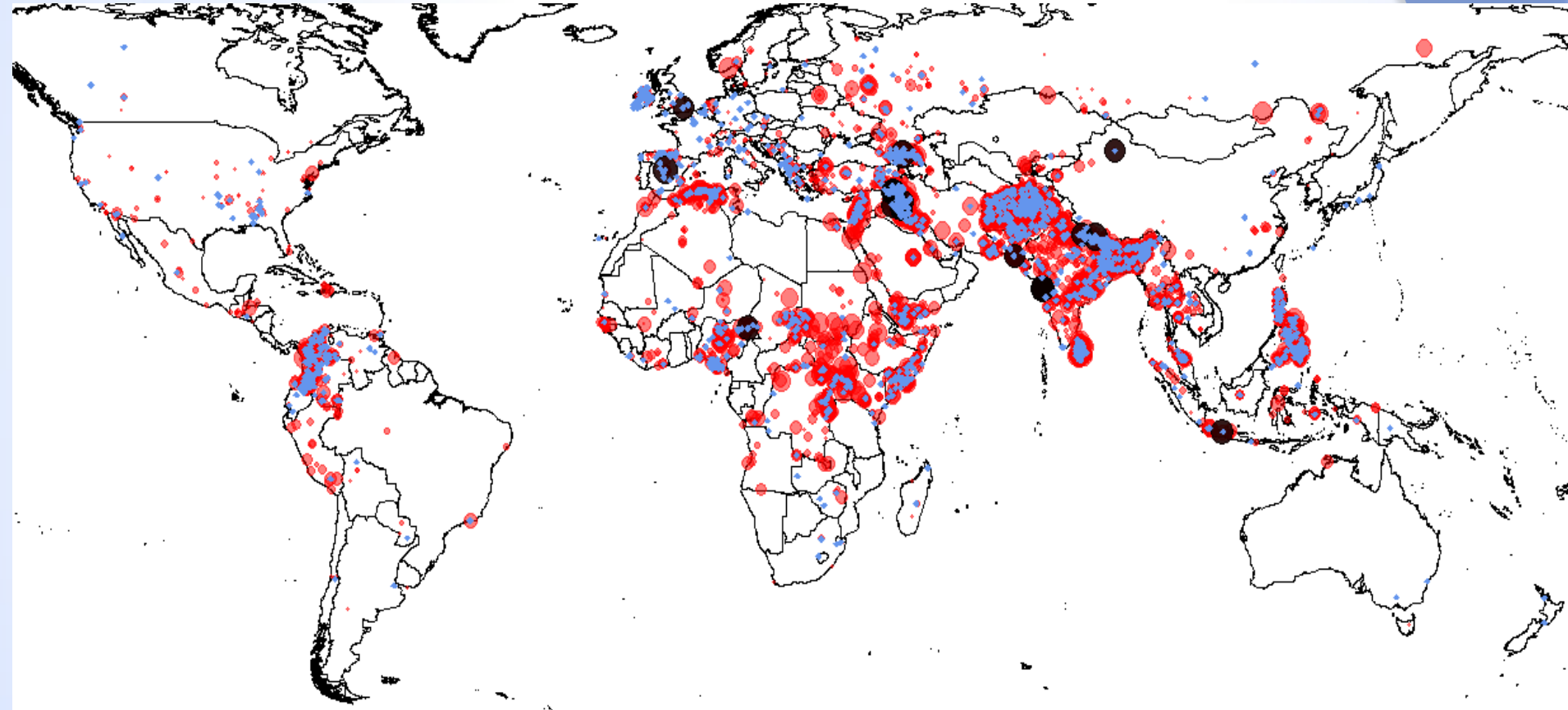


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Positive Peace Index – *Key baseline measure of the institutions, attitudes and structures which build a more peaceful society*



Violence Data on Terrorism is geocoded



Red Dot single terrorist incident, Black Dots are 20 largest incidents



Uses of IEP data

- Inclusion in **SIPRI** Yearbook
- Referenced in more than 2,000 books – Google Books
- Inclusion in **World Bank** data sets and website
- Inclusion in **OECD** Measuring Progress of Societies project
- Used in **Building Blocks of Peace** education curricula of IEP
- Inclusion in **UNDP** Monitoring and Evaluation framework
- Inclusion in **UN University** materials for studies worldwide
- Foundation for **Global Symposium of Peaceful Nations**
- Inclusion in **Inter-American Development Bank** governance indicators database

Defining and Measuring 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

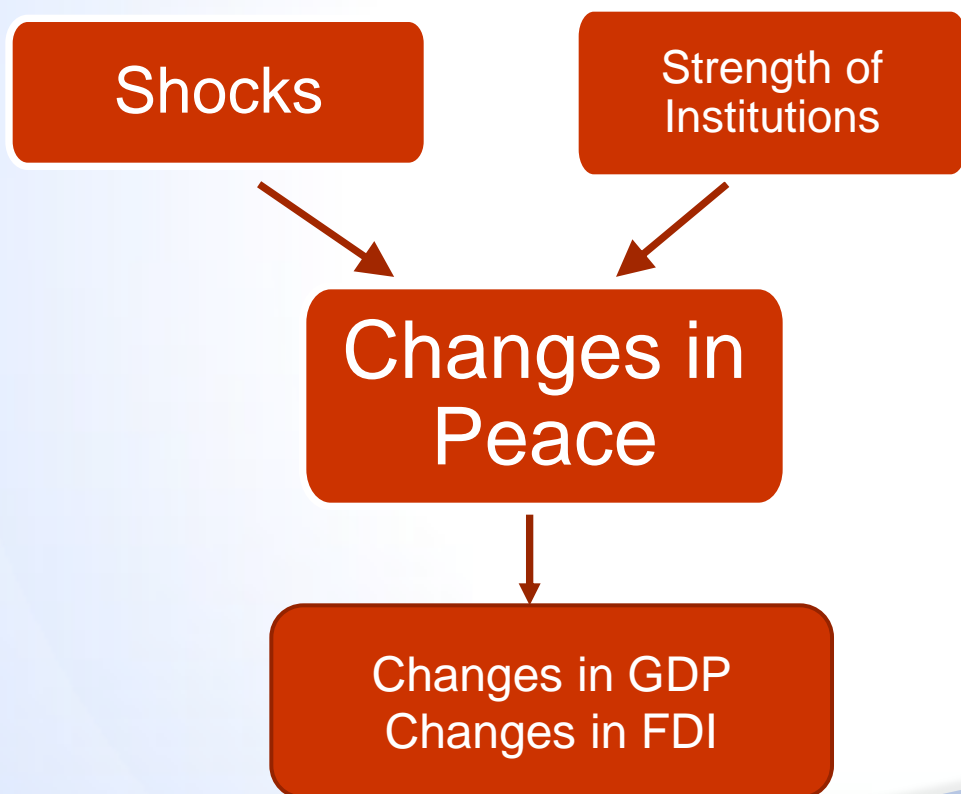


Positive Peace Index

Financial Risk



Aimed at Fund Managers and Private Capital, using original data and analytic techniques developed by IEP.



'Tool to analyse probability of changes in GDP and FDI based on changes in peace and the structural aspects of a society'

Why Resilience Matters for Investment?

