

INSTITUTE FOR ECONOMICS & PEACE

2009 METHODOLOGY, RESULTS & FINDINGS



## EXECUTIVE SUMMARY

*The results of the Global Peace Index for 2009 suggest that the world has become slightly less peaceful in the past year, which appears to reflect the intensification of violent conflict in some countries and the effects of both the rapidly rising food and fuel prices early in 2008 and the dramatic global economic downturn in the final quarter of the year. Rapidly rising unemployment, pay freezes and falls in the value of house prices, savings and pensions is causing popular resentment in many countries, with political repercussions that have been registered by the GPI through various indicators measuring safety and security in society.*

This is the third edition of the Global Peace Index (GPI). It has been expanded to rank 144 independent states and updated with the latest-available figures and information for 2007-08. The index is composed of 23 qualitative and quantitative indicators from respected sources, which combine internal and external factors ranging from a nation's level of military expenditure to its relations with neighbouring countries and the level of respect for human rights. These indicators were selected by an international panel of experts including academics and leaders of peace institutions.

As before, the GPI has been tested against a range of potential “drivers” or potential determinants of peace – including levels of democracy and transparency, education and material wellbeing. The GPI brings a snapshot of relative peacefulness among nations while continuing to contribute to an understanding of what factors help create or sustain more peaceful societies.

The GPI was founded by Steve Killelea, an Australian international technology entrepreneur and philanthropist. It forms part of the Institute for Economics and Peace, a new global think tank dedicated to the research and education of the relationship between economic development, business and peace. The GPI is collated and calculated by the Economist Intelligence Unit, with whom this report is written in co-operation.

## HIGHLIGHTS

New Zealand is ranked as the country most at peace, followed by Denmark and Norway. Small, stable and democratic countries are consistently ranked highest; 14 of the top 20 countries are Western or Central European countries. This is, however, a reduction from 16 last year, with Hungary and Slovakia both slipping out of the top 20, while Qatar and Australia moved up to 16th and 19th place respectively. All five Scandinavian countries are in the top ten of the GPI. Island nations generally fare well, although Madagascar fell by 30 places amid mounting political instability and violent demonstrations. For the third year running, the country ranked least at peace is Iraq. Afghanistan and Somalia follow – countries that are in a state of ongoing conflict and upheaval. The average score for the nations surveyed in the 2009 GPI is 1.964 (based on a 1-5 scale). There is little variance between the overall scores of the top 20 countries (1.202 for New Zealand and 1.481 for Chile), although the 20 lowest ranked countries exhibit a far greater spread, varying between 2.485 (Sri Lanka) and 3.341 (Iraq).

### **Changes to the methodology for 2009**

The international panel of experts that oversees the compilation of the Global Peace Index chose to include five additional countries in the 2009 edition: Burundi, Georgia, Guyana, Montenegro and Nepal. Hong Kong was dropped in response to queries about its status as a special administrative region of the People's Republic of China. While Hong Kong maintains a high degree of autonomy, foreign affairs and defence are the responsibility of China's authorities in Beijing. This brings the total number of countries covered to 144,

encompassing almost 99% of the world's population and over 87% of the planet's land mass.

A further change involved the removal of two indicators featured in the Global Peace Indexes of 2007 and 2008: the measures of UN and non-UN deployments. The former was dropped because it was generally felt that it was not a sufficiently accurate measure of a commitment from countries to UN peacekeeping missions. In the 2009 GPI the UN deployments indicator has been replaced with a measure of financial support to UN peacekeeping missions as all UN member states share the cost of mounting these operations. The indicator calculates the percentage of countries' "outstanding contributions versus annual assessment to the budget of the current peacekeeping missions" (see Annex A for a full definition).

The indicator of Non-UN deployments was initially included on the assumption that a country deploying troops overseas cannot be considered free of violence. However, members of the panel of experts acknowledged that the indicator is potentially ambiguous - should the deployment of troops overseas, whose mission is to prevent genocide in a foreign country, be recorded as a "negative" indicator in the GPI? In order to avoid making such judgements, the consensus view was to remove the indicator.

The two previous editions of the Global Peace Index have been compiled using a combination of "raw" quantitative scores that were "normalized" and scores (mainly qualitative) that were banded using a scale of 1-5. The compilers have observed that the use of raw scores contributed to the volatility of the index, so, following discussion with the

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overseeing panel of experts, it was decided this year to place all of the scores across the 23 indicators in bands, on either a scale of 1-5 or 1-10.

In order to make appropriate analysis of year-on-year changes to scores and rankings of the GPI, the Economist Intelligence Unit have used the amended set of indicators and weights as decided upon by the panel of experts to construct a revised index and set of rankings for the 2008 GPI. All discussions of changes in rankings and scores refer to these new methodologies. For more details, see Annex B.

## BACKGROUND

### Defining peace

The concept of peace is notoriously difficult to define. The simplest way of approaching it is in terms of harmony achieved by the absence of war or conflict. Applied to nations, this would suggest that those not involved in violent conflicts with neighbouring states or suffering internal wars would have achieved a state of peace. This is what Johan Galtung<sup>1</sup> defined as a “negative peace” – an absence of violence. The concept of negative peace is immediately intuitive and empirically measurable, and can be used as a starting point to elaborate its counterpart concept, “positive peace”: having established what constitutes an absence of violence, is it possible to identify which structures and institutions create and maintain peace? The Global Peace Index is a first step in this direction; a measurement of peace as the “absence of violence”, that seeks to determine what cultural attributes and institutions are associated with states of peace.

In 1999 the UN General Assembly launched a programme of action to build a “culture of peace” for the world’s children, which envisaged working towards a positive peace of justice, tolerance and plenty. The UN defined a culture of peace as involving values, attitudes and behaviours that:

- Reject violence
- Endeavour to prevent conflicts by addressing root causes
- Aim at solving problems through dialogue and negotiation

It proposed that such a culture of peace would be furthered by actions promoting education for peace and sustainable development, which it suggested was based

on human rights, gender equality, democratic participation, tolerant solidarity, open communication and international security. However, these links between the concept of peace and the causes of them were presumed rather than systematically measured. For example, while Doyle<sup>2</sup> and advocates of his liberal peace theory have held that democratic states rarely attack each other, the ongoing war in Iraq demonstrates how some democratic countries can be militant or belligerent – the justification for war often being that peace is ultimately secured through violence or the threat of violence.

### Measuring states of peace

The difficulties in defining the concept of peace may partly explain why there have been so few attempts to measure states of peace across nations. This project has approached the task on two fronts – the first aim is to produce a scoring model and global peace index that ranks 144 nations by their relative states of peace using 23 indicators. The indicators have been selected as being the best available datasets that reflect the incidence or absence of peace, and contain both quantitative data and qualitative scores from a range of trusted sources. The second aim is to use the underlying data and results from the Global Peace Index to undertake investigations into the relative importance of a range of potential determinants or “drivers” that may influence the creation and nurturing of peaceful societies, both internally and externally.

<sup>1</sup> Galtung, Johan. *Peace by Peaceful Means: peace and conflict, development and civilization*. Oslo: International Peace Research Institute, 1996

<sup>2</sup> Doyle, Michael. *Kant, Liberal Legacies, and Foreign Affairs*. *Philosophy and Public Affairs* (1983) 205, 207-208

## BACKGROUND

### **The international advisory panel of experts**

As with all composite indexes of this type, there are issues of bias and arbitrariness in the factors that are chosen to assess peace and, as seriously, in assigning weights to the different indicators (measured on a comparable and meaningful scale) to produce a single synthetic measure. In order to minimise these slants, the choices of indicators and the weights assigned to them were agreed following close and extensive consultation with the following international panel of experts in 2009:

**Professor Kevin P. Clements, Chairperson**  
Foundation Chair of Peace and Conflict Studies and  
Director, National Centre for Peace and Conflict Studies  
University of Otago, New Zealand

**Professor Sultan Barakat**  
Director, Post-war Reconstruction and Development Unit (PRDU)  
Department of Politics, University of York,  
United Kingdom

### **Dr Bates Gill**

Director, Stockholm International Peace Research Institute (SIPRI), Sweden  
with **Dr Ian Anthony** and **Dr Ekaterina Stepanova**

### **Dr Ronald J. Horvath**

Honorary Associate, School of Geosciences  
University of Sydney, Australia

### **Dr Linda S. Jamison**

Dean, Abshire-Inamori Leadership Academy  
and Senior Fellow  
Center for Strategic and International Studies (CSIS), USA

### **Dr Manuela Mesa**

Director, Center for Education and Peace Research (CEIPAZ) and  
President, Spanish Association for Peace Research (AIPAZ), Spain

### **Dan Smith**

Author, in a private capacity

### **Paul van Tongeren**

Secretary General, Global Partnership for the Prevention of Armed Conflict (GPPAC),  
The Netherlands

## METHODOLOGY AND DATA SOURCES

### The indicators

Twenty-three indicators of the existence or absence of peace were chosen by the panel of experts (see page 9), which are divided into three broad categories: measures of ongoing domestic and international conflict, measures of safety and security in society and measures of militarization. All scores for each indicator have now been “banded”, either on a scale of 1-5 (for qualitative indicators) or 1-10 (for quantitative data, such as military expenditure or the jailed population, which have then been converted to a 1-5 scale for comparability when compiling the final index). Qualitative indicators in the index have been scored by the Economist Intelligence Unit’s extensive team of country analysts, and gaps in the quantitative data have been filled by estimates by the same team.

Indicators consisting of quantitative data such as military expenditure or jailed population have been measured on the basis of the distribution of values across all countries between the maximum and minimum values (we assume that the 144 countries measured for the Global Peace Index are a representative sample of all countries). Each of the indicator’s data set has been divided into ten bands based on the full range of the data set and a country’s corresponding score results in its position in the distribution. Each indicator’s range between the maximum and minimum values has now been anchored in time based on data collected for the 2008 Global Peace Index. This is a change to the measurement methodology used in previous versions of the GPI and a detailed description is provided in Annex A. In order to make comparable and fair assessments over time, the 2009 methodology has been used to recalculate

GPI 2008. All ranking and score changes between the 2009 GPI and 2008 GPI are on the basis of these enhanced measuring techniques.

A detailed explanation of the scoring criteria used for each indicator is supplied in Annex A to this paper.

### Measures of ongoing domestic and international conflict

The Global Peace Index is intended as a review of the state of peace in nations over the past year, although many indicators are based on available data from the last two years. The panel of experts decided against including data reflecting a country’s longer-term historical experience of domestic and international conflict on the grounds that the GPI uses authoritative statistics on ongoing civil and trans-national wars collated by institutes such as the Uppsala Conflict Data Program and the International Peace Research Institute, Oslo. These, combined with two indicators scored by the Economist Intelligence Unit’s analysts, comprise five of the 23 indicators:

- Number of external and internal conflicts fought: 2002-07
- Estimated number of deaths from organized conflict (external)
- Number of deaths from organized conflict (internal)
- Level of organized conflict (internal)
- Relations with neighbouring countries

## METHODOLOGY AND DATA SOURCES

### Measures of societal safety and security

Ten of the indicators assess the levels of safety and security in a society (country), ranging from the perception of criminality in society, to the level of respect for human rights and the rate of homicides and violent crimes. Crime data is from the UN Office of Drugs and Crime. The difficulties of comparing international crime statistics are discussed in detail in Annex A. Five of these indicators have been scored by the Economist Intelligence Unit's team of country analysts:

- Perceptions of criminality in society
- Number of displaced people as a percentage of the population
- Political instability
- Level of disrespect for human rights (Political Terror Scale)
- Potential for terrorist acts
- Number of homicides per 100,000 people
- Level of violent crime
- Likelihood of violent demonstrations
- Number of jailed population per 100,000 people
- Number of internal security officers and police per 100,000 people

### Measures of militarization

Eight of the indicators are related to a country's military build-up – reflecting the assertion that the level of militarization and access to weapons is directly linked to how at peace a country feels internationally. Comparable data are readily available from sources such as the International Institute of Strategic Studies (IISS):

- Military expenditure as a percentage of GDP

- Number of armed services personnel per 100,000 people
- Volume of transfers (imports) of major conventional weapons per 100,000 people
- Volume of transfers (exports) of major conventional weapons per 100,000 people
- Funding for UN peacekeeping missions: outstanding contributions versus annual assessment to the budget of the current peacekeeping missions
- Aggregate number of heavy weapons per 100,000 people
- Ease of access to small arms and light weapons
- Military capability/sophistication

### Weighting the index

The panel of experts apportioned scores based on the relative importance of each of the indicators on a 1-5 scale. The consensus scores for each indicator are given in table 1.

Two sub-component weighted indices were then calculated from the GPI group of indicators:

- 1 a measure of how at peace internally a country is;
- 2 a measure of how at peace externally a country is (its state of peace beyond its borders).

The overall composite score and index was then formulated by applying a weight of 60% to the measure of internal peace and 40% for external peace. The heavier weight applied to internal peace was agreed within the panel of experts, following robust debate. The decision was based on the innovative notion that a greater level of internal peace is likely to lead to, or at least correlate with, lower external conflict.



Indicator	Weight (1 to 5)
<b>Internal Peace</b>	<b>60%</b>
<b>External Peace</b>	<b>40%</b>
Perceptions of criminality in society	4
Number of internal security officers and police per 100,000 people	3
Number of homicides per 100,000 people	4
Number of jailed population per 100,000 people	3
Ease of access to weapons of minor destruction	3
Level of organized conflict (internal)	5
Likelihood of violent demonstrations	3
Level of violent crime	4
Political instability	4
Respect for human rights	4
Volume of transfers of major conventional weapons, as recipient (Imports) per 100,000 people	2
Potential for terrorist acts	1
Number of deaths from organized conflict (internal)	5
Military expenditure as a percentage of GDP	2
Number of armed services personnel per 100,000 people	2
Funding for UN peacekeeping missions	2
Aggregate number of heavy weapons per 100,000 people	3
Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people	3
Military capability/sophistication	2
Number of displaced people as a percentage of the population	4
Relations with neighbouring countries	5
Number of external and internal conflicts fought: 2002-07	5
Estimated number of deaths from organized conflict (external)	5

*Table 1*

## ANALYSIS OF THE RESULTS

Table 2 provides the GPI rankings for the 144 countries in 2009. Countries most at peace are ranked first. Those countries shaded green are in the top 20%; those shaded red are in the bottom 20%.

Rank	Country	Score	Rank	Country	Score
1	New Zealand	1.202	36	Italy	1.648
2	Denmark	1.217	37	Taiwan	1.652
2	Norway	1.217	38	Estonia	1.661
4	Iceland	1.225	39	Vietnam	1.664
5	Austria	1.252	40	Bhutan	1.667
6	Sweden	1.269	40	United Arab Emirates	1.667
7	Japan	1.272	42	Kuwait	1.680
8	Canada	1.311	43	Lithuania	1.687
9	Finland	1.322	44	Tunisia	1.698
9	Slovenia	1.322	45	Laos	1.701
11	Czech Republic	1.328	46	Libya	1.710
12	Ireland	1.333	47	Malawi	1.711
13	Luxembourg	1.341	48	Cyprus	1.737
14	Portugal	1.348	49	Croatia	1.741
15	Belgium	1.359	50	Bosnia and Herzegovina	1.755
16	Germany	1.392	51	Gabon	1.758
16	Qatar	1.392	52	Ghana	1.761
18	Switzerland	1.393	53	Mozambique	1.765
19	Australia	1.476	54	Egypt	1.773
20	Chile	1.481	54	Latvia	1.773
21	Oman	1.520	56	Bulgaria	1.775
22	Netherlands	1.531	57	Greece	1.778
23	Singapore	1.533	58	Zambia	1.779
24	Slovakia	1.539	59	Panama	1.798
25	Uruguay	1.557	59	Tanzania	1.798
26	Malaysia	1.561	61	Equatorial Guinea	1.801
27	Hungary	1.575	61	Nicaragua	1.801
28	Spain	1.577	63	Morocco	1.811
29	Costa Rica	1.578	64	Jordan	1.832
30	France	1.579	65	Namibia	1.841
31	Romania	1.591	66	Argentina	1.851
32	Poland	1.599	67	Indonesia	1.853
33	South Korea	1.627	68	Cuba	1.856
34	Botswana	1.643	69	Bahrain	1.881
35	United Kingdom	1.647	70	Dominican Republic	1.890

Table 2 (continued over page)

Rank	Country	Score	Rank	Country	Score
71	Burkina Faso	1.905	111	Guatemala	2.218
72	Madagascar	1.912	112	Honduras	2.265
73	Paraguay	1.916	113	Kenya	2.266
74	China	1.921	114	Azerbaijan	2.327
75	Moldova	1.925	114	Philippines	2.327
75	Albania	1.925	116	Haiti	2.330
77	Nepal	1.939	117	Cote d' Ivoire	2.342
78	Serbia	1.951	118	Thailand	2.353
79	Peru	1.972	119	Yemen	2.363
80	Senegal	1.984	120	Venezuela	2.381
81	Bolivia	1.990	121	Turkey	2.389
82	Ukraine	2.010	122	India	2.422
83	United States of America	2.015	123	South Africa	2.437
84	Kazakhstan	2.018	124	Mauritania	2.478
85	Brazil	2.022	125	Sri Lanka	2.485
86	Rwanda	2.027	126	Myanmar	2.501
87	Trinidad and Tobago	2.035	127	Burundi	2.529
88	Macedonia	2.039	128	Ethiopia	2.551
89	Mongolia	2.040	129	Nigeria	2.602
90	Bangladesh	2.045	130	Colombia	2.645
91	Montenegro	2.046	131	North Korea	2.717
92	Syria	2.049	132	Lebanon	2.718
93	Papua New Guinea	2.059	133	Central African Republic	2.733
94	El Salvador	2.068	134	Georgia	2.736
95	Cameroon	2.073	134	Zimbabwe	2.736
96	Mali	2.086	136	Russia	2.750
97	Guyana	2.098	137	Pakistan	2.859
98	Belarus	2.103	138	Chad	2.880
99	Iran	2.104	139	Democratic Republic of the Congo	2.888
100	Angola	2.105	140	Sudan	2.922
101	Turkmenistan	2.110	141	Israel	3.035
102	Jamaica	2.111	142	Somalia	3.257
103	Uganda	2.140	143	Afghanistan	3.285
104	Saudi Arabia	2.167	144	Iraq	3.341
105	Cambodia	2.179			
106	Congo (Brazzaville)	2.202			
106	Uzbekistan	2.202			
108	Mexico	2.209			
109	Ecuador	2.211			
110	Algeria	2.212			

## ANALYSIS OF THE RESULTS

### A regional overview

Western Europe is markedly the most peaceful region, with the majority of the countries in this group ranking in the top 20 overall. France, the United Kingdom, Italy, Cyprus and Greece fare the least well of the Western European nations, with deteriorations in the scores for both Greece (a fall of 8 places) and Italy (3 positions). Greece's score for political instability rose, reflecting the travails of the scandal-hit centre-right New Democracy (ND) party. The ruling party's fortunes faded further in late 2008, amid a week of rioting in Athens and Thessaloniki that was sparked by the death of a 15-year-old boy who was shot by a police officer. In Italy, a rise in the indicator measuring perceptions of criminality in society was linked to a focus on rising illegal immigration and violent crime, frequently blamed on immigrants, in the April 2008 election campaign. Fairly high levels of militarization, sophisticated weapon industries and arms exports in the UK and France contribute to their relatively low scores.