- Resilience is the measure of the ability to absorb shocks.
- Resilience **can** be measured using institutional strength.
- Institutional strength is a predictor of peace.
- Increases in peace are a precondition for increasing prosperity.
- The tool uses over 1000 global harmonized datasets for analysis.

“IEP has developed unique datasets and analytic frameworks based on empiric methods to measure violence and to understand the attitudes, institutions and structures which create peace”.

Agenda

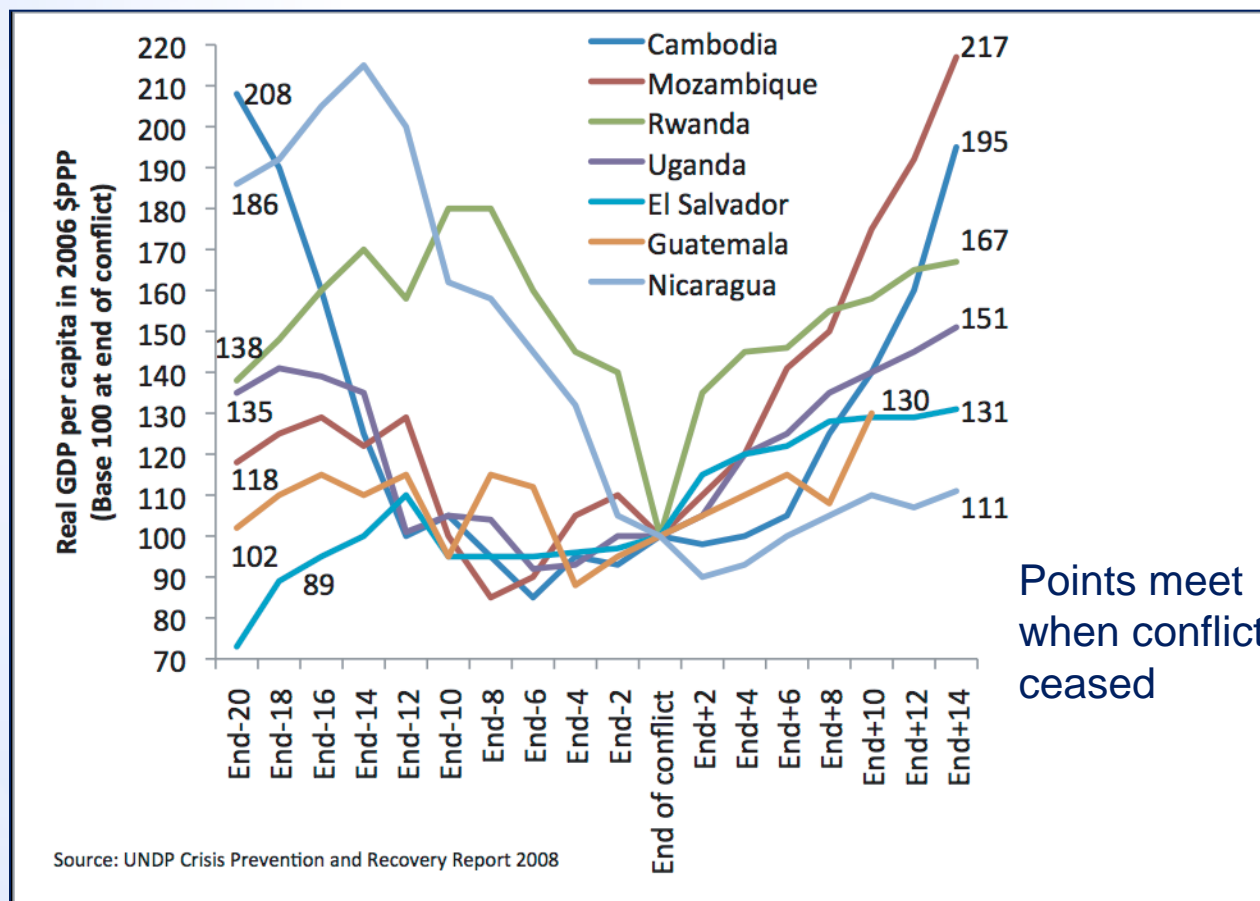
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How does violence affect the economy?



*Violence poses a significant risk to GDP growth.
Conversely its end results in significant upside opportunity.*



Business and Global Peace Index Correlations

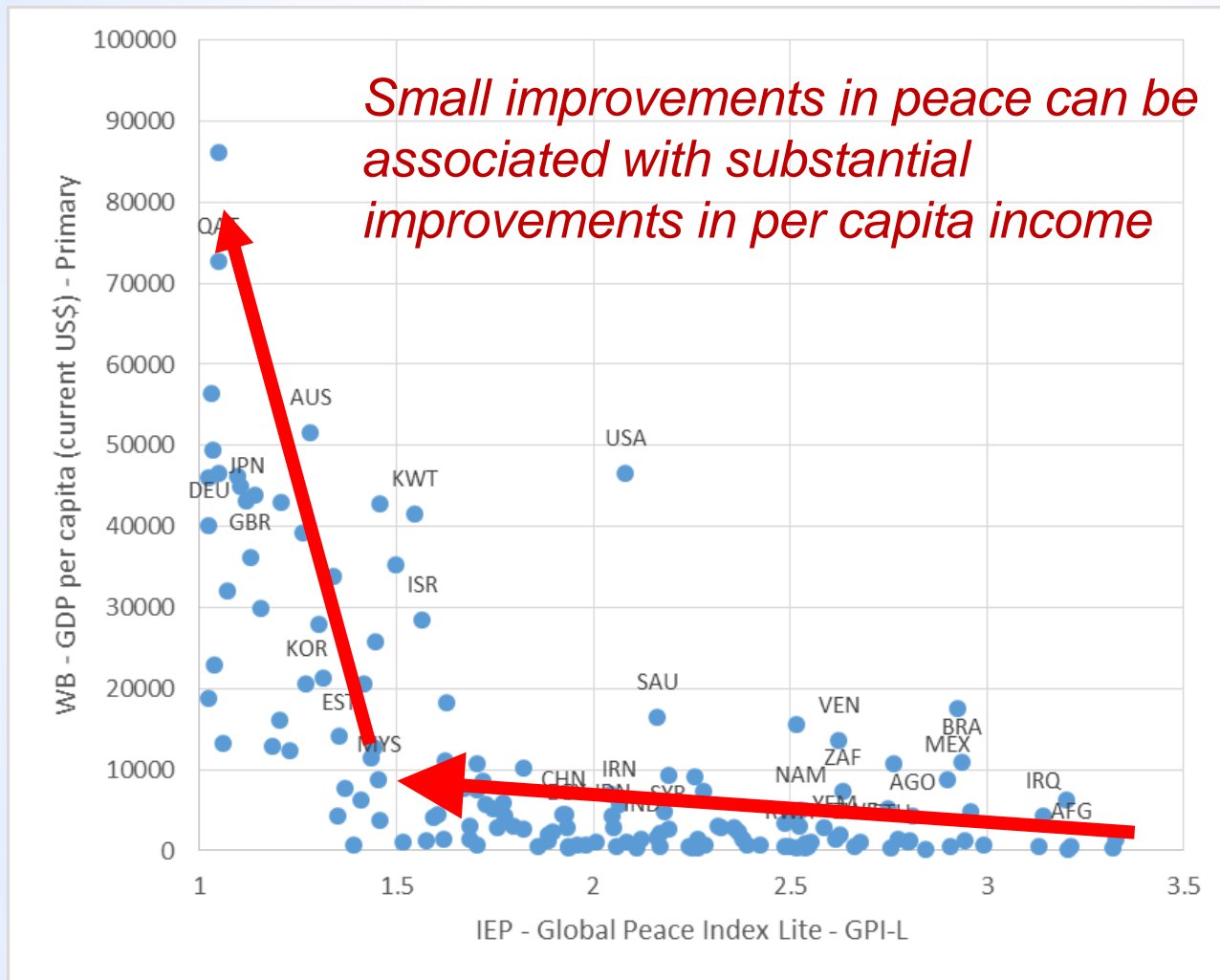


Improvements in business are statistically linked to peace.