Table 3.1

Western Europe	Overall Rank	Overall Score	Regional Rank
Denmark	2	1.22	1
Norway	2	1.22	1
Iceland	4	1.23	3
Austria	5	1.25	4
Sweden	6	1.27	5
Finland	9	1.32	6
Ireland	12	1.33	7
Luxembourg	13	1.34	8
Portugal	14	1.35	9
Belgium	15	1.36	10
Germany	16	1.39	11
Switzerland	18	1.39	12
Netherlands	22	1.53	13
Spain	28	1.58	14
France	30	1.58	15
United Kingdom	35	1.65	16
Italy	36	1.65	17
Cyprus	48	1.74	18
Greece	57	1.78	19
<b>Average</b>	<b>20</b>	<b>1.43</b>	

In Central and Eastern Europe, the recent members of the European Union generally fare well, with Slovenia leading the way in 9th place, followed by Czech Republic (11th position), although Estonia, Hungary, Latvia and Poland all experienced falls of at least five places in this year's index. Countries in the Caucasus and Central Asia are accorded low ranks, as last year, and Russia slips to 136th place, reflecting high scores for the majority of indicators, notably on measures of internal peace with high scores for homicides, the jailed population, perceived criminality, violent crime and respect for human rights.

*Table 3.2*

Central and Eastern Europe	Overall Rank	Overall Score	Regional Rank
Slovenia	9	1.32	1
Czech Republic	11	1.33	2
Slovakia	24	1.54	3
Hungary	27	1.58	4
Romania	31	1.59	5
Poland	32	1.60	6
Estonia	38	1.66	7
Lithuania	43	1.69	8
Croatia	49	1.74	9
Bosnia and Herzegovina	50	1.76	10
Latvia	54	1.77	11
Bulgaria	56	1.77	12
Moldova	75	1.92	13
Albania	76	1.93	14
Serbia	78	1.95	15
Ukraine	82	2.01	16
Kazakhstan	84	2.02	17
Macedonia	88	2.04	18
Montenegro	91	2.05	19
Belarus	98	2.10	20
Turkmenistan	101	2.11	21
Uzbekistan	106	2.20	22
Azerbaijan	115	2.33	23
Turkey	121	2.39	24
Georgia	134	2.74	25
Russia	136	2.75	26
<b>Average</b>	<b>70</b>	<b>1.92</b>	

## ANALYSIS OF THE RESULTS

The **Asia Pacific** region is on average the third most peaceful region (behind North America), but it exhibits wide variation. The region's OECD nations rank highly, with New Zealand coming first overall and Japan seventh, a two-pronged impact of very strong scores for overall domestic peace and low levels of militarization. With the exception of Japan, the top seven Asia/Pacific countries all rose in the rankings this year, led by Malaysia which climbed by 5 places to 26th position.

Ongoing internal conflicts and related security concerns in Afghanistan, Pakistan and Sri Lanka contribute to their low rankings, while in North Korea and Myanmar very high levels of militarization are key factors. Thailand and the Philippines are ranked higher than these nations, but their relatively low scores reflect elevated levels of crime and internal disharmony.

*Table 3.3*

Asia-Pacific	Overall Rank	Overall Score	Regional Rank
New Zealand	1	1.20	1
Japan	7	1.27	2
Australia	19	1.48	3
Singapore	23	1.53	4
Malaysia	26	1.56	5
South Korea	33	1.63	6
Taiwan	37	1.65	7
Vietnam	39	1.66	8
Bhutan	40	1.67	9
Laos	45	1.70	10
Indonesia	67	1.85	11
China	74	1.92	12
Nepal	77	1.94	13
Mongolia	89	2.04	14
Bangladesh	90	2.04	15
Papua New Guinea	93	2.06	16
Cambodia	105	2.18	17
Philippines	114	2.33	18
Thailand	118	2.35	19
India	122	2.42	20
Sri Lanka	125	2.48	21
Myanmar	126	2.50	22
North Korea	131	2.72	23
Pakistan	137	2.86	24
Afghanistan	143	3.28	25
<b>Average</b>	<b>75</b>	<b>2.01</b>	

Latin America also exhibits a broad spread, led by Chile and Uruguay (as last year), although both countries fell slightly in rankings, to 20th and 25th positions respectively. Costa Rica's high ranking in the GPI (it rose 6 places this year to 29th place) partly reflects very low scores for all measures of militarization apart from the accessibility of small arms and light weapons, in step with the abolition of the country's army at the end of the civil war in 1948. Colombia and Venezuela remain in the bottom 25, with high scores in the majority of their measures of safety and security and fairly high levels of militarization.

*Table 3.4*

Latin America	Overall Rank	Overall Score	Regional Rank
Chile	20	1.48	1
Uruguay	25	1.56	2
Costa Rica	29	1.58	3
Panama	59	1.80	4
Nicaragua	61	1.80	5
Argentina	66	1.85	6
Cuba	68	1.86	7
Dominican Republic	70	1.89	8
Paraguay	73	1.92	9
Peru	79	1.97	10
Bolivia	81	1.99	11
Brazil	85	2.02	12
Trinidad and Tobago	87	2.04	13
El Salvador	94	2.07	14
Guyana	97	2.10	15
Jamaica	102	2.11	16
Mexico	108	2.21	17
Ecuador	109	2.21	18
Guatemala	111	2.22	19
Honduras	112	2.26	20
Haiti	116	2.33	21
Venezuela	120	2.38	22
Colombia	130	2.65	23
<b>Average</b>	<b>83</b>	<b>2.01</b>	

## ANALYSIS OF THE RESULTS

The countries of the **Middle East and North Africa** are broadly ranked in the bottom half of the GPI, with war-torn Iraq the least at peace, as last year. Israel's low rank reflects its very high levels of militarization as well as the Israel Defence Force's incursion into Gaza in late December 2008 and very tense relations with neighbouring countries. Yemen's fall of 13 places to 119th position reflects a sharply worsening security situation. Qatar and Oman are, by contrast, ranked in the top 25 of the GPI, with low levels of militarization by regional standards and fairly low scores for most measures of safety and security in society.

*Table 3.5*

Middle East and North Africa	Overall Rank	Overall Score	Regional Rank
Qatar	16	1.39	1
Oman	21	1.52	2
United Arab Emirates	41	1.67	3
Kuwait	42	1.68	4
Tunisia	44	1.70	5
Libya	46	1.71	6
Egypt	54	1.77	7
Morocco	63	1.81	8
Jordan	64	1.83	9
Bahrain	69	1.88	10
Syria	92	2.05	11
Iran	99	2.10	12
Saudi Arabia	104	2.17	13
Algeria	110	2.21	14
Yemen	119	2.36	15
Lebanon	132	2.72	16
Israel	141	3.04	17
Iraq	144	3.34	18
Average	78	2.05	



**Sub-Saharan African** nations are generally placed in the bottom half of the index, with conflict-ravaged Somalia, Sudan, the Democratic Republic of the Congo (DRC), Chad and Zimbabwe all lying in the GPI's bottom ten. Botswana fares best, in 34th position, as a result of minimal militarization, an absence of external or internal conflicts and relatively low scores for most measures of safety and security, although the homicide rate is high. Malawi is in the top 50 for broadly similar reasons, with a lower homicide rate than in Botswana, but a higher score for political instability. Madagascar falls 30 places from its relatively high position last year, amid mounting political instability and the outbreak of violent demonstrations.

Three of the world's major military-diplomatic powers (the European Union could be considered the 4th) continue to register relatively low ranks, with China at 74th, the US at 83rd and Russia at 136th. The US rose six places from last year, partly as a result of an improvement in its measures of political stability and a fall in the indicator registering the potential for terrorist acts. Most measures of militarization are still accorded very high scores and the country still jails a higher proportion of its population than any of the other 143 nations in the GPI. Members of the G8 apart from Russia, the UK and the US do better, with Japan at 7th place, Canada at 8th and Germany at joint 16th.

*Table 3.6*

Africa	Overall Rank	Overall Score	Regional Rank
Botswana	34	1.64	1
Malawi	47	1.71	2
Gabon	51	1.76	3
Ghana	52	1.76	4
Mozambique	53	1.77	5
Zambia	58	1.78	6
Tanzania	59	1.80	7
Equatorial Guinea	61	1.80	8
Namibia	65	1.84	9
Burkina Faso	71	1.91	10
Madagascar	72	1.91	11
Senegal	80	1.98	12
Rwanda	86	2.03	13
Cameroon	95	2.07	14
Mali	96	2.09	15
Angola	100	2.10	16
Uganda	103	2.14	17
Congo (Brazzaville)	106	2.20	18
Kenya	113	2.27	19
Cote d' Ivoire	117	2.34	20
South Africa	123	2.44	21
Mauritania	124	2.48	22
Burundi	127	2.53	23
Ethiopia	128	2.55	24
Nigeria	129	2.60	25
Central African Republic	133	2.73	26
Zimbabwe	134	2.74	27
Chad	138	2.88	28
DRC	139	2.89	29
Sudan	140	2.92	30
Somalia	142	3.26	31
<b>Average</b>	<b>96</b>	<b>2.22</b>	

## THE TEN MOST AT PEACE

### **New Zealand: 1st place**

*Score: 1.202*

New Zealand is ranked the nation most at peace of the 144 ranked in the 2009 Global Peace Index. Its rise from 3rd position in 2008 is partly explained by an increase in the score for political stability, following the election of a new coalition government in November 2008. The centre-right National Party has a strong popular mandate and a robust parliamentary majority by New Zealand's standards, putting the new prime minister, John Key, in a good position to push through his agenda. The rise to first position is also related to the fall of Iceland from the top spot last year, which reflects the deterioration in its indicators of political stability, the likelihood of violent demonstrations and perceived criminality in the wake of the banking collapse that engulfed the economy in September.

Most aspects of safety and security in society, including the likelihood of violent demonstrations, the homicide rate and the level of respect for human rights receive the lowest possible scores (unchanged from last year), although the proportion of the population in jail is higher than any of the Nordic nations. New Zealand maintains harmonious relations with neighbouring countries, notably Australia, links with which are underpinned by the 1983 Closer Economic Relations (CER) agreement. Augmenting the single-market agreement is a Trans-Tasman Travel Agreement, which allows citizens of New Zealand and Australia to travel, work and live freely in either country. Steps are also being taken towards greater harmonisation of competition policy, and banking and accountancy regulations with Australia,

although plans for a joint Trans-Tasman agency for the regulation of drugs and therapeutic goods were shelved in mid-2007 owing to a lack of agreement on the issue among New Zealand political parties.

New Zealand's measures of militarization continue to receive very low scores – military expenditure fell back to 1.07% of GDP in 2007 (latest available figures), which is a lower proportion than Norway and Finland, but higher than Denmark and Iceland. Concerns have been raised in New Zealand that its low level of military spending could compromise the ability of the 8,600-strong New Zealand Defence Force (NZDF) to meet all its objectives, which include its alliance commitments to Australia and maintaining security in the South Pacific. New Zealand is accorded a low score for its exports of major conventional weapons—slightly lower the score for Norway, Denmark and Finland and considerably below the score for Sweden.

### **Denmark: equal 2nd place**

*Score: 1.217*

Denmark remains in second position in the GPI in 2009. It is politically stable and enjoys good relations with its neighbours. Rates of violent crime and homicide are low, violent demonstrations are highly unlikely to occur and there is a high level of respect for human rights. Although Denmark abandoned its policy of neutrality in 1949 to become a member of NATO, it has maintained a relatively modest level of defence contribution and refuses to allow nuclear weapons on its soil in peacetime. Military expenditure as a percentage of GDP is very low and exports of major conventional weapons are notably lower than in Sweden and Norway.

The indicator for imports of major conventional weapons rose slightly compared with that in the 2008 GPI, but not sufficiently to alter Denmark's overall position when other countries near the top of the GPI, notably Iceland, experienced a greater deterioration in a wider range of indicators.

The government, led by Anders Fogh Rasmussen (Liberal Party), lent strong support to the intervention in Iraq in March 2003, and around 500 Danish troops were present in Iraq from June 2003 until they were withdrawn in August 2007. Along with the other Nordic states, Denmark has contributed both equipment and training to help the Baltic States establish stronger military capacities for peacekeeping.

### **Norway: equal 2nd place**

*Score: 1.217*

Norway receives the same score as Denmark in the 2009 GPI, putting the country in joint second place, compared with third position last year. The country's high rank reflects the continued absence of internal conflict and the fact that involvement in external conflicts is limited to peacekeeping roles. Relations between Norway and its neighbouring Scandinavian countries, with which it shares a strong cultural and linguistic heritage, are very good. Indeed, close co-operation with the other Nordic countries is a cornerstone of Norway's foreign policy. The rate of violent crime is very low, there is a strong level of respect for human rights, the political scene is stable and violent demonstrations are highly unlikely to occur, all of which indicate a harmonious society.

Norway's measures of militarization receive low scores in a broad international comparison, and military expenditure as a percentage of GDP has fallen to the same level as the other Nordic countries surveyed, including Denmark, which is also a NATO member. Access to small arms and light weapons remains highly restricted. Norway's direct military role in the international struggle against terrorism following the September 11th 2001 attacks on the US has been limited, although important for Norwegian forces. The change in the nature of threats to security in the Western Hemisphere has altered the priorities of Norwegian defence. Instead of being chiefly geared to counter a Russian invasion, the military is adopting a more flexible structure. A reform process has been under way since 2002 and the active peacetime military force is being gradually cut by at least 5,000 troops (from about 26,600 at the outset) and the military intends to dispose of one-third of its property.

### **Iceland: 4th place**

*Score: 1.225*

Iceland falls from first position in the 2008 GPI to 4th place this year, amid an unprecedented collapse in the country's financial system and currency that was triggered by international financial turmoil in September and October 2008. Subsequent protests on the streets of the capital, Reykjavik, which eventually brought about the demise of the coalition government led by Geir Haarde in January 2009, was reflected in a rise in the scores for political instability and the likelihood of violent demonstrations, albeit from very low levels. The indicator

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measuring perceptions of the level of criminality also increased, contributing to the modest drop in the overall rankings. Other indicators remain unchanged compared with last year; the proportion of citizens who are in jail is still one of the lowest of the 144 countries surveyed, although there are more internal security officers and police per head than in Denmark and Finland.

A member of NATO since its inception in 1949, Iceland has no standing army, which means it continues to receive the lowest possible scores for most of the measures of militarization, although the score for military capability/sophistication is relatively high on account of the nation's well equipped Coast Guard. In April 2007 the Icelandic government signed peacetime security co-operation agreements with its Norwegian and Danish counterparts, which mainly focus on monitoring the North Atlantic. Iceland's UN peacekeeping deployments are the work of the Icelandic Crisis Response Unit (ICRU), which was founded in 2001 and comprises a team including police officers, doctors and engineers.

### **Austria: 5th place**

*Score: 1.252*

Neutral since the end of Soviet occupation of part of the country in 1955, Austria is politically stable and free of civil unrest. The country continues to enjoy good relations with neighbouring states, which includes support for Croatia's bid to join the European Community. Levels of violent crime are very low, as is the homicide rate. The proportion of the population in jail is also low, although slightly higher than that recorded in the Nordic countries and Japan. Austria is

accorded a score of 2 in Dalton and Gibney's Political Terror Scale (measuring the level of respect for human rights), which is higher than any of the other countries in the top ten of the GPI.

Austria's military expenditure as a percentage of GDP is amongst the lowest of the 144 countries surveyed and there was a year-on-year reduction in the number of internal security officers and police in 2008. The volume of imports of major conventional weapons fell considerably from the high level in 2007-08 that was associated with the (domestically) controversial procurement of 18 Typhoon interceptor aircraft from the European Aeronautic Defence and Space Company (EADS). This fall contributed considerably to Austria's rise of five places in the rankings this year, offsetting the slight rise in Austria's indicator for political stability, which reflected escalating tensions between the Social Democratic Party (SPÖ) and the Austrian People's Party (ÖVP) over tax and healthcare reforms. The grand coalition eventually collapsed in July 2008 after just 18 months.