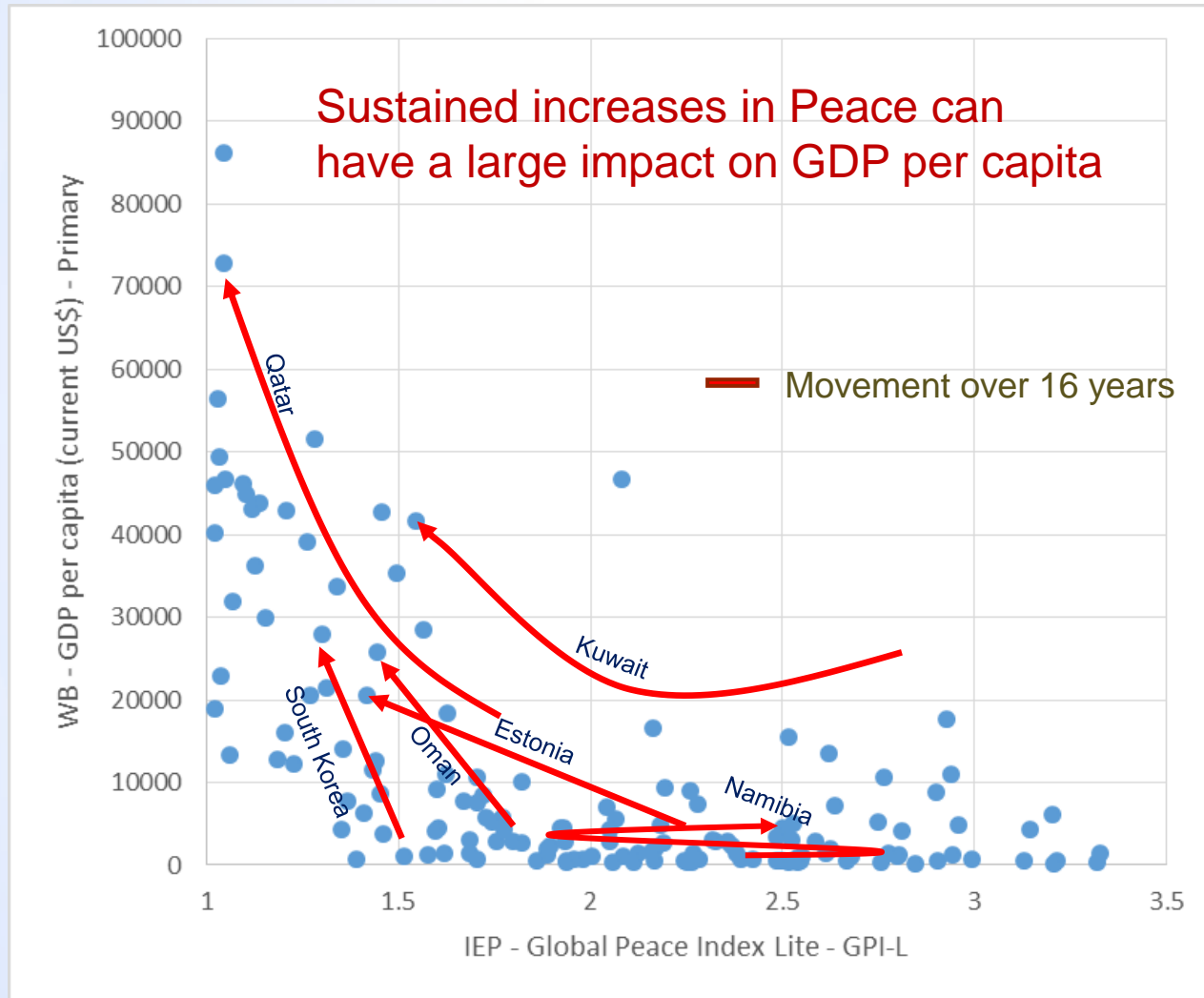
Source	Index	Indicator	Year	Correlation Coefficient
World Bank	Ease of Doing Business	Overall Rank	2011	0.542
		Trading Across Borders	2011	0.524
		Closing a Business	2011	0.512
World Economic Forum	Global Competitiveness Report	Technological Readiness	2011	-0.643
		Institutions	2011	-0.628
		Basic Requirements	2011	-0.624
		Higher Education and Training	2011	-0.598
		Goods Market Efficiency	2011	-0.597
		Overall Score	2011	-0.597
		Infrastructure	2011	-0.588
		Efficiency Enhancers	2011	-0.578
		Innovation and Sophistication Factors	2011	-0.573
		Health and Primary Education	2011	-0.512
		Heritage Foundation	Index of Economic Freedom	Property Rights
Overall Score	2011			-0.602
Business Freedom	2011			-0.566
Financial Freedom	2011			-0.514
Economist Intelligence Unit		GDP per capita	2011	-0.581
Legatum Foundation	Legatum Prosperity Index	Overall Score	2010	-0.756
		Entrepreneurship and Opportunity Sub-Index Score	2010	-0.683
		Capital Per Worker	2010	-0.606
		Economy Sub-Index Score	2010	-0.551
World Bank	World Development Indicators	R+D Expenditure	2010	-0.582
Frazer Institute	Economic Freedom of the World Index	Overall Score	2008	-0.585

Source?

Global Peace Index vs GDP per capita



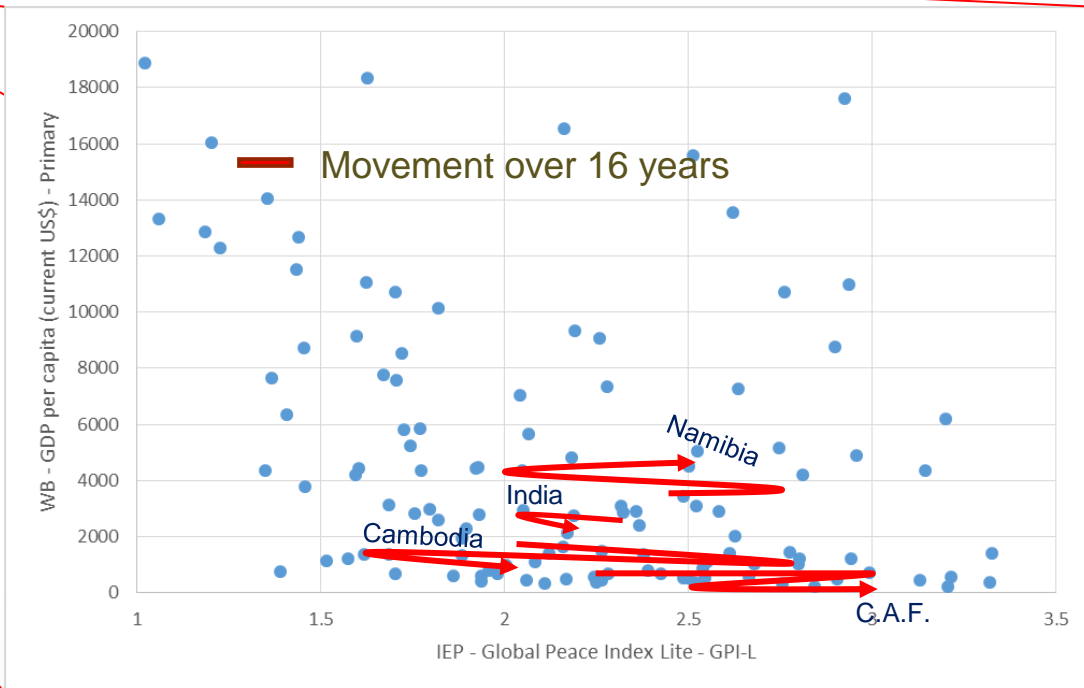
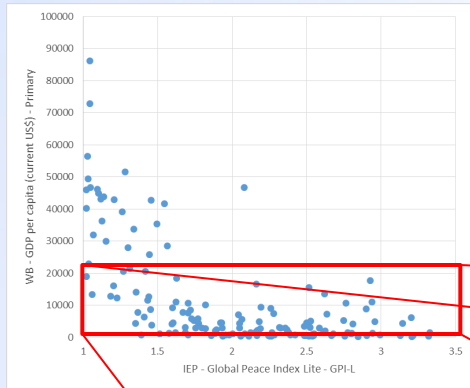
GDP and Peace Growth Paths since 1996



GDP and Peace Growth Paths since 1996



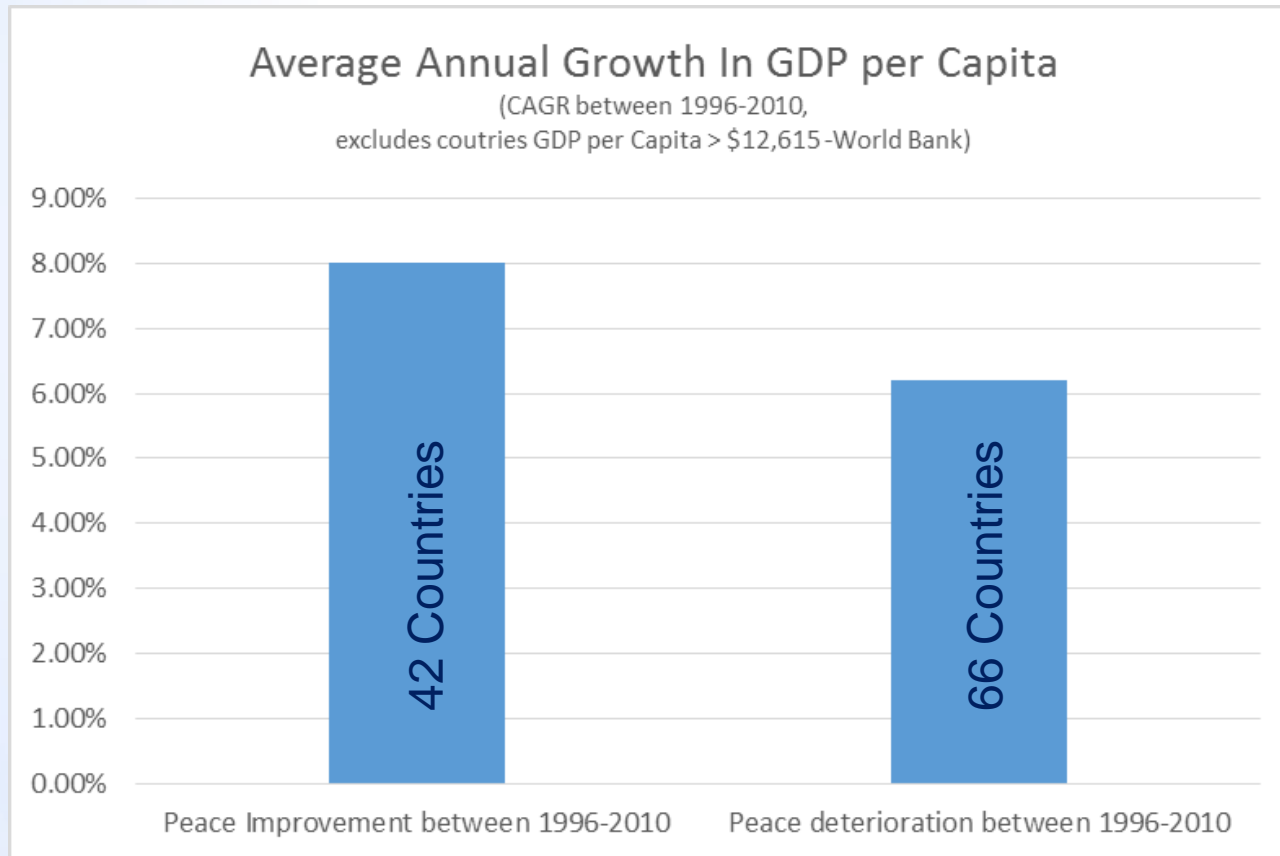
Countries that fluctuate in peace do not see the same increases



Violence and GDP per Capita Growth



Countries that decreased in violence have tended to experience better GDP per Capita Growth.