Since 1995 Austria has been a member of NATO's Partnership for Peace (PfP) programme, which has led to small numbers of its troops operating in Serbia (KFOR) and Afghanistan (ISAF). In 2002 Austria adopted a new foreign-policy doctrine, which allows for greater involvement in collective security arrangements without formally abandoning Austria's constitutionally enshrined neutrality.

## Sweden: 6th place

*Score: 1.269*

Sweden is politically stable, free from civil unrest and it enjoys harmonious relations with neighbouring countries. Human rights are accorded a high level of respect, according to Dalton and Gibney's index, and the jailed population is one of the lowest in the world. Measures of societal safety and security such as the level of violent crime and the likelihood of violent demonstrations are low (and unchanged since last year). According to UN Surveys of Crime Trends and Operations of Criminal Justice Systems, the number of homicides fell in 2007/08.

The majority of Sweden's measures of militarization receive very low scores; the small amount of military expenditure as a percentage of GDP and low numbers of armed service personnel is a reflection of the country's long-standing neutrality. The tradition of military non alignment continues, although the commitment to neutrality has been loosened since early 2002 and there has arguably been a shift towards NATO. Sweden is a member of the NATO-initiated Partnership for Peace (PfP) programme and troops participate in peacekeeping operations in Afghanistan, Chad, the Balkans and the Democratic Republic of the Congo, with UN mandates. Sweden receives a notably high score for one measure of militarization in the GPI, however, that of the volume of transfers of major conventional weapons as a supplier. The country has developed a thriving arms industry through firms such as Saab Bofors Dynamics and its status as one of the world's top exporters of weapons per head is the main reason for its relatively low rank among Scandinavian countries. Sweden's rise to sixth position this year appears to be the result of a

significant fall in the homicide rate and drops in scores for some countries ranked above Sweden last year – notably Ireland, which slid seven places.

## Japan: 7th place

*Score: 1.272*

Japan's 7th position in the 2009 GPI represents a fall of two places from last year. The country has remained free from civil unrest and measures of societal security such as the level of violent crime, the likelihood of violent demonstrations and the rate of homicides are among the lowest in the world – receiving correspondingly low scores in the 2008 GPI that did not change in 2009. Respect for human rights is high and stringent laws prohibit the possession of firearms. Japan has generally been stable since the turbulence that followed the end of the Second World War. The score for political instability remained unchanged in 2008, although it had increased the previous year in response to the scandal-hit premiership of Shinzo Abe of the Liberal Democratic Party, who was forced to resign as prime minister in July 2007 when the resurgent opposition refused to back his reformist agenda.

Japan's low level of military expenditure as a percentage of GDP reflects the ban on maintaining war potential that was enshrined in the 1946 constitution. Nevertheless, the annual defence budget is sizeable (around US\$48bn) and Japan's Self-Defence Forces (SDF) are highly sophisticated. They have increasingly been deployed on international humanitarian and peacekeeping missions, including, controversially within Japan, to Iraq in December 2003. An arms export ban that dated back to 1946 was overturned in

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2004, although subsequent exports have been on a relatively small scale. All measures of militarization remained unchanged year on year.

### **Canada: 8th place**

*Score: 1.311*

Politically stable, free from internal conflict, with low levels of violent crime and few violent demonstrations, Canada's scores for societal safety and security are low and broadly mirror those of the Nordic countries. The proportion of the population in jail rose slightly compared with the 2008 GPI and it remains higher than in the Scandinavian nations, but it is far lower than in the US. Offsetting the rise in the jailed population was an improvement in the score for the level of respect for human rights, which is one of the factors behind Canada's rise into the top ten countries most at peace in the 2009 GPI. Access to small arms is far more restricted than in the US and almost all of the measures of militarization are accorded much lower scores in Canada than in its southern neighbour. Since Canada's three separate armed forces were reorganized into the Canadian Armed Forces (CAF) in 1964 the defence budget has declined as a proportion of overall government spending, in line with a diminishing perceived threat from the Warsaw Pact. The CAF's two bases in West Germany were closed in the early 1990s and the military was increasingly associated with international peacekeeping missions. Canada has more than 2,500 troops in Afghanistan, as part of NATO's International Security Assistance Force (ISAF). The Canadians are at the forefront of actions against the Taliban and by April 2009 116 of the 2,500 troops

stationed at Kandahar had been killed, since the mission began in 2002. Despite these setbacks, the Conservative administration won parliamentary approval in 2008 to extend the mission in Afghanistan until 2011, but rising casualties and public confusion about the purpose of the mission have raised doubts about Canada's role.

### **Finland: equal 9th place**

*Score: 1.322*

Finland is politically stable, free of civil unrest and not at war with any other country. Relations with neighbouring countries are harmonious and the level of violent crime is very low – unchanged from last year – although the homicide rate is higher than in the other Nordic countries. Other measures of safety and security in society including the proportion of the population in jail and perceptions of criminality are very low, while human rights are accorded a high level of respect. The potential for terrorist acts is considered to have diminished in 2008, although it remains slightly higher than the other Scandinavian countries apart from Denmark.

Since the end of the cold war, Finland has professed a policy of strategic non-alignment and chosen not to apply for NATO membership, despite the fact that the three nearby Baltic States joined in 2004. The Finnish government has adopted an essentially neutral approach to the conflict in Iraq; it has refrained from sending troops and is not included in the US list of countries eligible to bid for contracts for reconstructing Iraq. However, Finland is involved in the NATO Partnership for Peace (PfP) programme and has supplied troops to the

NATO-led force in Afghanistan – 80 remain in 2009, a slight reduction on last year. Military spending as a proportion of GDP stays low at 1.29% of GDP in 2007 (latest available figure), but higher than in Denmark and Iceland.

### **Slovenia: equal 9th place**

*Score: 1.322*

Slovenia became an independent nation in July 1991 after a brief conflict with the Yugoslav People's Army, avoiding most of the turmoil that engulfed the former Yugoslavia in the early 1990s and experiencing relative political stability under a 12-year spell of centre-left coalition government led by the Liberal Democracy of Slovenia from May 1992. The score for political instability is lower than that of any other country in the Balkans in the 2009 GPI, although it rose slightly compared with last year, reflecting tensions emerging from the constituents of the coalition government that has been led by Borut Pahor of the Social Democrats since September 2008. Relations with neighbouring countries are good, although Slovenia's score of 2 is lower than that of the Nordic countries as a result of an ongoing maritime border dispute with Croatia. Several measures of safety and security in Slovenian society receive the lowest possible scores: namely the level of violent crime, the proportion of the population in jail and the rate of homicides, although violent demonstrations are considered to be more likely than in neighbouring Austria.

The number of internal security officers and police per head fell significantly in 2008, which is one of the reasons for the country's move into the top ten most at peace nations

in the 2009 GPI, coupled with the slide of nations including Ireland and Portugal, ranked higher than Slovenia last year. Low scores characterize most aspects of Slovenia's measures of militarization – the 7,200-strong army accounts for a low proportion of GDP. A small contingent of 70 soldiers is in Afghanistan and others are restricted to various NATO and UN peacekeeping missions, most notably in Kosovo, where Slovenia deploys around 350 troops. The present government is considering decreasing the Slovenian presence in other international peacekeeping missions.

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Globally, war-torn Iraq is classified as the least at peace out of 144 countries, followed by Afghanistan.

### **Iraq: 144th place**

*Score: 3.341*

War-torn Iraq remains the lowest-ranked nation of the GPI. The indicator for the level of organized conflict within the country stays at the highest possible score (5) in this year's GPI; 9,204 Iraqis were killed in 2008 according to Iraqi Body Count, as were 322 Coalition troops. Some 946 Iraqis died in the first four months of 2009. Mosul remains an urban stronghold for al-Qaida, and the Iraqi security forces, despite their successes elsewhere, have largely failed to clear insurgents from Diyala governorate.

Iraq's score for political stability has improved since last year, albeit from a low base, in line with a substantial enhancement of the position of the prime minister, Nouri al-Maliki, following a series of Iraqi army offensives in early 2008 in Basra, Baghdad, and Amarah against elements within the Mahdi Army (a militia ostensibly loyal to Moqtada al-Sadr, a radical Shia cleric).

The crackdown on Shia militia's has also precipitated thawing relations with neighbouring Arab countries (the score for this indicator falls from 4 to 3), and most of them have now reopened their embassies in Baghdad, although mutual suspicions remain. Despite these improvements, and an easing security situation since mid-2007, ongoing tensions and violence is far higher in Iraq than in most countries and the GPI's measures of safety and security in society mirror this: the level of trust in other citizens, the homicide rate, the level of violent crime and

the potential for terrorist acts all receive the highest possible scores (unchanged from last year). The proportion of the population who are displaced rose to almost 8%, according to latest statistics from the UNHCR, higher even than Afghanistan. As a result of rising violence, some 1.5 million Iraqis are now thought to live in Syria, with another 500,000-750,000 in Jordan. "Sectarian cleansing" – most notably in the capital, Baghdad, but also elsewhere – by insurgent and militia groups has led to an estimated 2.2 million internally displaced persons (IDPs). Fearful of reprisals, or in the face of explicit threats, most IDPs have withdrawn from mixed areas to those that are more religiously homogenous. In addition, many Iraqis have fled to the more stable Iraqi Kurdistan region.

Iraq is a highly militarized country, the legacy of Saddam Hussein's steady build-up of forces from his time as head of security in the ruling Ba'ath Party in the 1970s. The GPI score for its military capability sophistication has increased this year, in line with the Iraqi Army's recent purchase of sophisticated US weaponry, including General Dynamics Abrams tanks, Lockheed Martin M-16 fighter jets and Bell helicopters.

### **Afghanistan: 143rd place**

*Score: 3.285*

Embroided in conflict and instability for much of the past two decades, Afghanistan remained far from unified during 2008, experiencing an intensification of fighting between the NATO-supported Afghan National Army (ANA) and a Taliban-backed insurgency that has spread well beyond its stronghold in the south and east of the country. The GPI scores for the



number of deaths in organized conflict, the level of violent crime and the likelihood of violent demonstrations all rose significantly – reflecting reports that as many as 5,400 people were killed in 2008, making it the bloodiest year since the beginning of this conflict in 2001. The upsurge in violence contributed to the country's fall in the overall GPI rankings in 2009, which was also the result of a slight rise in Sudan's overall score from last year.

An estimated three million Afghan refugees have returned to their country since 2002, mainly from settlements in neighbouring Pakistan, but around two million Afghans are still displaced, which is the second-highest proportion of a population in the 144 countries surveyed (behind Bhutan). In 2008 Pakistan agreed to postpone the closure of Afghan refugee camps and extended the deadline for the repatriation of two million refugees to Afghanistan beyond 2009.

Relations with most neighbouring countries are tense. Most of the other measures of safety and security in society receive very high scores in the GPI, notably the number of homicides, the level of violent crime, the potential for terrorist acts and perceptions of criminality in society. The political scene is highly unstable – the president, Hamid Karzai, has experienced repeated assassination attempts and public support is fragile. Many people feel that their living conditions are worsening, owing to a lack of jobs and basic necessities such as electricity, clean water, hospitals and food. Afghanistan's GPI score for respect for human rights is the worst possible.

Small arms and light weapons are readily available, but other measures of

militarization, such as the number of armed services personnel per 100,000 people, military expenditure as a percentage of GDP and the aggregate number of heavy weapons per head receive fairly low scores. The official army, the ANA, is small, with around 35,000 members in mid-2008, and vastly understaffed relative to the security challenges it faces.

### **Somalia: 142nd place**

*Score: 3.257*

Somalia has not had a nationally functioning state government since its descent into civil war in 1991. The UN estimates that around one million people of an estimated population of 8.5 million have been displaced by the ongoing conflict, which remains one of the largest proportions in the 144 countries in the GPI even though the latest available figures from the UNHCR (2007) point to a fall in the number of displaced people. More than a dozen peace agreements have been brokered between the warring factions since 1991, but none have brought about political stability or restored security. The GPI score for political instability increased slightly in 2008, reflecting an upsurge in fighting between Islamist insurgents loyal to the Union of Islamic Courts (UIC) and the Transitional Federal Government (TFG) of Somalia, which spread beyond the capital, Mogadishu, to the Galgaduud, Muudug and Hiiran regions.

The deteriorating security situation has coincided with a growing number of violent pirate attacks off the coast of Somalia (more than 100 were recorded in 2008); disrupting one of the world's busiest shipping lanes. This year's rise in the GPI score for the number of deaths from organized conflict also

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mirrors attacks by insurgents on the African Union (AU) troops stationed in Somalia, which prompted the UN Security Council to extend their mandate by six months from February 2008. Not surprisingly, almost all of Somalia's measures of safety and security are accorded the highest possible scores. The exceptions are indicators such as the number of internal security officers and police per head of population and the proportion of the population in jail, on account of the country's lack of civil institutions.

### **Israel: 141st place**

*Score: 3.035*

Despite peace treaties with Egypt in 1982 and with Jordan in 1994, Israel remains in a formal "state of war" with its northern neighbours, Syria and Lebanon, and with much of the Arab world. Relations with Lebanon have been tense since the war in July and August 2006 (known in Israel as the Second Lebanon War and in Lebanon as the July War). The GPI indicator measuring relations with neighbouring countries remains unchanged at "4" on a scale of 1-5; defined as "aggressive, open conflict with violence and protests". The level of organized internal conflict is recorded as "high", and unchanged from last year, reflecting continued Israeli/Palestinian tensions that were manifested in sustained rocket attacks from Gaza (controlled by the Islamist group, Hamas, since June 2007) on towns in southern Israel in 2008 and a military offensive in Gaza launched by the Israel Defence Force (IDF) in late December 2008. The IDF's incursions into Gaza led to the deaths of an estimated 1,300 Palestinians and 13 Israelis by the time both sides agreed unilateral ceasefires on January 18th 2009.

Indicators of societal safety and security in Israel present a mixed picture, as last year. On the one hand, the level of violent crime and the number of homicides are low, violent demonstrations are unlikely to occur and the political scene is reasonably stable (becoming slightly more so during 2008). On the other hand, terrorist acts are likely, even though the threat diminished slightly in 2008 and criminality is perceived to be high. Military expenditure in Israel as a percentage of GDP fell in 2008, but at 7.1% it remains among the highest in the world. Despite a drop in the number of armed service personnel per head in 2008, Israel's score for this indicator remains at the highest possible level (only North Korea comes close). The IDF is highly sophisticated and Israel is a major manufacturer and exporter of arms. Imports of major conventional weapons increased, according to the most recent figures from the Stockholm International Peace Research Institute, further contributing to a very high score for Israel's measures of militarization in the GPI.

### **Sudan: 140th place**

*Score: 2.922*

Sudan's lowly position in the GPI reflects the continued bloodshed and deepening humanitarian crisis in the western region of Darfur, as well as rekindled tensions between the north and south of the country. The Darfur conflict began in early 2003, when the Sudan Liberation Movement (SLM) launched guerrilla attacks on government positions in the region, angered by what they saw as their political and economic marginalisation and the Sudanese government's failure to protect them from attacks by nomadic Arab

militias, known as the *janjaweed*. The brutal conflict has forced around 2.7 million people from their homes, many of them fleeing to neighbouring Chad, caused more than 300,000 deaths and left 4.7 million dependent on humanitarian aid. Fighting continued in 2008 in spite of the signing of Darfur Peace Agreement in May 2006 and the presence of a 9,200-strong UN-African Union mission in Sudan (UNAMIS). The conflict forced another 300,000 to flee their homes last year. Additionally, the conflict between the Sudan People's Liberation Army (SPLA) and the government of the National Congress Party (NCP) about the future status of Southern Sudan and the implementation of the 2005 the Comprehensive Peace Agreement (CPA) rumbled on in 2008; in mid-May heavy fighting broke out between Arab tribal militias and SPLA troops in the town of Abyei, emptying it and displacing 50,000 people.

Not surprisingly, measures of safety and security in society such as the number of homicides, political terror and the number of displaced people as a percentage of the population receive very high scores, although the latter dropped slightly from last year. Political instability increased during 2008, in line with the International Criminal Court (ICC) deliberation over whether to issue an arrest warrant against the president, Omar al-Bashir, who was charged with war crimes in Darfur by the ICC's chief prosecutor in July. In the military sphere, small arms and light weapons remain highly accessible, while military expenditure as a percentage of GDP rose slightly year on year from a moderate level.

## Democratic Republic of the Congo: 139th place

Score: 2.888

The Democratic Republic of the Congo's score in the GPI deteriorated significantly in 2008. This reflected renewed violence in the eastern province of North Kivu and the outbreak of what the Uppsala Conflict Data Program (UCDP) classify as a new conflict in the war-torn country; between the Bundu dia Kongo (Kingdom of Kongo, Bdk) and the government about the orientation of the political system in the province of Bas-Congo. Armed clashes between the Congrès national pour la défense du peuple (CNDP) led by Laurent Nkunda, a renegade Tutsi general, and the national army, Forces armées de la République démocratique du Congo (FARDC), broke out in North Kivu in late August and continued more or less unabated until mid-November. The CNDP has also been fighting a Rwandan Hutu force based in eastern DRC. The humanitarian fallout from the fighting in North Kivu, has, once again, been devastating, with hundreds of casualties and an estimated 250,000 people fleeing their homes, many trying to find refuge in the town of Goma. The already high level of perceived criminality increased in 2008.

Unsurprisingly for a nation that has endured decades of misrule and which has been frequently wracked by conflict, including a civil war between 1998 and 2003 that caused an estimated three million deaths, almost all of DRC's measures of safety and security in society receive very high scores. The indicator measuring potential terrorist acts is an exception, with a moderate score (unchanged from last year), notably lower than in

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Somalia, Iraq, Afghanistan and India. Small arms and light weapons are readily available, but the other measures of militarization are accorded low scores, in common with most African countries.