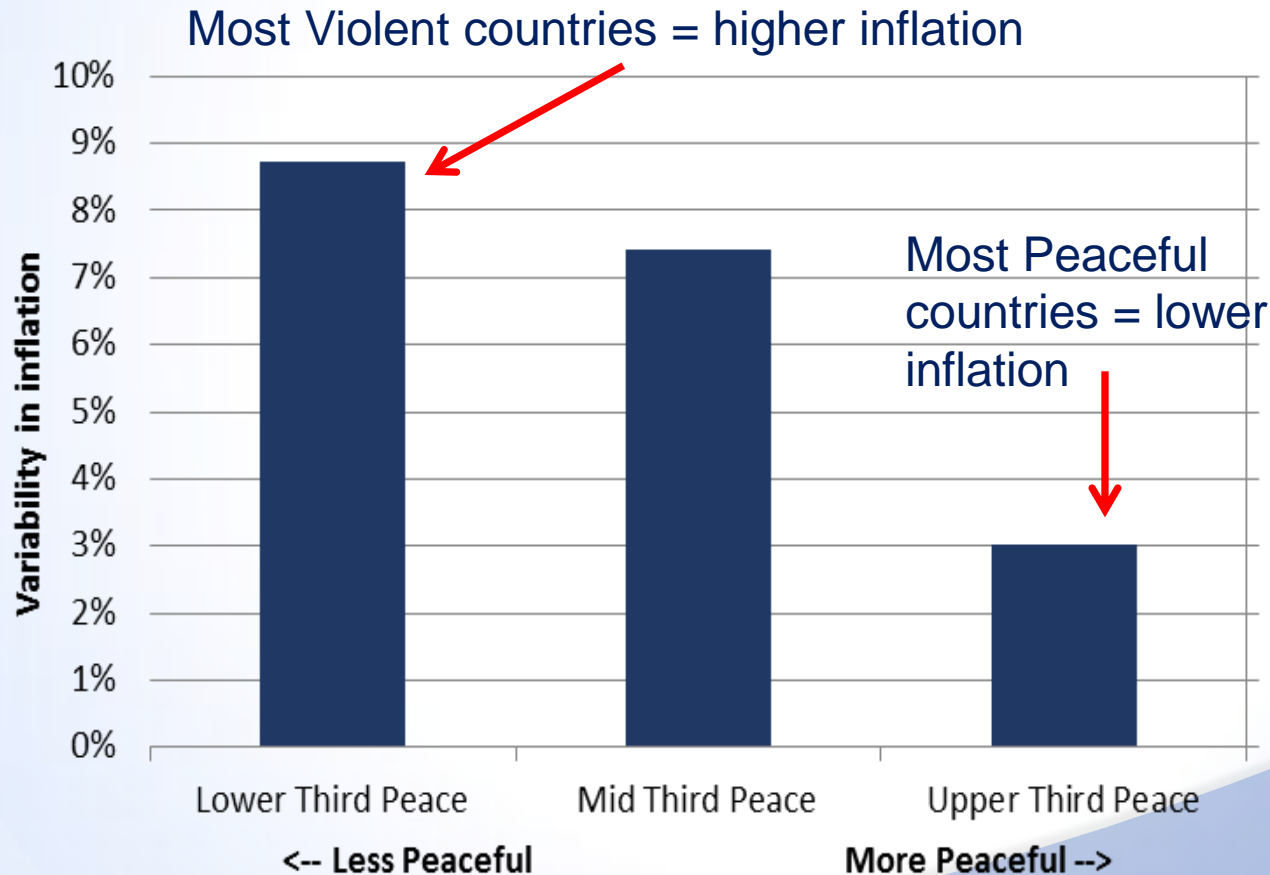
High income countries excluded due to low variance in peace,
Average of national CAGR GDP per Capita growth between 1996-2010

www.economicsandpeace.org

Inflation and Violence



The most peaceful countries consistently tended to have lower variability in inflation.



Source: Pillars of Peace, Institute for Economics and Peace, 2013

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The Pillars of Peace – Original Framework



The attitudes, institutions and structures that sustain a peaceful society



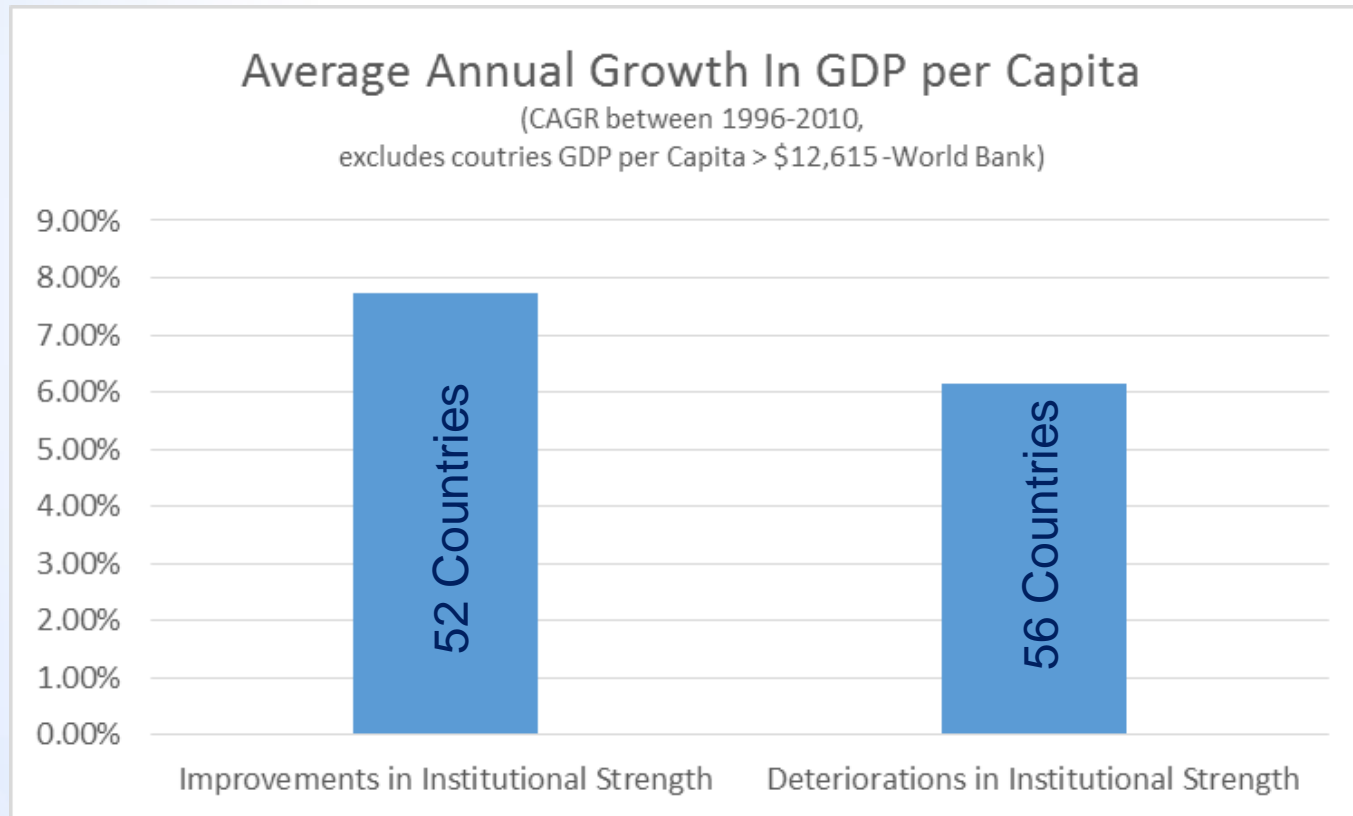
By measuring the strength of these institutions we can predict a country's likelihood of being peaceful and subsequently how much risk there is of falls in GDP and FDI.

Conversely, we can predict likelihood of improvement

Institutional Capacity and GDP



Institutional capacity is the attitudes, institutions and structures that drive peace and economic growth.