### **Chad: 138th place**

*Score: 2.880*

Political violence has plagued Chad for much of its 48-year history as an independent nation. The country's very high scores in the GPI's indicators of ongoing domestic conflict reflect ongoing violence in the east of the country, close to the border with Sudan and the Central African Republic, which is linked to the genocide and humanitarian crisis in Darfur. The measure of relations with neighbouring countries is not surprisingly accorded the highest possible score, unchanged from last year. Fighting in Chad escalated in early 2008, when a convoy of 300 vehicles carrying around 2,000 rebels of the Union of Forces for Democracy and Development (UFDD) and the Rally of Forces for Change (RFC) approached the capital, Ndjamena, where they were eventually repelled by government forces. Against this backdrop, the GPI's indicators of safety and security in society register very high scores, notably the homicide rate and the perceived level of criminality. Political instability rose from an already high level in 2008, amid the growing military threat posed to the president, Idriss Déby, by a newly formed rebel alliance, Union des forces de la résistance (UFR). An expanded UN military force in Chad, MINURCAT 2, is not due to be fully operational until October 2009 at the earliest.

The large number of displaced people as a proportion of the population also contributes to Chad's low overall rank. Small arms and light weapons are easily accessed, but other measures of militarization, such as military expenditure as a percentage of GDP and military sophistication receive fairly low scores. The influx of refugees from Sudan and Central African Republic has outstripped the increase in security personnel (newly trained by the UN mission in the country, MINURCAT), leading to a drop in the ratio of security officers to population.

### **Pakistan: 137th place**

*Score: 2.859*

Buffeted by bombings and violent attacks linked to a strengthening Islamic insurgency, sectarian clashes, political turmoil and a severe economic downturn, it is no surprise that Pakistan slides into the ten nations ranked least at peace in this year's GPI. The nation's score for relations with neighbouring countries has risen two places to level 5, primarily in response to the attacks by militant Islamists linked to Pakistan-based Lashkar-e-Taiba on India's financial and cultural capital, Mumbai, in late November 2008. The terrorist attacks, which left at least 173 people dead, has led to a sharp escalation of tensions with India and a renewed international focus on Pakistan's responsibility to rein in locally based terrorist groups. Relations with neighbouring Afghanistan also became increasingly strained in 2008 and early 2009, reflecting growing violence in Pakistan's North-West Frontier Province, including attacks by militants on supplies destined for NATO troops in Afghanistan.

Relations with neighbouring countries was one of three indicators of ongoing domestic and international conflict that deteriorated in 2008, mirroring an alarming rise in suicide bombings and violent attacks in the North West Frontier Province (NWFP), the Federally Administered Tribal Areas (FATA) and Baluchistan. Violence has also increasingly afflicted parts of Punjab, Sindh, and the Gilgit-Baltistan region in the past year. According to the India-based Institute for Conflict Management terrorism-related violence caused 6,715 deaths in Pakistan in 2008 (2,155 of whom were civilians), compared with 3,599 a year earlier and 189 in 2003, when the country was already being viewed as unstable. Small arms and light weapons became even more readily accessible in 2008, but most measures of militarization continued to receive relatively low scores, with the exception of military capability/sophistication, which remained at level 4, in line with Pakistan's status as a nuclear-armed state.

### **Russia: 136th place**

*Score: 2.750*

Russia slides deeper into the ten countries least at peace this year, falling by three places to 136th, partly as a result of the dramatic escalation of a simmering conflict with Georgia in August 2008. The effort by Georgian troops launched on August 7th to retake Georgia's breakaway territory of South Ossetia prompted a devastating response from Russian forces, their first external military engagement since the collapse of the Soviet Union, which extended deep into Georgia. The brief, but intense, war that left around 370 Georgians and 80 Russians dead, prompted international

criticism of the scale and manner of Russia's response, including from Ukraine. This predictably pushed up the score measuring Russia's relations with neighbouring countries to level 4: "Aggressive: open conflict with violence and protests." Violent demonstrations were also adjudged to have become more likely to occur in 2008 than the previous year. Rates of homicide and violent crime remain high and Russians continue to perceive high levels of criminality (all three indicators are unchanged from last year). The International Centre for Prison Studies records that a very high proportion of the Russian population is in jail (second only to the US in the 144 countries surveyed).

Russia's military capability has shrunk greatly since the Soviet era, but it remains powerful; its active armed forces totalled just over one million in 2008, compared with 2.7 million in June 1992 and an estimated 4 million at the height of the Soviet Union's power. Although military expenditure as a percentage of GDP has shrunk considerably in the past decade, it remains relatively high and rose by 0.3% to 2.5% in 2008. The number of exports of major conventional weapons is extremely high (second only to Israel), although it did fall slightly during 2008.

### **Zimbabwe: 134th place**

*Score: 2.736*

Years of misrule have precipitated a humanitarian and economic catastrophe in Zimbabwe. The country is mired in hyperinflation, 80% unemployment and a collapsing infrastructure, and waves of brutal land-reform programmes and political violence have forced hundreds of thousands

## THE TEN LEAST AT PEACE

from their homes. GPI scores for measures of ongoing domestic and international conflict are very high, and the level of organized conflict (internal) rose in 2008, reflecting an upsurge in political violence surrounding the presidential election on 29th March. The score for relations with neighbouring countries also rose, in line with mounting criticism, notably from the leaders of Botswana and Zambia. In November 2008, Botswana foreign minister, Phandu Skelemani, called for all countries bordering Zimbabwe to close their borders with the country, to 'bring down Robert Mugabe's government'.

Most measures of safety and security in society are predictably high, and scores for the likelihood of violent demonstrations and the level of violent crime rose slightly, while more marked hikes occurred in the indicators for political instability, perceptions of criminality and the potential for terrorist acts. Rises also occurred in two of Zimbabwe's measures of militarization: military expenditure as a percentage of GDP (which rose to 9.3%, the highest level of any African country) and ease of access to small arms and light weapons. All of this contributed to a considerable deterioration in the country's state of peace, bringing about a fall of ten positions in the 2009 GPI to a rank of 134th place.



## THE TOP FIVE RISERS IN THE 2009 GPI

### **Bosnia and Herzegovina**

*Change in rank: +23*

*Overall rank: 50*

Bosnia's rise to 50th position in the 2009 GPI follows an impressive rise last year, which mainly reflected improvements in the scores for measures of safety and security in society. This year, a notable fall in the number of displaced people as a proportion of the population (as recorded by the UNHCR) was a key factor – around one million people have returned to Bosnia and Herzegovina since the end of the war in December 1995, a three-and-a-half-year conflict that resulted in some 200,000 deaths and displaced an estimated 2.2 million people, almost one-half of the country's population. The number of police officers per head of population also fell compared with last year, amid the gradual restructuring of the separate Serb and Muslim-Croat police forces. In April 2008 parliament approved long-debated reforms to ostensibly centralise the two police forces, which cleared the way for the signing of a stabilisation and association agreement (SAA) with the EU in June. Bosnia's homicide rate, the number of deaths resulting from internal conflict and the country's military expenditure as a percentage of GDP all dropped compared with their scores in the 2008 GPI. An even more significant rise in the rankings was curtailed, however, by rises in the scores for the likelihood of violent demonstrations and terrorist acts, the former linked to heightened political tension surrounding local elections in October and a slowing economy.

### **Angola**

*Change in rank: +16*

*Overall rank: 100*

Angola's impressive rise to 100th position in the 2009 GPI is owing to improvements in the scores of seven indicators, five of which relate to safety and security in society: an increasingly stable political scene, a lower chance of violent demonstrations, less violent crime, a reduction in the number of displaced people and an improvement in the level of respect for human rights. Much-delayed legislative elections held in September 2008 resulted in a resounding victory for the ruling Movimento Popular de Libertação de Angola (MPLA). Notwithstanding complaints about the fairness and conduct of the poll, the impressive turnout – estimated at 87% – has given the government the strong democratic mandate that it lacked. The MPLA now holds 191 out of 220 seats in the National Assembly, giving it the two-thirds majority needed to push through changes to the constitution. As a result, the former rebel movement, União Nacional para a Independência Total de Angola (UNITA), has lost what little power it had in government and is in danger of losing all relevance as an opposition party.

The formal ending of a long-running conflict in the oil-rich enclave of Cabinda (fewer than 25 battle-related deaths in the year following a peace agreement between the government and one faction of the Frente para a Libertação do Enclave de Cabinda (FLEC) in July 2006) also contributes to Angola's rise in the GPI rankings. By 2008 80-90% of the former FLEC fighters had been demobilized or joined the army, although sporadic attacks on government forces by the FLEC-FAC faction were recorded during the year.

## THE TOP FIVE RISERS IN THE 2009 GPI

### **Congo (Brazzaville)**

*Change in rank: +15*

*Overall rank: 106*

The 14-point rise of Congo (Brazzaville) in the GPI rankings is chiefly the result of improvements in the country's scores registering the level of internal conflict and the level of perceived criminality. This reflected a year in which a fragile peace between so-called Ninja rebels and government security forces held firm – there were no reported clashes in the rebel's stronghold of Pool (a southern region between the capital, Brazzaville, and the port city of Pointe Noire) or elsewhere. The rebels fought a violent insurgency against Congo's government in the late 1990s which killed thousands, displaced around 90,000 and devastated much of the region's infrastructure. Although a peace deal was signed in 2003 sporadic violence has since plagued the Pool region, with rebels robbing civilians and hijacking trains to the oil-rich coast. In 2007 the former rebel leader, Pasteur Ntoumi, renounced violence and created his own political party, Conseil national des républicains (CNRe). Although it has some support in certain areas of the Pool region, it has so far failed to obtain strong political representation. Despite the fragile peace and Congo's rise in the rankings, several measures of safety and security in society are accorded high scores, with violent crime and the homicide rate remaining at level 4 and contributing to the country's overall standing of 106th position.

### **Egypt**

*Change in rank: +13*

*Overall rank: 54*

Egypt's rise reflects an improvement in three indicators measuring safety and security in society: growing political stability, greater levels of trust between citizens and a fall in the extent of political terror (suggesting an improvement in the human rights situation), albeit from a very high level (4 in Dalton and Gibney's Political Terror Scale) last year. The improved score for political stability reflects the continuing rule of the national Democratic Party (NDP), which was returned with a reduced, but still substantial, majority in the December 2005 general election. The secular opposition has been largely ineffective in pressing for greater political plurality, while the Muslim Brotherhood's quest for power has been quashed by the arrests of activists and leaders and amendments to Egypt's constitution that prohibit political parties based on religion, gender or ethnicity.

Beset by allegations of cronyism and incompetence, the NDP has recently been overhauled by the president's son, Gamal Mubarak, who has attempted to introduce greater discipline and coherence, as well as bringing younger, more in-touch figures to prominence at a local level. The improvement in the score for greater trust between citizens partly reflects a fall in tensions surrounding attacks by militant Islamists – no attacks have taken place since those at Dahab in Sinai in April 2006 that resulted in 20 deaths. The government has attributed the waves of attacks that took place in 2004-06 to "terror cells" of disaffected local Bedouin from North Sinai, which have crossborder links to Palestinian groups in Gaza.



## Trinidad and Tobago

*Change in rank: +11*

*Overall rank: 87*

Drops in the scores of four of Trinidad and Tobago's measures of safety and security in society are behind the country's 11-point rise in the GPI rankings. Politics is adjudged to have become more stable during 2008 following the general election in November 2007, which observers considered generally free and fair and which resulted in an increased majority for the People's National Movement (PNM). The party, led by Patrick Manning, picked up 26 seats in a newly expanded 41-seat parliament, although it fell short of the two-thirds majority needed to push through all of Mr Manning's proposed constitutional changes unopposed. The indicator measuring the likelihood of violent demonstrations registered a fall in 2008, reflecting a year that was largely free of demonstrations, in contrast to 2007, when, in January, there were a series of protests at soaring crime rates and a two-day national shutdown. The demonstrations were sparked by the kidnapping of the country's highest profile businesswoman, Vindra Naipul-Coolman.

Trinidad and Tobago's jailed population fell in 2008 and respect for human rights rose, according to Dalton and Gibney's Political terror scale – with the score falling from 3 to 2. Nevertheless, violent crime continued to be the leading political issue in 2008. The murder rate reached an all-time annual high of 527 in mid-December, almost 50% higher than a year earlier. The number of robberies and kidnappings also rose. This has not been picked up in the GPI as Trinidad's scores for violent crime and the homicide rate were already at 5, the highest possible level, contributing to the country's overall low ranking of 87th.

## THE TOP FIVE FALLERS IN THE 2009 GPI

### Madagascar

*Change in rank: -30*

*Overall rank: 72*

Madagascar's dramatic fall of 30 places from its position as the second-highest ranked African nation in last year's GPI comes amid a two-point rise in the measure of internal conflict and increased political instability following several weeks of violent protests and the deaths. Political tensions had been mounting between the president, Marc Ravalomanana, and the opposition mayor of the capital, Antananarivo, Andry Rajoelina, since the mayor rapidly emerged as a political force after his surprise election in 2007. The government's attempts to undermine Rajoelina's control of the capital, which included blocking the disbursal of funds and closing the mayor's radio and TV station, Viva TV, triggered mass protests. These became increasingly violent after government guards opened fire on a crowd of protesters outside the presidential palace, killing 28 people. The president was forced to step down on 17<sup>th</sup> March and Rajoelina assumed power with military backing, amid widespread international condemnation.

Most of Madagascar's measures of militarization continued to receive very low scores in the 2009 GPI (unchanged from last year) although military expenditure as a proportion of GDP rose slightly to 1.1%.

### Latvia

*Change in rank: -16*

*Overall rank: 54*

Rising political instability in late 2008 and an increase in the measure of internal conflict were the key factors behind Latvia's substantial fall in the GPI rankings this year. The four-party centre-right coalition government led by the prime minister, Ivars Godmanis, since December 2007 struggled to cope with the fallout of an unprecedented nosedive in the country's economy, triggered by the international banking crisis of September 2008. The credit crunch hit Latvia particularly hard, owing to the country's large external imbalances coupled with its currency peg to the euro, which forced the government to turn to the IMF and a consortium of European countries for a loan to cover its ballooning current-account deficit and underpin the currency. A large protest against the government in the capital, Riga, in mid-January 2009 spilled over into the most serious rioting in Latvia since independence. The beleaguered government was eventually forced to resign in late February 2009 after two coalition partners withdrew their support for Mr Godmanis.

## Mexico

*Change in rank: -16*

*Overall rank: 108*

Mexico's slide in the rankings to 108th position reflects deterioration in six measures of safety and security in society since last year, including a one-point hike in the score for violent crime and smaller rises in the potential for terrorist acts, violent demonstrations and in perceived criminality. This follows an escalation in violence linked to Mexican drug cartels, notably in and around the cities of Tijuana, Culiacan and Ciudad Juarez. Mexican officials say 6,290 people were killed in the violence in 2008, a significant year-on-year rise. Drug gangsters and security forces clashed on an almost daily basis. In May, three of Mexico's top anti-crime investigators were assassinated and several high ranking security officers resigned and fled to the US. In late August almost 500,000 people protested against drug-related violence in Mexico City, which was followed by the president, Felipe Calderón, announcing a budget increase of almost 40% in security and justice expenditure for next year. The proportion of the population in jail rose in 2008.

The ongoing drug-related violence (which has been on the rise since the mid-1990s, catalyzed by a traumatic economic crisis and exacerbated by pervasive corruption and criminality in law-enforcement institutions) was probably a factor in the deterioration in the GPI indicator charting political instability. The other likely culprit is Mexico's economy, which slumped in late 2008, leading to the loss of 386,000 formal-sector jobs in November and December alone, according to the Ministry of Labour. Mr Calderón and his minister of finance, Agustín Carstens, have been facing mounting criticism from the main opposition parties, which accuse the government of failing to provide an adequate response to rising unemployment.

## South Africa

*Change in rank: -15*

*Overall rank: 123*

Waves of violence that swept through South Africa's Gauteng townships in May 2008 left at least 42 people dead, more than 200 injured and around 15,000 homeless. Destitute Zimbabweans and other immigrants (who are thought to number around one million in Gauteng and more than three million nationwide) were targeted by violent mobs – blamed for taking advantage of already scarce housing, jobs and public services and for contributing to rising crime and insecurity. The escalation in violence has damaged South Africa's post-apartheid reputation for tolerance and openness. In the GPI, this is reflected in rises in two indicators: a two-point climb in the measure of the level of internal conflict and an increase in perceived criminality (to 4 on a scale of 1-5). The homicide rate and the level of violent crime are both accorded the highest possible scores, unchanged from last year, although they are counterbalanced by relatively low scores for measures of militarization, with the exception of military capability and sophistication.

## THE TOP FIVE FALLERS IN THE 2009 GPI

### Yemen

*Change in rank: -13*

*Overall rank: 119*

Five of Yemen's measures of safety and security in society deteriorated in 2008, contributing to a 13-place fall in the GPI rankings to a lowly 119th position. A heightened level of violent crime, an increased likelihood of terrorist attacks and violent demonstrations, growing perceptions of criminality in society and dwindling respect for human rights reflects an escalation in three broad conflicts across the country: The decade-long contretemps between the Believing Youth Movement of Shia rebels led by the al-Houthi clan in northern Saada governorate and the government; an ongoing rebellion of several al-Qaida-linked groups over the orientation of the political system; and secessionist rebellions among southern tribesmen resentful of the northern-dominated regime.