High income countries excluded due to low variance in peace,
Average of national CAGR GDP per Capita growth between 1996-2010

Link between Institutions and Economic Growth



Country	Government Effectiveness	Control of Corruption	Human Rights Index	Freedom of the Press	Human Development Index	Average annual % change in GDP growth since 1996
Thailand						4.25%
Philippines						4.43%
Malaysia						5.75%
Indonesia						8.40%

Countries that experienced negative growth since 1996



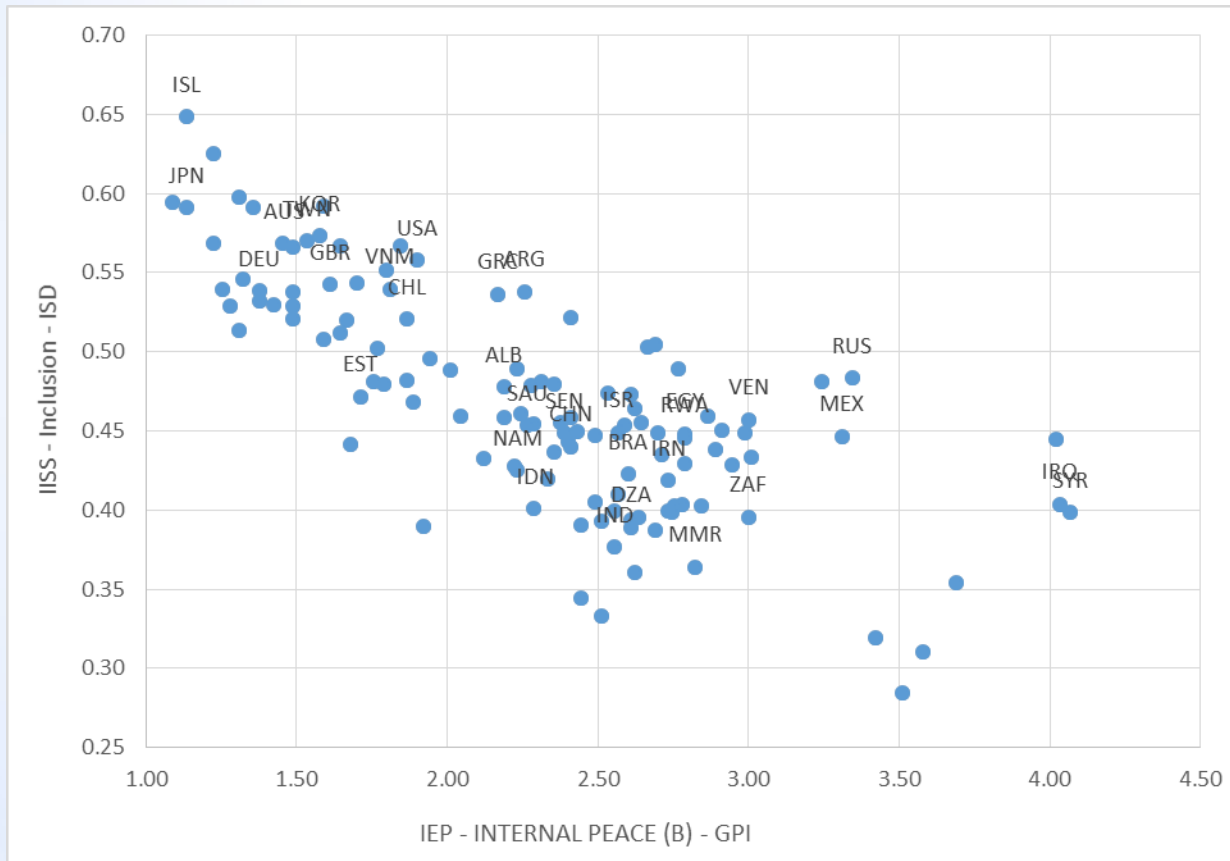
Country	Government Effectiveness	Control of Corruption	Human Rights Index	Freedom of the Press	Human Development Index	Average annual % change in GDP growth since 1996
Zimbabwe						-1.69%
Guinea						-0.66%
Gambia						-2.22%

CAGR GDP per Capita growth between 1996-2010
 Small arrows = slight changes, large arrows = significant changes

Social Inclusion and Violence



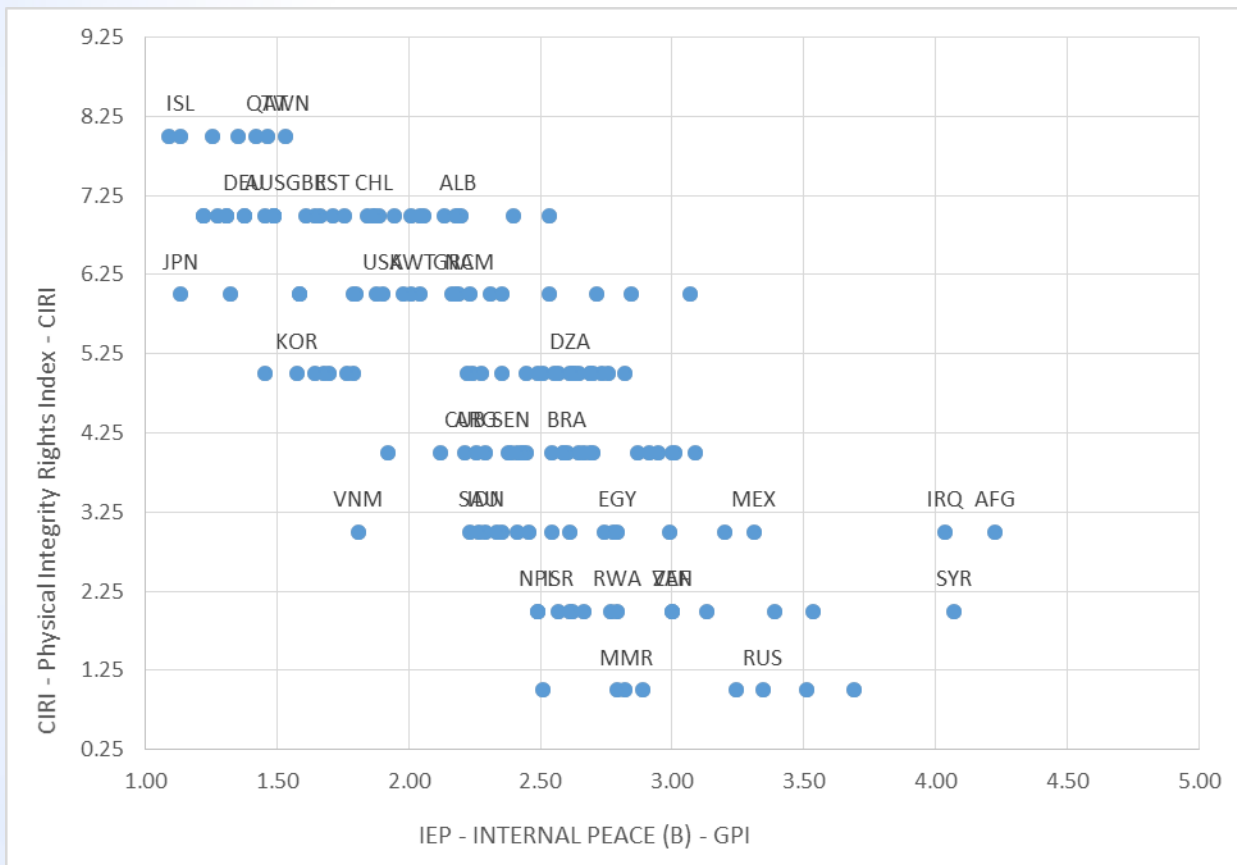
Countries with less social inclusion and social capital tend to be more violent



Human Rights and Violence



Countries with higher human rights standards tend to have less violence (measuring physical rights, civil liberties, workers rights and rights of women)

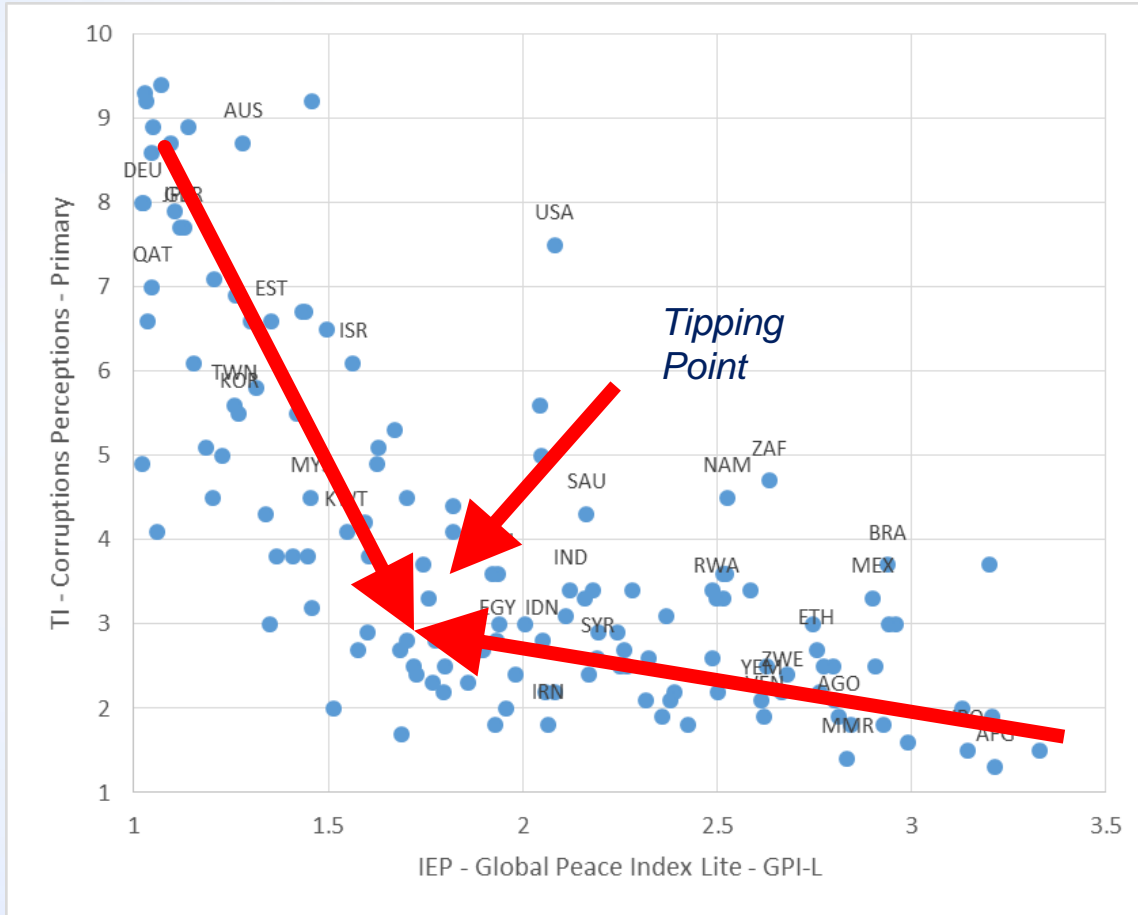


Violence vs Corruption Perceptions

There is a tipping point between peace and corruption. Once countries reach a certain point on corruption they then become much more peaceful.



Low
corruption

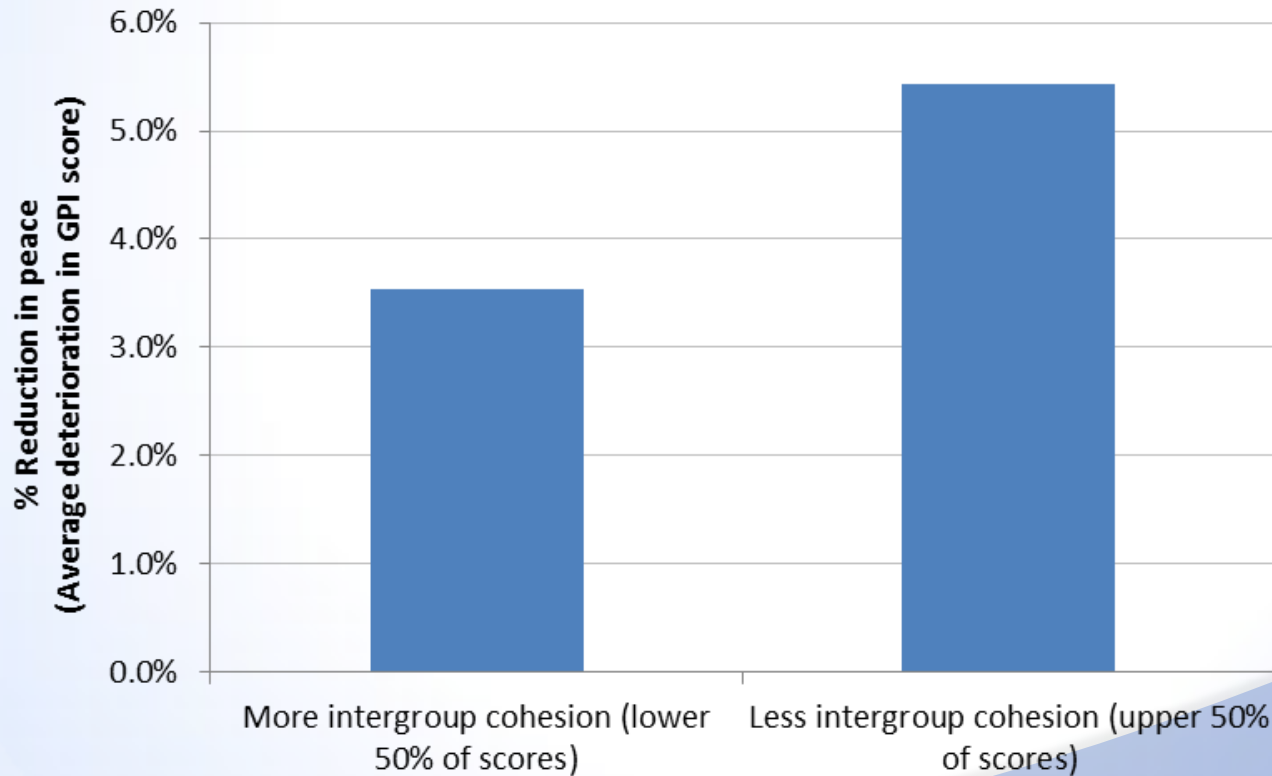


High
peace

Social Cohesion and Violence



Countries with higher levels intergroup cohesion have tended to experience better outcomes in terms of peace.