Militant activity by Islamist guerrillas is linked to the return to Yemen of men who had been recruited to fight against Soviet occupation in Afghanistan. It is widely alleged that an agreement between the government and al-Qaida in Yemen (AQY) – in which the group agreed to conduct its operations outside the country, in return for immunity inside Yemen – caused a lull in militant activity, but this broke down in mid-2007, apparently when a younger cadre of militants took over the leadership of the group. Subsequently, a spate of attacks has occurred, mainly on Western targets. In January three people were killed in an attack on a tourist convoy and the Italian and US embassies were both the targets of bombers – an attack on the latter by Islamic Jihad in September killed

16 people. Kidnappings also increased during 2008 and in early 2009. Yemen's relations with neighbouring countries remain fairly tense – the score stays at 3 this year. This is underlined by the fact that Yemen's security problems are not entirely home-grown. The Israeli blockade of and subsequent assault on the Gaza Strip has resulted in mass protests in support of the Palestinians. Yemen's proximity to Somalia has also added to the security problems confronting the authorities, not least through the smuggling of weapons to and from the war-torn state. The GPI measure of the ease of access to weapons of minor destruction remains at the highest possible level in 2008. Given that the two-way traffic is marine-based, it comes as little surprise that Yemenis are also suspected of being involved in the increase in piracy in the Gulf of Aden. Yemen's military spending as a percentage of GDP remains high at 2.5% (unchanged from last year); in common with most other Middle Eastern nations, but most other measures of militarization receive fairly low scores.

## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

The GPI is a numerical measure of how at peace a country is with itself and other countries. It is a foundation on which to establish a measure of the incidence of peace. However, it cannot on its own explain why these absences occur and whether groups of countries exhibit sufficient similar deficiencies resulting in an absence of peace.

In addition to the collation of data and scores for the 23 indicators listed on page 9 (Table 1), the Economist Intelligence Unit has updated for the third year its secondary dataset of 33 drivers including democracy, government competence and efficacy; the strength of institutions and the political process; international openness; demographics; regional integration; religion and culture; education and material well-being. Full descriptions for each of these indicators are provided in Annex B.

The list of potential drivers is by no means exhaustive; it comprises indicators with data that are both available across the countries from credible sources and are comparable and consistent in their measurement. Table 4 lists each of the indicators in the two groups, the GPI and the pool of potential drivers. Correlation coefficients of the GPI scores and ranks and then the scores for the internal and external measures of peace are given against each indicator. The correlation coefficients are calculated across the full 144 countries. Values shaded in green are for values where  $r > 0.5$  and  $r < -0.5$ , generally considered a valid correlation.

## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

	OVERALL SCORE	OVERALL RANK	Internal Peace	External Peace
OVERALL SCORE	1.00	0.96	0.97	0.62
OVERALL RANK	0.96	1.00	0.95	0.53
Internal Peace	0.97	0.95	1.00	0.40
External Peace	0.62	0.53	0.40	1.00
Level of distrust in other citizens	0.75	0.73	0.76	0.36
Number of internal security officers and police per 100,000 people	0.05	0.06	0.07	-0.03
Number of homicides per 100,000 people	0.62	0.62	0.70	0.04
Number of jailed population per 100,000 people	0.11	0.13	0.06	0.20
Ease of access to weapons of minor destruction	0.73	0.73	0.78	0.22
Level of organized conflict (internal)	0.83	0.81	0.82	0.46
Likelihood of violent demonstrations	0.67	0.69	0.74	0.13
Level of violent crime	0.65	0.68	0.75	0.01
Political instability	0.77	0.78	0.78	0.36
Respect for human rights	0.85	0.84	0.84	0.46
Volume of transfers of major conventional weapons, as recipient (Imports) per 100,000 people	-0.07	-0.12	-0.14	0.19
Potential for terrorist acts	0.63	0.58	0.59	0.44
Number of deaths from organized conflict (internal)	0.72	0.60	0.66	0.55
Military expenditure as a percentage of GDP	0.35	0.28	0.24	0.53
Number of armed services personnel per 100,000 people	0.25	0.18	0.12	0.51
UN Funding	0.33	0.31	0.31	0.23
Aggregate number of heavy weapons per 100,000 people	0.14	0.09	0.02	0.45
Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people	-0.06	-0.10	-0.16	0.28
Military capability/sophistication	-0.08	-0.10	-0.22	0.40
Number of displaced people as a percentage of the population	0.26	0.14	0.23	0.22
Relations with neighbouring countries	0.73	0.69	0.63	0.71
Number of external and internal conflicts fought	0.28	0.25	0.13	0.61
Estimated number of deaths from organized conflict (external)	0.15	0.14	0.02	0.48
Political Democracy Index	-0.56	-0.57	-0.57	-0.27
Electoral process	-0.38	-0.39	-0.38	-0.20
Functioning of government	-0.65	-0.65	-0.66	-0.32
Political participation	-0.46	-0.49	-0.48	-0.17
Political culture	-0.64	-0.65	-0.68	-0.21
Civil liberties	-0.50	-0.50	-0.48	-0.32
Corruption perceptions (CPI score: 10 = highly clean, 0 = highly corrupt)	-0.71	-0.78	-0.77	-0.19
Women in parliament (as a percentage of the total number of representatives in the lower house)	-0.30	-0.32	-0.31	-0.14
Freedom of the press	0.50	0.51	0.49	0.29
Exports + Imports % of GDP	-0.12	-0.14	-0.11	-0.08
Foreign Direct Investment (flow) % of GDP	-0.19	-0.20	-0.17	-0.17
Number of visitors as % of domestic population	-0.42	-0.45	-0.44	-0.16
Net Migration (% of total population)	-0.24	-0.32	-0.28	-0.02
15-34 year old males as a % of total population	0.39	0.46	0.44	0.05
Gender ratio of population: women/men	-0.07	-0.08	-0.06	-0.07
Gender Inequality	-0.43	-0.44	-0.44	-0.17
The extent of regional integration	0.64	0.64	0.64	0.35
Current education spending (% of GDP)	-0.29	-0.28	-0.30	-0.10
Primary school enrolment ratio (% Net)	-0.51	-0.44	-0.53	-0.18
Secondary school enrolment ratio (% Net)	-0.52	-0.53	-0.59	-0.05
Higher education enrolment (% Gross)	-0.49	-0.54	-0.57	-0.02
Mean years of schooling	-0.61	-0.62	-0.65	-0.19
Adult literacy rate (% of pop over 15)	-0.50	-0.47	-0.52	-0.18
Hostility to foreigners/private property	0.63	0.61	0.66	0.25
Importance of religion in national life	0.47	0.48	0.48	0.20
Willingness to fight	0.37	0.37	0.29	0.41
Nominal GDP (US\$PPPbn)	-0.06	-0.05	-0.12	0.16
Nominal GDP (US\$bn)	-0.11	-0.11	-0.17	0.14
GDP per capita	-0.58	-0.64	-0.63	-0.15
Gini Index	0.39	0.43	0.48	-0.07
Unemployment %	0.24	0.21	0.26	0.07
Life expectancy	-0.54	-0.55	-0.60	-0.10
Infant mortality per 1,000 live births	0.54	0.53	0.57	0.17

*Table 4*

With reference to changes since last year and the year before, the extension of the data to 144 countries has largely verified and endorsed our initial findings from 2007 and 2008. Those series with high correlations to the GPI in previous years, measured against the 144 countries maintain their significance threshold of +/- 0.5 hinting at a constant relationship over time between these indicators and the GPI.

Of the listed variables, the overall index continues to be strongly determined by the internal measure of peace with  $r = 0.97$ . Of the set of potential drivers, the composite measure of political democracy remains significant at  $r = -0.56$ , slightly less than last year. Unsurprisingly a number of that index's sub-components calculate as having a reasonable correlation with the overall scores and rankings. Functioning of government – a qualitative assessment of whether freely elected representatives determine government policy and whether there is an effective system of checks and balances on the exercise of government authority – almost maintains its correlation at  $r = -0.65$ . Electoral process and political participation remain just below +/-0.5. Interestingly the external peace measure is not significantly correlated to any of our measures relating to democracy. Our measure of the freedom of the press, compiled by Reporters Without Borders dips slightly back below our +/-0.5 threshold, although exceeds it at 0.51 when measured against the rankings rather than the GPI scores.

For all the following charts, the GPI score is shown on the left-hand axis.

# INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

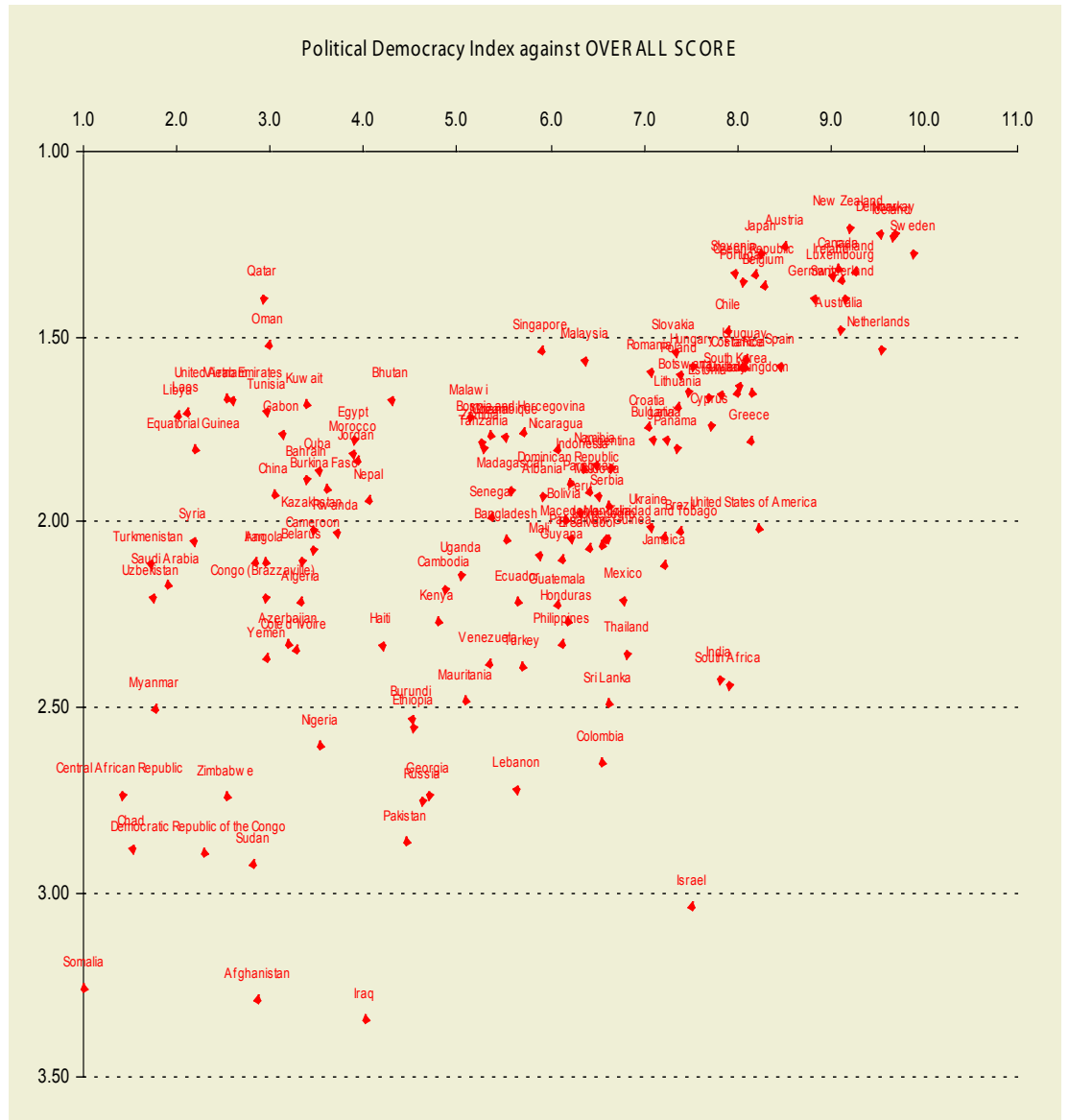
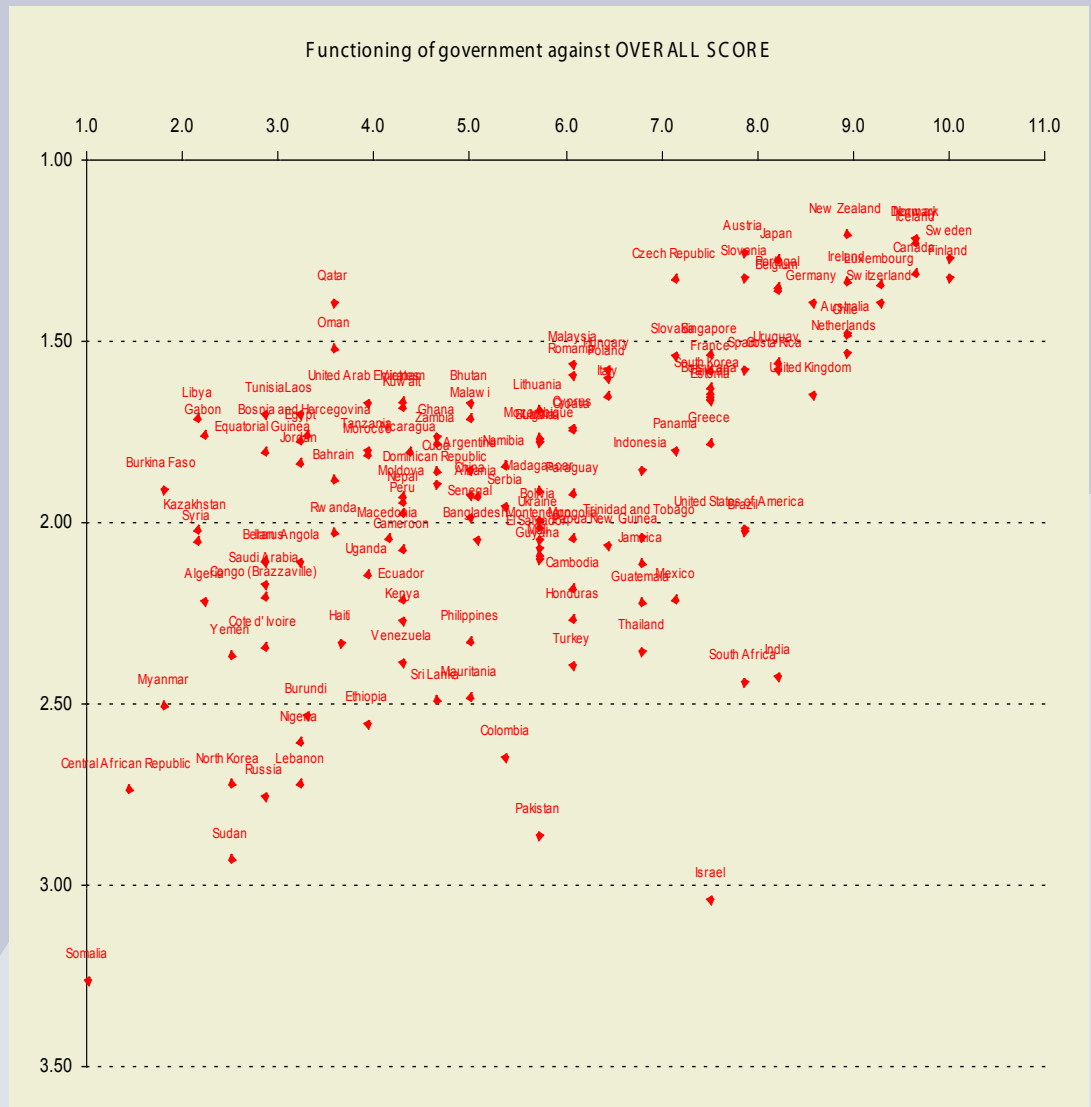


Figure 1: Democracy and overall GPI score





*Figure 2: Functioning of government and overall GPI score*

The indicators for international openness still exhibit no significant correlations despite the expansion of the group of countries under review although the correlation coefficient as measured against the number of tourists as a percentage of the total domestic population to the GPI rankings is getting closer at  $r = -0.45$ . Our demographic indicators also show no significance at our set thresholds, but the number of males aged 15-34 as a percentage of the population has a relatively high correlation to the Global Peace Index rankings at  $r = 0.46$ .

## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

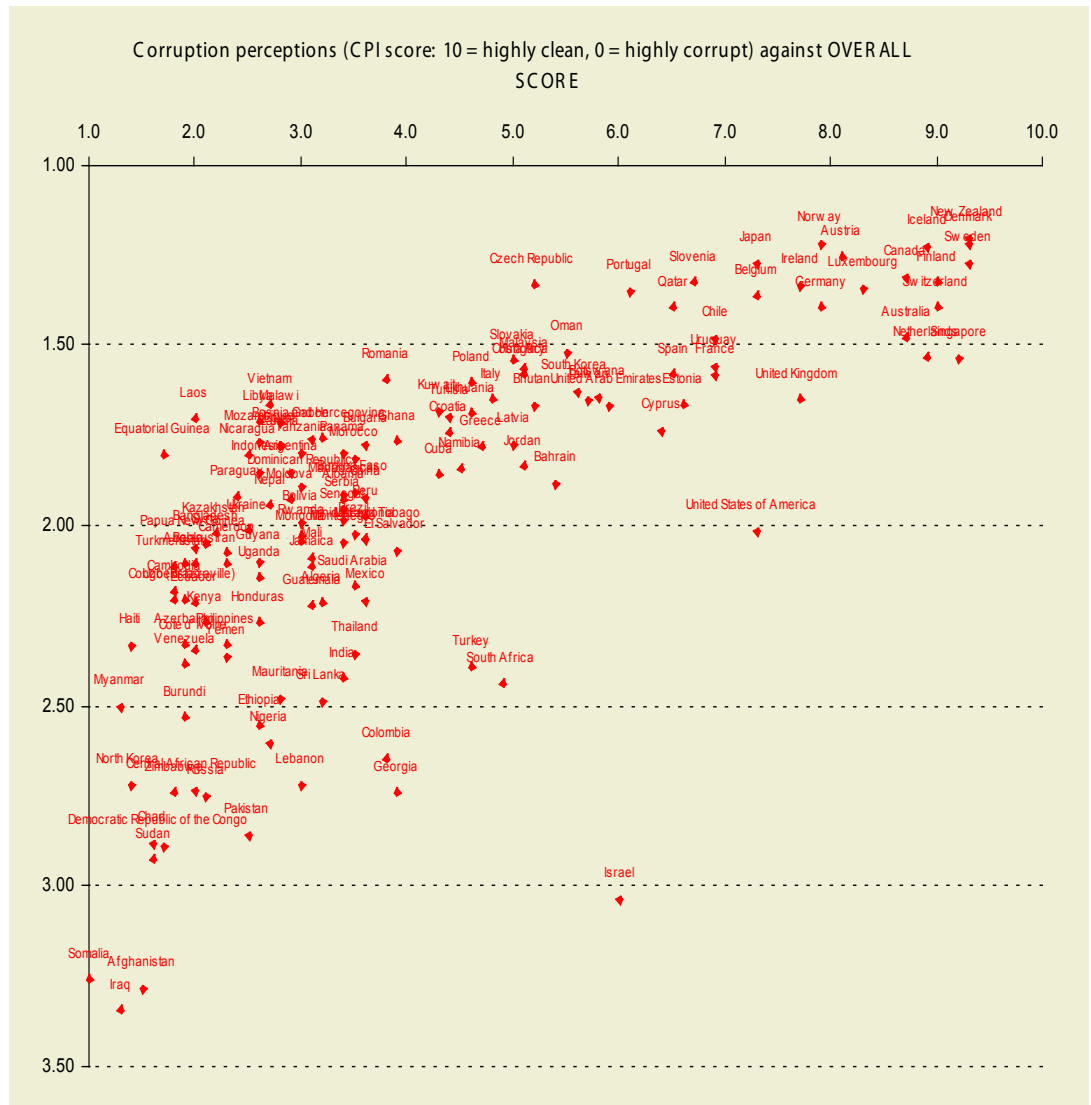


Figure 3: Corruption and overall GPI peace score

The measure of corruption within a society from Transparency International continues to have a strong correlation with the overall GPI index (the highest in fact) and the internal peace index scores, despite the annual updates to both. Indeed, this correlation experiences an improvement in significance compared with last year.



## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

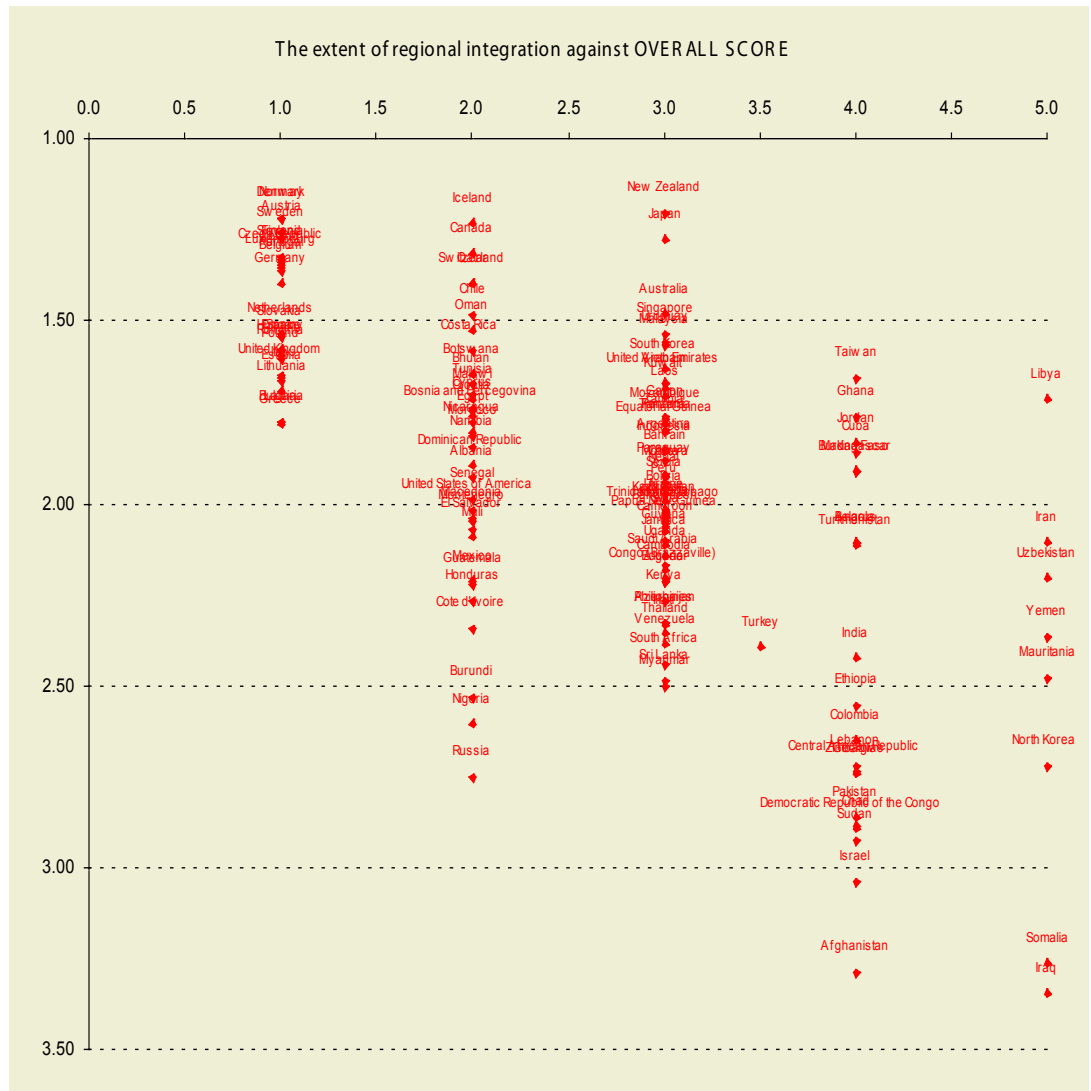


Figure 5: Regional integration and overall GPI score

The extent of regional integration continues to have a significant correlation with the overall index, but also with the internal measure. This is surprising, as the regional integration score is a qualitative assessment of a country's relations with its neighbours, and therefore an external metric. To an extent this is explained by the high scores for regional integration in the countries of the European Union and their generally high peace scores.

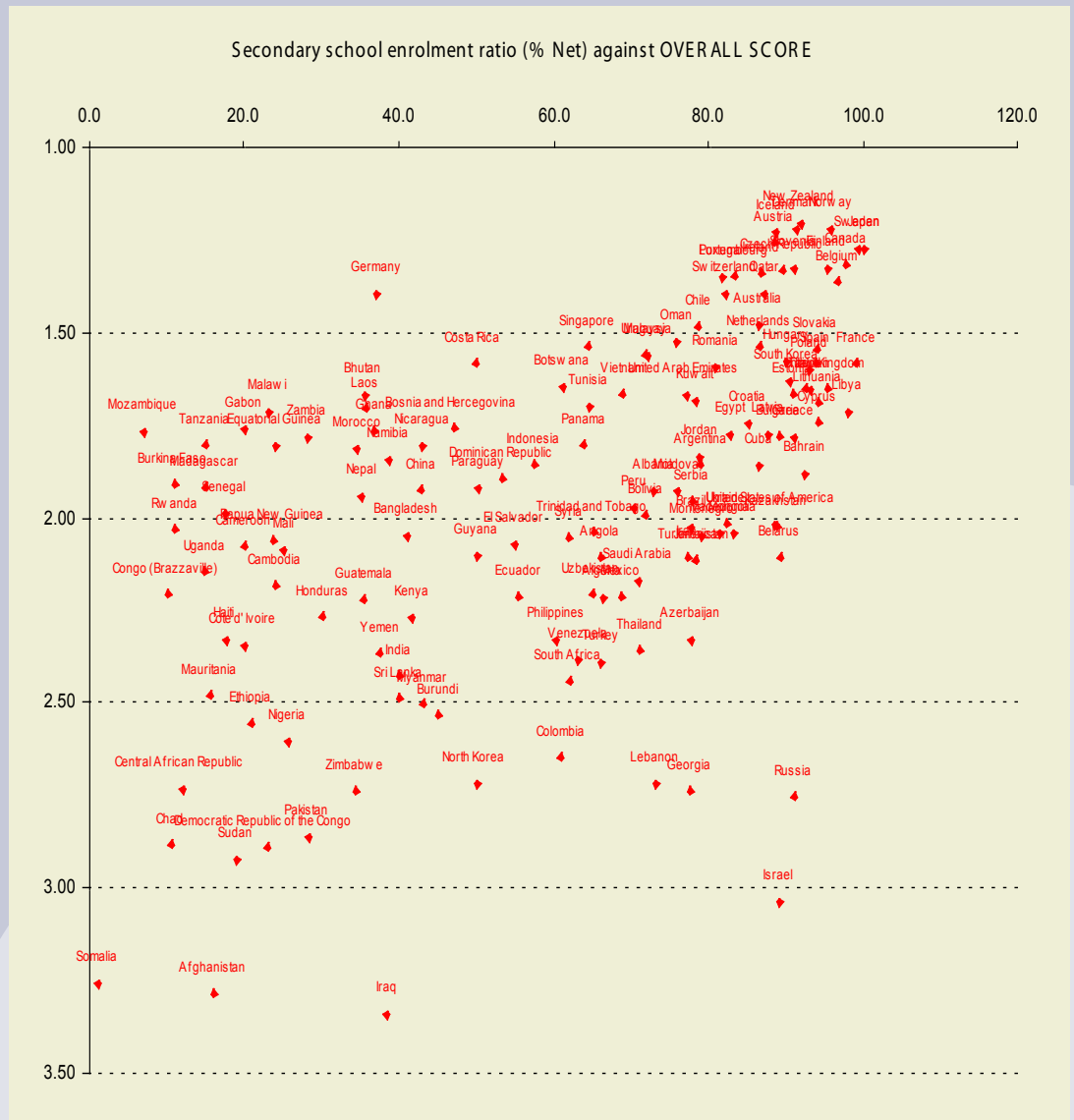


Figure 6: Secondary school enrolments and overall GPI score

The education measures used in the index continue to have significant correlations with the overall GPI. These are, however, likely to be strongly correlated with other measures such as good governance and material well being.

## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS



*Figure 7: Mean years of schooling and internal peace score*

Two societal, qualitative assessments scored by the Economist Intelligence Unit’s team of analysts also appear to have a reasonable correlation to the overall score. The first indicator, hostility to foreigners and private property attempts to measure just that, society and government’s general attitude to foreigners and their investments in any given country. This has a high correlation coefficient of  $r = 0.63$ . The second is a measure of the importance of religion in national life, both for households and its influence on government policy. This is no longer significant on our measure of internal peace however, measuring just below our threshold, down from last year.

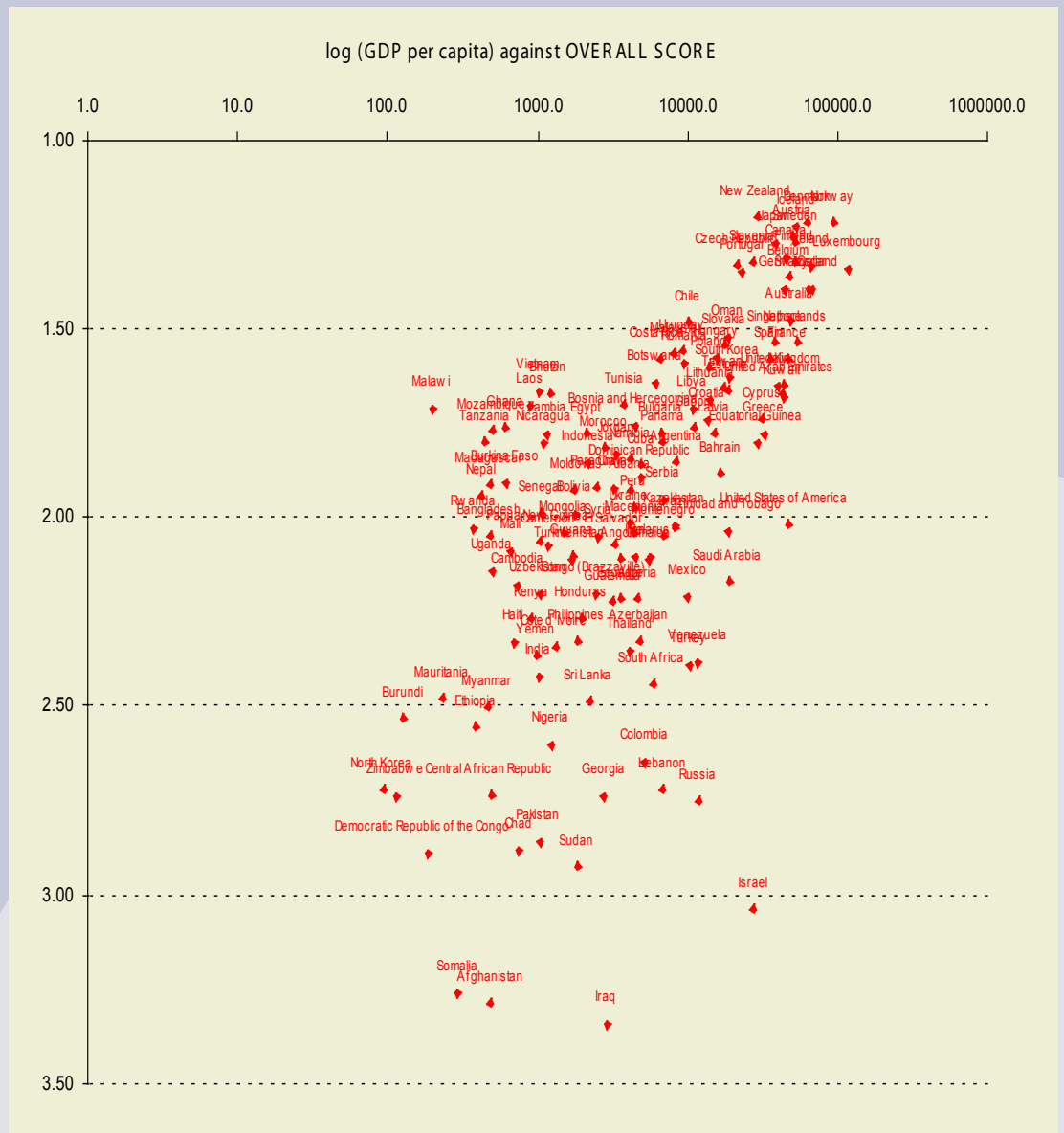


Figure 8: GDP per head and overall GPI score

The final three indicators of significance are measures of material wellbeing and health. Their significance matches other quantitative investigations in this area of study that have established a causal relationship with GDP per head and these healthcare measures. GDP per capita remains significant against the Global Peace Index in its third year indeed the relationship has strengthened this year with a  $r = -0.58$ , higher than the  $r = -0.57$  of last year, (and  $r = -0.64$  against the GPI rankings rather than the scores). The relationship is even more pronounced against the measure of internal peace. There appears to be no relationship, however, to the measure of external peace.

# INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

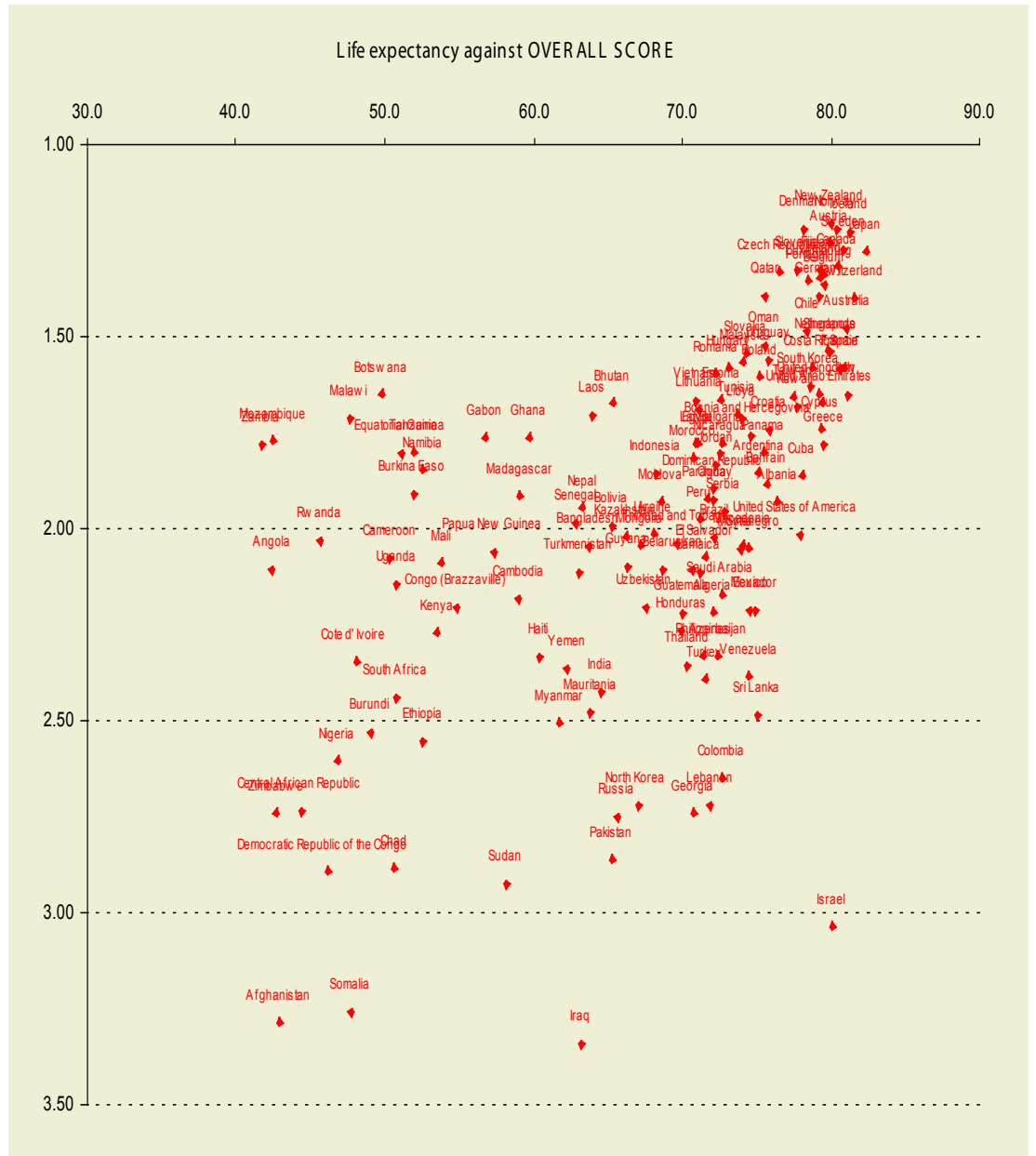
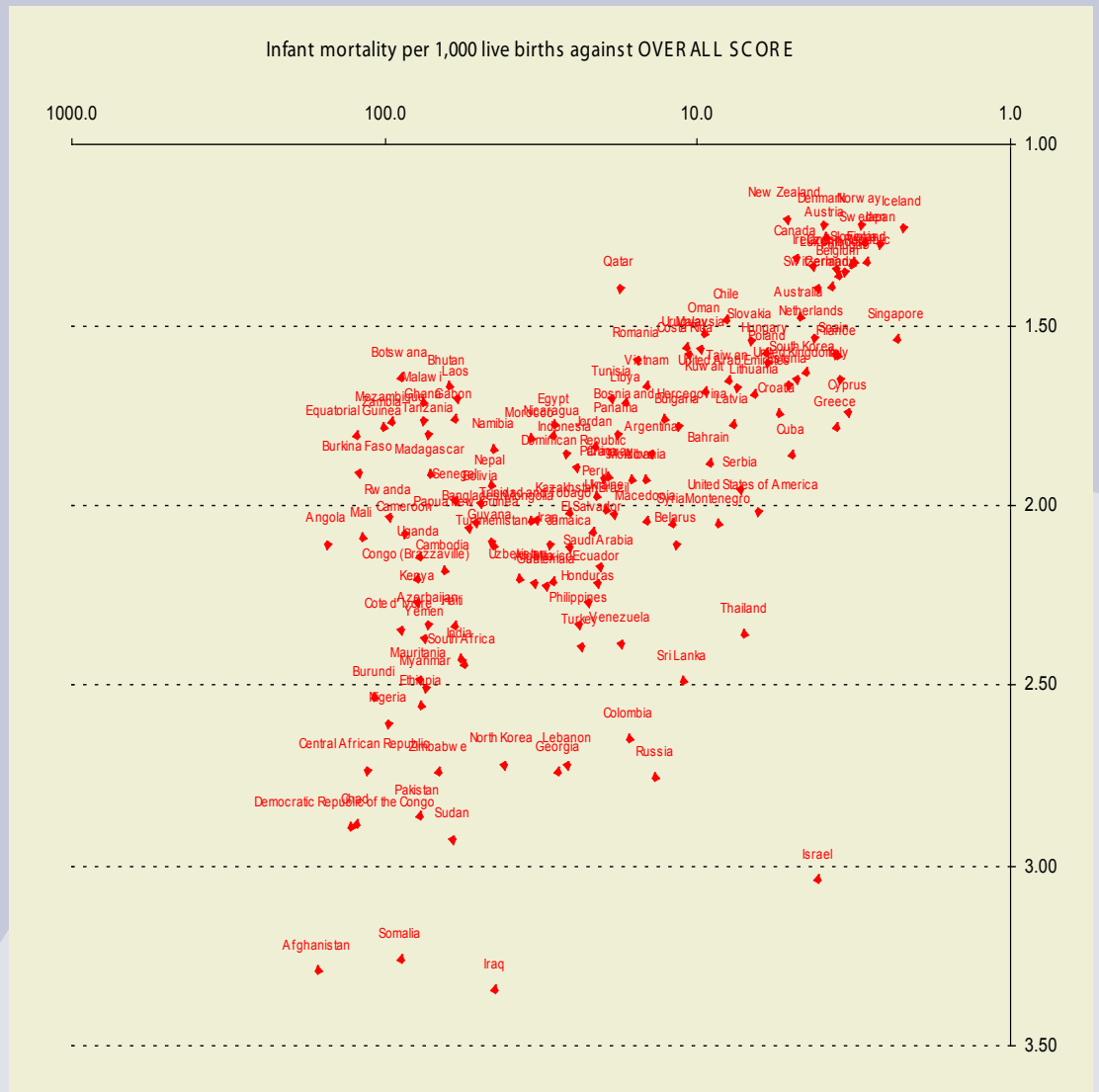


Figure 9: Life expectancy and overall internal peace score





**Figure 10:** Infant mortality and internal peace score

Infant mortality per 1,000 births (shown here as a log scale) is also significant against our measure of overall peace and internal peace. Again this indicator is likely to be highly correlated to a number of the other potential drivers, such as GDP per head.

None of the other metrics on material wellbeing and health have correlation coefficients greater than 0.5 or less than -0.5. The gini-coefficient, a measure of income distribution, comes close, especially on our internal measure of peace ( $r = 0.48$ ). Once again, despite the inclusion of 144 countries, it cannot be described as a significant correlation. There are, nevertheless, some problems with the gini coefficient; there is a considerable lag in the publication of statistics for many countries, forcing the Economist Intelligence Unit to estimate the coefficient for a sizeable proportion of the 144 in the GPI. These problems of measurement look likely to persist for the foreseeable future, and the use of other measures of income inequality may be desirable.

## INVESTIGATING THE SET OF POTENTIAL DETERMINANTS

For each of the calculations carried out there are some notable outliers, some consistent with each measure. These can be seen on the scatter plots, as those countries frequently deviating from the general trend. Commonly listed countries include on the peaceful side, Qatar (but no longer Bhutan) and, less peacefully, Iraq, Sudan, Israel, Colombia, Lebanon and the US. As outliers they weaken the overall results, but also appear not to be following the general trends established for other countries. There are clearly other factors relating to these countries that are not being captured by the chosen set of determinants.

It should be noted that further research is needed to establish significant correlations to the measure of external peace. This is probably attributable to the previously noted observation that there have been very few interstate conflicts within this group of 144 countries during the period under review.

Based on these preliminary investigations, an ordering of influences and drivers would look like Figure 11 on the following page, similar to those established in previous years.

Based on the last three years of research carried out on the GPI against the chosen set of drivers, peaceful societies are those characterized as countries with very low levels of internal conflict with efficient, accountable governments, strong economies, cohesive/integrated populations and good relations within the international community.

Additional research has been conducted in 2009 (see 2009 Discussion Paper - Peace, its Causes and Economic Value) including factor and discriminant analysis that further

refines the set of determinants to a core set of powerful drivers and predictors. Regression analysis could also provide a tightening of the weights for future iterations of the GPI. With each additional year of compiling the datasets for the Global Peace Index calculations and its set of 'drivers' we increase the possibility of testing more robustly the actual causality order; do the societal variables really drive internal conflict or does it work the other way round? For example, do rises in average incomes and wealth such as GDP per capita create more peaceful societies, or is the emergence of greater internal and external peace a prerequisite for a take-off in economic growth? Is corruption a symptom of an absence of peace or its cause?

This year we have seen tentative signs of a causal relationship between our measure of the state of peace and the strength of the economy. As the global economy was heading into a synchronized recession towards the end of 2008, many of our measures in aggregate deteriorated that year (for example, likelihood of violent demonstrations, political instability, etc). We expect this relationship to become more pronounced when measuring the GPI next year as economic upheaval this year impacts on the most economically vulnerable countries, with expected political repercussions.

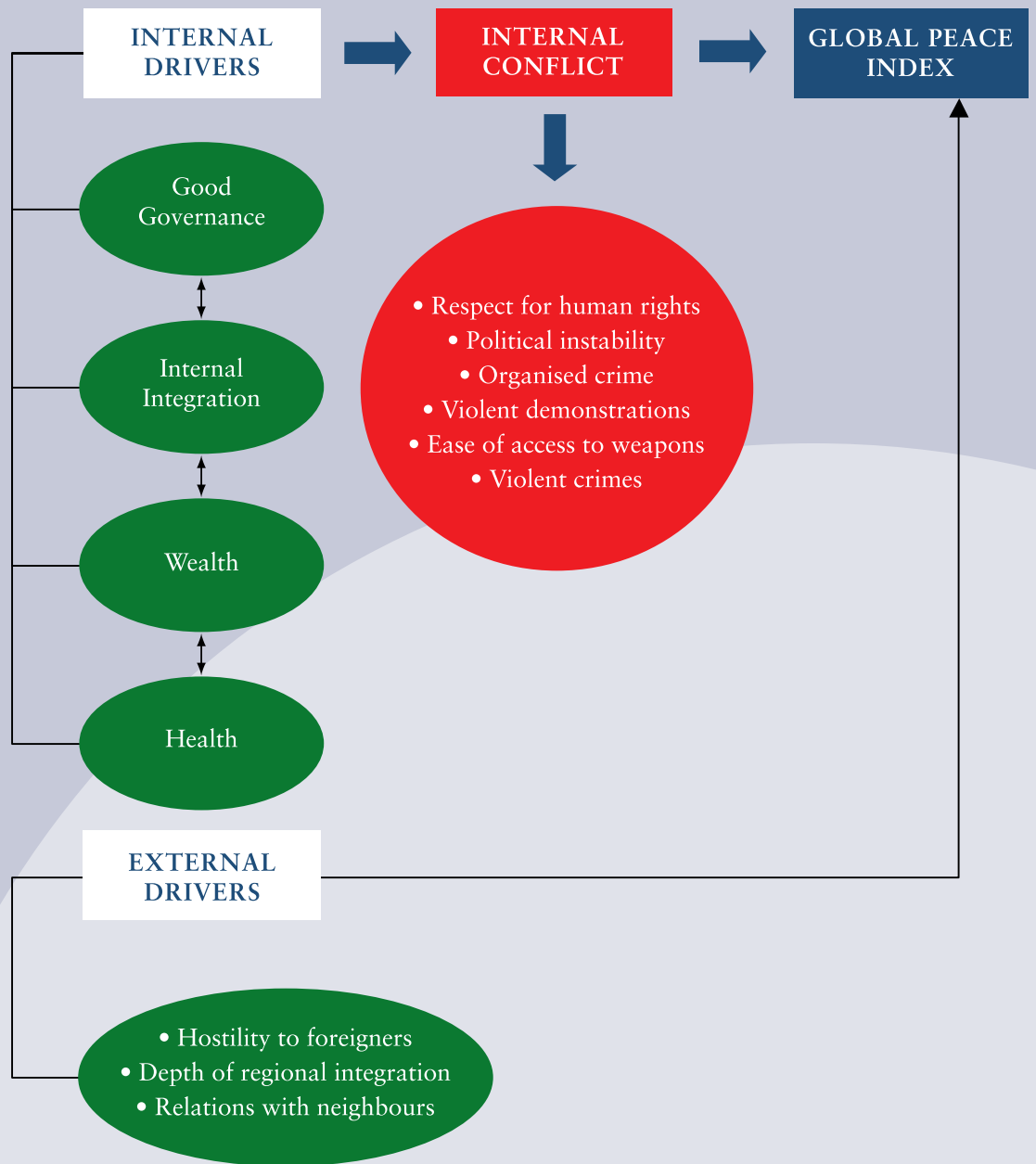


Figure 11

## ANNEX A

Where the quantitative indicators have missing data in the central source, the Economist Intelligence Unit's analysts have estimated the scores.

### Measures of ongoing domestic and international conflict

	Indicator	Central Source	Year	Definition / coding
1	Number of external and internal wars fought	Uppsala Conflict Data Program (UCDP), University of Uppsala, Sweden / International Peace Research Institute, Oslo (PRIO) Armed Conflict Dataset	2002-07	UCDP defines conflict as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year". For additional information on this indicator see notes on page 55.
2	Estimated number of deaths from organized conflict (external)	UCDP	2007	As above
3	Number of deaths from organized conflict (internal)	International Institute for Strategic Studies, Armed Conflict Database	2007	For additional information on this indicator see notes on page 55.
4	Level of organized conflict (internal)	Economist Intelligence Unit	2008	Qualitative assessment of the intensity of conflicts within the country. Ranked 1-5 (very low-very high) by EIU analysts.
5	Relations with neighbouring countries	Economist Intelligence Unit	2008	Qualitative assessment of relations with neighbouring countries. Ranked 1-5 (very low-very high) by EIU analysts.

### Measures of safety and security in countries

	Indicator	Central Source	Year	Definition / coding
6	Level of perceived criminality in society	Economist Intelligence Unit	2008	Qualitative assessment of perceived criminality. Ranked 1-5 (very low-very high) by EIU analysts. For additional information on this indicator see notes on page 56.
7	Number of displaced people as a percentage of the population	UNHCR Statistical Yearbook 2007	2007	Refugee population by country or territory of origin, as a percentage of the country's total population.
8	Political instability	Economist Intelligence Unit	2008	This indicator addresses the degree to which political institutions are sufficiently stable to support the needs of its citizens, businesses and overseas investors. It is a composite indicator based on the scores, 1 to 5 for each of the following issues: What is the risk of significant social unrest during the next two years? How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another? How likely is it that an opposition party or group will come to power and cause a significant deterioration in business operating conditions? Is excessive power concentrated or likely to be concentrated, in the executive so that executive authority lacks accountability and possesses excessive discretion? Is there a risk that international disputes/ tensions will negatively affect the economy and/or polity?

	Indicator	Central Source	Year	Definition / coding
9	<b>Level of respect for human rights (Political Terror Scale)</b>	Gibney, M., Cornett, L., & Wood, R., (year of publication) Political Terror Scale 1976-2007. Date Retrieved, from the Political Terror Scale Web site: <a href="http://www.politicalterrorsscale.org">http://www.politicalterrorsscale.org</a>	2007	Countries are coded on a scale of 1-5 according to their level of respect for human rights the previous year, according to the description provided in the Amnesty International and US Department County Reports. The average of the two scores is taken for our assessment. For additional information on this indicator see notes on page 56.
10	<b>Potential for Terrorist Acts</b>	Economist Intelligence Unit	2008	Qualitative assessment of the potential for terrorist acts. Ranked 1-5 (very low-very high) by EIU analysts.
11	<b>Number of homicides per 100,000 people</b>	UNODC, 10th, 9th (and 8th) UN Survey on Crime Trends and the Operations of Criminal Justice Systems (UNCJS)	2006, 2004 and 2002 (dependent on availability)	Intentional homicide refers to death deliberately inflicted on a person by another person, including infanticide. For additional information on this indicator see notes on page 56.
12	<b>Level of violent crime</b>	Economist Intelligence Unit	2008	Qualitative assessment of the level of violent crime. Ranked 1-5 (very low-very high) by EIU analysts.
13	<b>Likelihood of violent demonstrations</b>	Economist Intelligence Unit	2008	Qualitative assessment of the level of violent demonstrations. Ranked 1-5 (very low-very high) by EIU analysts.
14	<b>Number of jailed population per 100,000 people</b>	International Centre for Prison Studies, King's College London: World Prison Population List (Eighth Edition)	2008	For additional information on this indicator see notes on page 57.
15	<b>Number of internal security officers and police per 100,000 people</b>	UNODC, 10th, 9th (and 8th) UN Survey of Criminal Trends and Operations of Criminal Justice Systems (UNCJS)	2006, 2004 and 2002 (dependent on availability)	Refers to the civil police force as distinct from national guards or local militia.

## ANNEX A

### Measures of militarization

	Indicator	Central Source	Year	Definition / coding
16	Military expenditure as a percentage of GDP	The International Institute for Strategic Studies, <i>The Military Balance 2009</i>	2007, 2008 (dependent on availability)	Cash outlays of central or federal government to meet the costs of national armed forces – including strategic, land, naval, air, command, administration and support forces as well as paramilitary forces, customs forces and border guards if these are trained and equipped as a military force. We use our own published data on nominal GDP to arrive at the value of military expenditure as a percentage of GDP.
17	Number of armed services personnel per 100,000 people	The International Institute for Strategic Studies, <i>The Military Balance 2009</i>	2007, 2008 (dependent on availability)	Active armed services personnel comprise all servicemen and women on full-time duty in the army, navy, air force and joint forces (including conscripts and long-term assignments from the Reserves).
18	Volume of transfers of major conventional weapons (imports) per 100,000 people	SIPRI Arms Transfers Project database	2003-07	The SIPRI Arms Transfers Database covers all international sales and gifts of <i>major conventional weapons</i> and the technology necessary for the production of them. The transfer equipment or technology is from one country, rebel force or international organisation to another country, rebel force or international organisation. Major conventional weapons include: aircraft, armoured vehicles, artillery, radar systems, missiles, ships, engines.
19	Volume of transfers of major conventional weapons (exports) per 100,000 people	SIPRI Arms Transfers Project database	2003-07	The SIPRI Arms Transfers Database As above.
20	Funding for UN peacekeeping missions	United Nations	2005-07	Calculation of percentage of countries' outstanding contributions versus annual assessment to the budget of the current peacekeeping missions. For additional information on this indicator see notes on page 58.
21	Aggregate number of heavy weapons per 100,000 people	Bonn International Centre for Conversion (BICC)	2003	The BICC Weapon Holdings Database contains figures for four weapon categories: armoured vehicles, artillery, combat aircraft, major fighting ships. The numbers of weapons in these categories have been indexed, with 1996 as the fixed base year. Holdings are those of government forces and do not include holdings of armed opposition groups. Weapon systems in storage are also not included. Indices for groups are directly calculated from the aggregated numbers of holdings of heavy weapons.
22	Ease of access to small arms and light weapons	Economist Intelligence Unit	2008	Qualitative assessment of the ease of access to small arms and light weapons. Ranked 1-5 (very low-very high) by EIU analysts.
23	Military capability / sophistication	Economist Intelligence Unit	2008	Qualitative assessment of the grade of sophistication and the extent of military research and development (R&D) Ranked 1-5 (very low-very high) by EIU analysts.

## ADDITIONAL NOTES ON THE INDICATORS USED IN THE GLOBAL PEACE INDEX

### 1. Number of external and internal armed conflicts fought: 2003-07

Source: the Uppsala Conflict Data Program (UCDP), Uppsala University, Sweden

The separate elements of the definition are as follows:

- (1) Use of armed force: use of arms in order to promote the parties' general position in the conflict, resulting in deaths.
  - (1.1) Arms: any material means, e.g. manufactured weapons but also sticks, stones, fire, water, etc.
- (2) 25 deaths: a minimum of 25 battle-related deaths per year and per incompatibility.
- (3) Party: a government of a state or any opposition organization or alliance of opposition organizations.
  - (3.1) Government: the party controlling the capital of the state.
  - (3.2) Opposition organization: any non-governmental group of people having announced a name for their group and using armed force.
- (4) State: a state is
  - (4.1) an internationally recognized sovereign government controlling a specified territory, or
  - (4.2) an internationally unrecognized government controlling a specified territory whose sovereignty is not disputed by another internationally recognized sovereign government previously controlling the same territory.
- (5) Incompatibility concerning government and/or territory the incompatibility, as stated by the parties, must concern government and/or territory.
  - (5.1) Incompatibility: the stated generally incompatible positions.
  - (5.2) Incompatibility concerning government: incompatibility concerning type of political system, the replacement of the central government or the change of its composition.  
Incompatibility concerning territory: incompatibility concerning the status of a territory, e.g. the change of the state in control of a certain territory (interstate conflict), secession or autonomy (intrastate conflict).

### 3. Number of deaths from organized conflict (internal)

UCDP/PRIO Armed Conflict Dataset records the number of battle deaths per conflict, defined as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a year". EIU analysts, then, have scored the figures available for 2007 and 2008 according to the following bands.

1	2	3	4	5
0-24	25-999	1,000-4,999	5,000-9,999	> 10,000

## ADDITIONAL NOTES ON THE INDICATORS USED IN THE GLOBAL PEACE INDEX

### **6. Level of perceived criminality in society**

A qualitative assessment ranked from 1-5 (very low to very high) by the Economist Intelligence Unit's Country Analysis team.

**Very low (1):** The majority of other citizens can be trusted. Very low levels of domestic security.

**Low (2):** An overall positive climate of trust with other citizens.

**Moderate (3):** Reasonable degree of trust in other citizens.

**High (4):** High levels of distrust in other citizens. High levels of domestic security.

**Very high (5):** Very high levels of distrust in other citizens – people are extremely cautious in their dealings with others. Large number of gated communities, high prevalence of security guards.

### **9. Respect for Human Rights (Political Terror Scale)**

Mark Gibney and Matthew Dalton, from University of North Carolina, have coded countries on a 1 to 5 scale according to their level of terror their previous year, based on the description provided in the Amnesty International Yearbook (in this case the 2007 Yearbook, referring to 2006 data). There is an additional index coded on a 1 to 5 scale based on a close analysis of Country Reports from the US State Department. Amnesty International scores have been used where available, with US State Department scores used to fill missing data.

- Level 1: Countries under a secure rule of law. People are not imprisoned for their views and torture is rare or exceptional.
- Level 2: There is a limited amount of imprisonment for non-violent political activity. However, few persons are affected and torture and beatings are exceptional. Politically-motivated murder is rare.
- Level 3: There is extensive political imprisonment, or a recent history of such imprisonment. Execution or other political murders and brutality may be common. Unlimited detention, with or without a trial, for political views is accepted.
- Level 4: Civil and political rights violations have expanded to large numbers of the population. Murders, disappearances, and torture are a common part of life. In spite of its generality, on this level political terror affects those who interest themselves in politics or ideas.
- Level 5: Terror has expanded to the whole population. The leaders of these societies place no limits on the means or thoroughness with which they pursue personal or ideological goals.

### **11. Number of homicides per 100,000 people**

This indicator has been compiled using UNODC figures in the UN Survey on Crime Trends and the Operations of Criminal Justice Systems (UNCJS) (10th, 9th and 8th Surveys of Criminal Trends) rather than Interpol data. The figures refer to the total number of penal code offences or their equivalent, but excluding minor road traffic and other petty offences, brought to the attention of the police or other law enforcement agencies and recorded by one of those agencies. The original Interpol figures reviewed for the first iteration of the Global Peace Index were for 1998/99 and the consensus among experts on the analysis of criminal justice is that the



UNODC figures are more reliable – they are compiled from a standard questionnaire sent to national officials via the UN statistical office. However, the UN acknowledges that international comparisons of crime statistics are beset by methodological difficulties:

- Different definitions for specific crime types: The category in which any incident of victimization is recorded relies on the legal definition of crime in any country. Should that definition be different, which is often the case, comparisons will not be made of exactly the same crime type. This is particularly the case in crimes that require some discretion from a police officer or relevant authority when they are identified. For example, the definitional difference between serious or common assault in different legal jurisdictions may be different, and this will be reflected in the total number of incidents recorded.
- Different levels of reporting and traditions of policing: This relates closely to levels of development in a society, most clearly reflected in accessibility to the police. Factors such as the number of police stations or telephones impact upon reporting levels. The level of insurance coverage in a community is also a key indicator of the likelihood of citizens approaching the police as their claim for compensation may require such notification. In addition, in societies where the police are or have been mistrusted by the population, most specifically during periods of authoritarian rule, reporting levels are likely to be lower than in cases where the police are regarded as important members of the community.
- Different social, economic and political contexts: Comparing crime data from societies that are fundamentally different may ignore key issues present in the society that impact upon levels of reporting. For example, different social norms in some countries may make it difficult for women to report cases of rape or sexual abuse, while in others, women are encouraged to come forward.

The International Crime Victim Survey (ICVS) is perhaps a more sensitive and accurate measure of crime – and arguably offers a picture of how the public views the criminal justice system – but is currently limited to a few, mainly industrialized, countries so these data are not included.

Where data are not present, The Economist Intelligence Unit’s analysts have estimated figures based on their deep knowledge of each country. All the figures for homicides per 100,000 people have been banded as:

1	2	3	4	5
0-1.9	2-5.9	6-9.9	10-19.9	> 20

#### 14. Number of jailed population per 100,000 people

Figures are from the International Centre for Prison Studies, King’s College, University of London and are compiled from a variety of sources. In almost all cases the original source is the national prison administration of the country concerned, or else the Ministry responsible for the prison administration. The International Centre for Prison Studies warns that because prison population rates (per 100,000 of the national population) are based on estimates of the national population they should not be regarded as precise. Comparability is compromised by different practice in different countries, for example with regard to whether all pre-trial detainees and

## ADDITIONAL NOTES ON THE INDICATORS USED IN THE GLOBAL PEACE INDEX

juveniles are held under the authority of the prison administration, and also whether the prison administration is responsible for psychiatrically ill offenders and offenders being detained for treatment for alcoholism and drug addiction. People held in custody are usually omitted from national totals if they are not under the authority of the prison administration.

The data have been banded for scoring accordingly:

1	2	3	4	5
0-69	70-139	140-209	210-279	> 280

### 15. Number of internal security officers and police 100,000 people

The original figures have been taken from UNODC, 10th, 9th and 8th UN Surveys of Criminal Trends and Operations of Criminal Justice Systems (UNCJS) and refer to the civil police force as distinct from national guards or local militia. Where there are gaps, then, EIU analysts have filled the gaps based on likely scores from our set bands of the actual data.

1	2	3	4	5
0-199	200-399	400-599	600-799	> 800

### 20. Funding for UN peacekeeping missions

The indicator calculates the percentage of countries' "outstanding payments versus annual assessment to the budget of the current peacekeeping missions"

All United Nations Member States share the costs of United Nations peacekeeping operations. The General Assembly apportions these expenses based on a special scale of assessments applicable to peacekeeping. This scale takes into account the relative economic wealth of Member States, with the permanent members of the Security Council required to pay a larger share because of their special responsibility for the maintenance of international peace and security.

### 22. Ease of access to small arms and light weapons

A qualitative assessment of the accessibility of small arms and light weapons (SALW), ranked 1-5 (very low–very high) by EIU analysts. Very limited access is scored if the country has developed policy instruments and best practices, such as firearm licences, strengthening of export controls, codes of conduct, firearms or ammunition marking. Very easy access, on the contrary, is characterized by the lack of regulation of civilian possession, ownership, storage, carriage and use of firearms.

### New developments to the scoring criteria for the Global Peace Index

This year we have altered the way in which we score a number of component indicators for the Global Peace Index. Previously these series were scored by normalising each country's datum on the basis of the following formula:

$$x = (x - \text{Min}(x)) / (\text{Max}(x) - \text{Min}(x))$$

Where Min (x) and Max (x) are respectively the lowest and highest values in all of the countries under measurement for any given indicator. The normalized value was then transformed from a 0-1 value to a 1-5 score to make it comparable with the other indicators.

However, while such an approach is able to accurately measure a country's performance against the whole data set of countries, such an approach does not lend itself to comparison over time. In order to compare scores effectively over time we needed to anchor the minimums and maximums to some set measures for every year of calculation. It was also apparent that some of the series under review exhibited a fair amount of volatility year on year and that normalisation, even with a set range year on year, would still result in a great deal of change in indicator scores. We therefore, with the consent of the panel of experts, moved to a banding system for these indicators based on the range of the data sets used for the index in 2008. The scoring criteria for each of the affected series are given below.

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

1	2	3	4	5
0-199.5	199.6 - 379.0	379.1 - 558.5	558.6 - 738.0	>738.0

**Volume of transfers of major conventional weapons, as recipient (imports) per 100,000 people**

1	2	3	4	5
0-15.2	15.3-30.4	30.5-38.0	38.1-60.8	>60.8

**Military expenditure as a percentage of GDP**

1	2	3	4	5
0-3.3	3.4-6.6	6.7-9.8	9.9-13.1	>13.1

**Number of armed services personnel per 100,000 people**

1	2	3	4	5
0-1,311.9	1,312-2,613.8	2,613.9-3,915.7	3,915.8-5,217.6	>5,217.6

**Funding for UN Peacekeeping Missions**

1	2	3	4	5
0-3.4	3.5-6.9	7.0-10.3	10.4-13.8	>13.8

**Aggregate number of heavy weapons per 100,000 people**

1	2	3	4	5
0-62.9	63.0-125.7	125.8-188.5	188.5-251.3	>251.3

**Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people**

1	2	3	4	5
0-5.9	5.9-11.9	12.0-17.8	17.9-23.8	>23.8

**Number of displaced people as a percentage of the population**

1	2	3	4	5
0.0-3.0	3.1-6.1	6.2-9.1	9.2-12.2	>12.2

**Number of external and internal conflicts fought**

1	2	3	4	5
0-1.1	1.2-2.1	2.2-3.0	3.1-4.0	>4.0

ANNEX B  
POTENTIAL DETERMINANTS OF PEACE

Democracy and Transparency

Indicator	Central Source	Year	Definition
Electoral process	EIU Democracy Index	2008	Qualitative assessment of whether elections are competitive in that electors are free to vote and are offered a range of choices. Ranked 1- 10 (very low to very high).
Functioning of government	EIU Democracy Index	2008	Qualitative assessment of whether freely elected representatives determine government policy? Is there an effective system of checks and balances on the exercise of government authority? Ranked 1- 10 (very low to very high).
Political participation	EIU Democracy Index	2008	Qualitative assessment of voter participation/turn-out for national elections, citizens' engagement with politics. Ranked 1- 10 (very low to very high).
Political culture	EIU Democracy Index	2008	Qualitative assessment of the degree of societal consensus and cohesion to underpin a stable, functioning democracy; score the level of separation of church and state. Ranked 1- 10 (very low to very high).
Civil liberties	EIU Democracy Index	2008	Qualitative assessment of the prevalence of civil liberties. Is there a free electronic media? Is there a free print media? Is there freedom of expression and protest? Are citizens free to form professional organisations and trade unions? Ranked 1- 10 (very low to very high).
Corruption perceptions	Transparency International, Corruption Perception Index	2008	The Index draws on multiple expert opinion surveys that poll perceptions of public sector corruption scoring countries on a scale from 0 to 10, with 0 indicating high levels of perceived corruption and 10 indicating low levels of perceived corruption.
Women in parliament (as a percentage of the total number of representatives in the lower house)	Inter-parliamentary Union	2008	Figures are based on information provided by national parliaments by 31st December 2006.
Gender inequality	Gender Gap Index, World Economic Forum	2008	A composite index that assesses countries on how well they are dividing their resources and opportunities among their male and female populations, regardless of the overall levels of these resources and opportunities.
Freedom of the press	Reporters without borders	1/9/2007 - 1/9/2008	The index measures the state of press freedom in the world, reflecting the degree of freedom journalists and news organisations enjoy in each country, and the efforts made by the state to respect and ensure respect for this freedom.

## International openness

Indicator	Central Source	Year	Definition
Exports + Imports % of GDP	EIU	2008	Merchandise goods exports free on board measure (fob) and merchandise goods imports (fob).
Foreign Direct Investment (flow) % of GDP	EIU	2008	Net flows of direct investment capital by non-residents into the country, as a percentage of GDP.
Number of visitors as % of domestic population	UNWTO Compendium of Tourism Statistics, Data	2006, 2005 dependent on availability	Arrivals data correspond to international visitors to the economic territory of the country and include both tourists and same-day non-resident visitors.
Net Migration (% of total population)	World Bank, World Development Indicators. Data refer to 2000-2005	2000-2005	Net migration is the net average annual number of migrants during the period 2000-2005 that is the number of immigrants less the number of emigrants, including both citizen and non citizens.

## Demographics

Indicator	Central Source	Year	Definition
15-34 year old males as a % of total population	UN World Population Prospects	2008	Male population 15-34 year olds as a proportion of the total population.
Gender ratio of population: women/men	UN World Population Prospects	2008	Male population divided by the female population.

## Regional & international framework/conditions

Indicator	Central Source	Year	Definition
Extent of regional integration	EIU	2008	Qualitative assessment of the level of membership of trade alliances, as NAFTA, ANSEAN, etc. Ranked 1-5 (Very low-very high ) by EIU analysts.

## ANNEX B

### POTENTIAL DETERMINANTS OF PEACE

#### Education

Indicator	Central Source	Year	Definition
Current education spending (% of GDP)	UNESCO, data refer to the UNESCO Institute for Statistics estimate, when no value is available	2005-2006 (depending on availability)	Public spending on education, total (% of GDP).
Primary school enrolment ratio (% Net)	World Bank, World Development Indicators	2005-2006 (depending on availability)	Net enrolment ratio is the ratio of the number of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age.
Secondary school enrolment ratio (% Net)	World Bank, World Development Indicators	2005-2006 (depending on availability)	Net enrolment ratio is the ratio of the number of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age.
Higher education enrolment (% Gross)	World Bank, World Development Indicators	2005-2006 (depending on availability)	Gross enrolment ratio is the ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.
Mean years of schooling	UNESCO, data refer to the UNESCO Institute for Statistics estimate, when no estimate is available	2005 and earlier years (depending on availability)	School life expectancy (years), Primary to tertiary.
Adult literacy rate (% of population over the age of 15)	UNESCO, data refer to the UNESCO Institute for Statistics	2007	Data refer to national literacy estimates from censuses or surveys.

#### Culture

Indicator	Central Source	Year	Definition
Hostility to foreigners/private property	EIU	2008	Scored 1-5 by EIU analysts.
Importance of religion in national life	EIU	2008	Qualitative assessment of the level of importance of religion in politics and social life. Ranked 1-5 (very low to very high) by EIU analysts.
Willingness to fight	EIU	2008	Qualitative assessment of the willingness of citizens to fight in wars. Ranked 1- 5 (very low to very high) by EIU analysts.

## Material well being

Indicator	Central Source	Year	Definition
Nominal GDP (US\$PPP bn)	EIU	2008	Nominal gross domestic product at 2005 US\$ purchasing power parities.
Nominal GDP (US\$ bn)	EIU	2008	Nominal gross domestic product US\$ market prices.
GDP per capita	EIU	2008	Nominal gross domestic product (US\$) per capita.
Gini coefficient	UN Human Development Index 2007-2008; World Bank, World Development Indicators; EIU estimates	Latest available year	The Gini index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution.
Unemployment %	EIU	2008	ILO defines the unemployed as members of the economically active population who are without work but available for and seeking work, including people who have lost their jobs and those who have voluntary left work.
Life expectancy	World Bank, World Development Indicators	2006	Life expectancy at birth is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
Infant mortality per 1,000 live births	World Bank, World Development Indicators	2008	Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.

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PO Box 42, St Leonards, Sydney NSW 1590, Australia  
email [info@visionofhumanity.org](mailto:info@visionofhumanity.org) web [www.visionofhumanity.org](http://www.visionofhumanity.org)

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