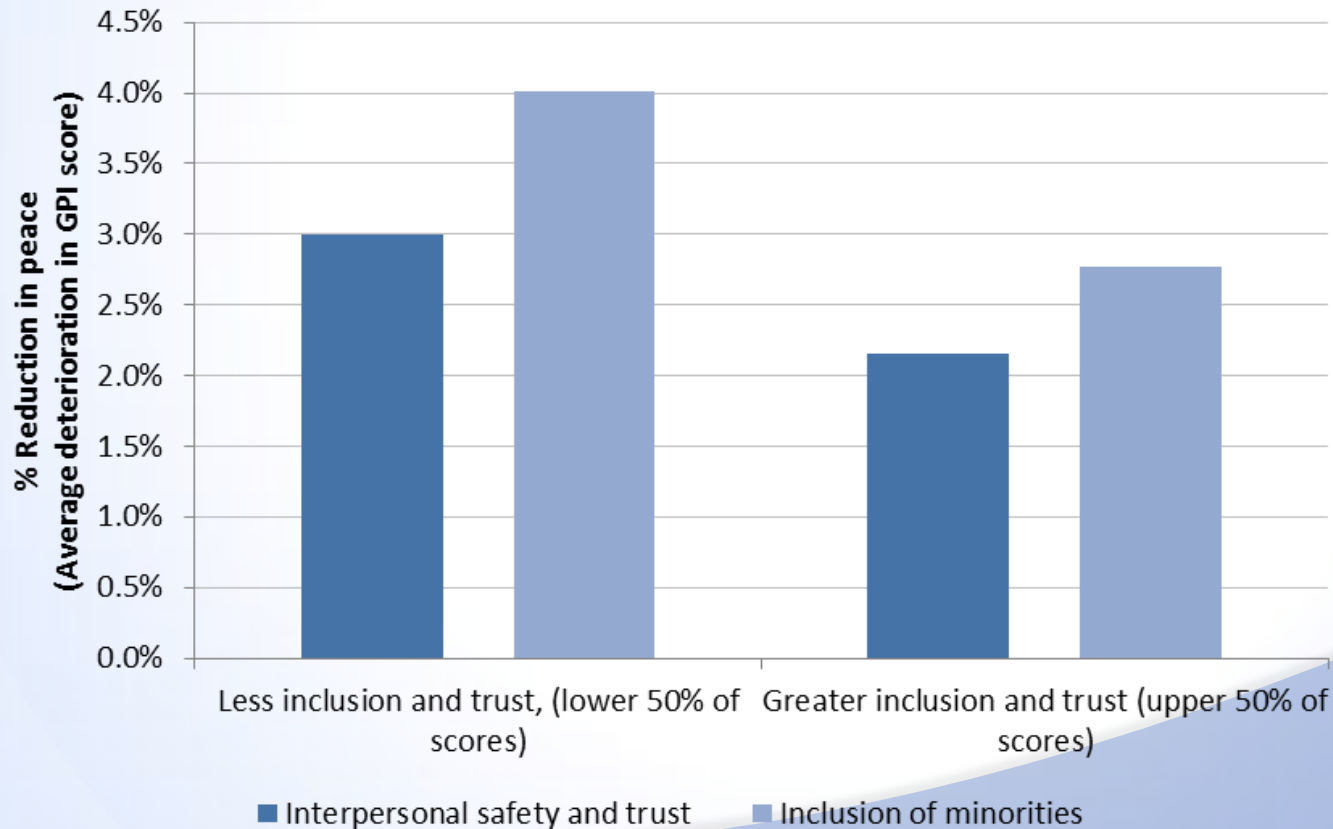


Source: Pillars of Peace, Institute for Economics and Peace, 2013

Trust and Violence



Countries which tended to be more accepting were also those which have historically been less violent.



Institutions and Absence of violence



Absence of Violence correlates strongly with many institutional measures

Positive Peace and Institutions Indicator	Correlation Strength
Government Effectiveness	-0.71
Rule Of Law	-0.75
Political Culture	-0.65
Ease of Doing Business	0.56
Economic Freedom	-0.61
GDP per Capita	-0.58
Life Expectancy Index Loss	0.53
Gini	0.28
Population Below \$2	0.45
Hostility to Foreigners	0.63
Empowerment Index	-0.58
Gender Inequality	0.61
Satisfaction with community	-0.44
Regional Integration	0.62
Intergroup Cohesion	-0.77
Press Freedom Index	0.62
World Press Freedom Index	0.63
Mobile Phones Subs per 1000	-0.30
Youth Development Index	-0.53
Non Income HDI	-0.54
Scientific Publications	-0.51
Control of Corruption	-0.75
Factionalised Elites	0.75
Transparency	0.73



Countries at Most Risk in 2008 Using Positive Peace Model

Most countries with weak institutions in 2008 deteriorated in peace by 2012

<i>Countries with weak institutions in 2008</i>	
Bangladesh	Belarus
Bolivia	Burkina Faso
Cameroon	China
Egypt	Gabon
Ghana	Indonesia
Iran	Jordan
Kazakhstan	Laos
Madagascar	Malawi
Malaysia	Morocco
Mozambique	Nicaragua
Rwanda	Romania
Syria	Senegal
Tunisia	Tanzania
Vietnam	Ukraine
Zambia	Yemen

Red = Deteriorated
Green = No Deterioration

Example – Senegal



What is the likelihood that internal peace in Senegal would deteriorate significantly after 2008?*

Three Dimensional Model to assess risk

Dimension 1. Statistical assessment of history of violence in Senegal in 2008:

- Since 1996 it had been significantly less peaceful 72% of this time.

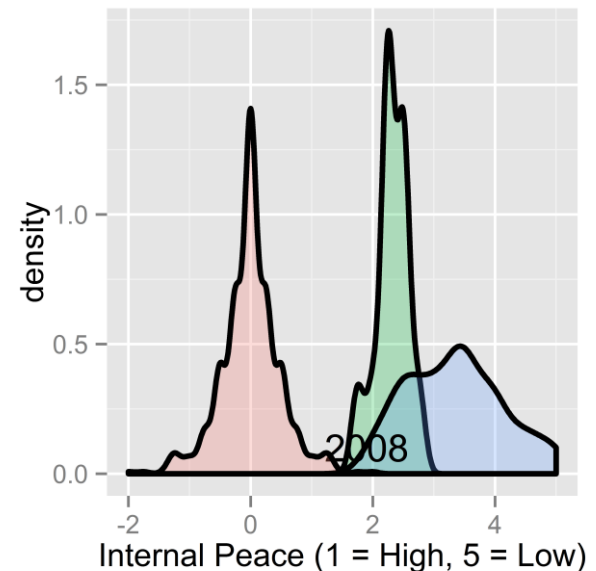
Dimension 2. Statistical assessment of medium Positive Peace countries in Sub-Saharan Africa compared to Senegal in 2008:

- Since 1996 these had been significantly less peaceful 91% of the time.

Dimension 3. How often do Sub Saharan countries with medium Positive Peace significantly deteriorate?

- Significant deteriorations occur 25% of the time

Final Risk Score = Using Bayesian Statistics, there is a 45% that Senegal will deteriorate significantly



Outcome – GPI score deteriorated by 50%**

$$Risk = \frac{P1 \times P2 \times P3}{P1 \times P2 \times P3 + (1 - P1) * (1 - P2 \times P3)}$$

*Significant deterioration is defined by as a fall in internal GPI score in the top quintile of all year on year changes since 1996. This equates to a nominal GPI internal peace score change of +0.25.

**Using Homicide rates and Political Terror scores

Countries Predicated as “at Risk” in 2008 Using 3 Dimensional Model



*It was possible to statistically identify 7 of the 10 countries that deteriorated in internal peace between 2008 – 2010**

Largest declines in Peace from 2008 to 2010	Countries rated with highest risk in 2008
Rwanda	☑
Kyrgyzstan	☑
Senegal	☑
Sierra Leone	☑
Guinea	☑
Ethiopia	☒
Angola	☑
Cote d'Ivoire	☒
Kuwait	☑
Uganda	☒

☑ Identified
☒ Unidentified



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