

**BLACK
EXHIBIT 86**

NAMIBIA SENEGAL FRANCE TIMOR-LESTE POLAND BELGIUM CHAD MALTA PAKISTAN
TUNISIA SIERRA LEONE EQUATORIAL GUINEA SEYCHELLES GREECE LESOTHO
ANGOLA SWITZERLAND PERU BOTSWANA ZIMBABWE ESTONIA DJIBOUTI BANGLADESH
LUXEMBOURG KAZAKHSTAN BURKINA FASO UNITED ARAB EMIRATES MAURITANIA CROATIA
CENTRAL AFRICAN REPUBLIC OMAN MEXICO RWANDA BELARUS KYRGYZSTAN
JORDAN ECUADOR UNITED KINGDOM CONGO-BRAZZAVILLE AUSTRIA GUYANA YEMEN
VIETNAM ISRAEL SLOVAKIA DOMINICAN REPUBLIC BHUTAN MONTENEGRO MAURITIUS
MALAYSIA MONGOLIA IRAQ AUSTRALIA NIGER PAPUA NEW GUINEA LIBERIA NEW ZEALAND
DOMINICA UKRAINE LATVIA SOLOMON ISLANDS KIRIBATI FINLAND TURKEY ERITREA
DEMOCRATIC REPUBLIC OF THE CONGO KOREA(SOUTH) SWAZILAND MOLDOVA DENMARK
UNITED STATES CAMEROON ETHIOPIA MALAWI TAJIKISTAN SINGAPORE MOZAMBIQUE
BURUNDI ICELAND TANZANIA EL SALVADOR IRELAND NICARAGUA SAMOA LEBANON
PORTUGAL HONDURAS CZECH REPUBLIC GERMANY CAPE VERDE MADAGASCAR RUSSIA
GUINEA-BISSAU TONGA INDONESIA GHANA SUDAN NIGERIA HONG KONG GEORGIA
HAITI CHILE MALI CUBA IRAN JAPAN

**CORRUPTION
PERCEPTIONS
INDEX 2010**

ROMANIA FYR MACEDONIA VENEZUELA CHINA
SYRIA NORWAY JAMAICA MYANMAR HUNGARY
BULGARIA BAHRAIN TRINIDAD AND TOBAGO
SAO TOME AND PRINCIPE TURKMENISTAN

QATAR ZAMBIA CAMBODIA ARGENTINA GAMBIA
COLOMBIA BOLIVIA PARAGUAY AZERBAIJAN

PHILIPPINES INDIA PUERTO RICO MALDIVES BOSNIA AND HERZEGOVINA GUINEA
SOUTH AFRICA COMOROS BENIN GUATEMALA BRUNEI ARMENIA CYPRUS NEPAL
SAUDI ARABIA NETHERLANDS UGANDA AFGHANISTAN COSTA RICA LITHUANIA MOROCCO
THAILAND TOGO SOMALIA ALBANIA CANADA KOSOVO BARBADOS SRI LANKA MACAU
PANAMA URUGUAY EGYPT TAIWAN ALGERIA SERBIA KUWAIT LIBYA CÔTE D'IVOIRE
KENYA UZBEKISTAN SWEDEN ITALY SPAIN GABON BRAZIL LAOS VANUATU SLOVENIA

Transparency International (TI) is the global civil society organisation leading the fight against corruption. Through more than 90 chapters worldwide and an international secretariat in Berlin, TI raises awareness of the damaging effects of corruption and works with partners in government, business and civil society to develop and implement effective measures to tackle it.

CONTENTS

2010 RESULTS	2
WHAT IS THE CORRUPTION PERCEPTIONS INDEX?	4
2010 FACTS	5
VISUALISING THE CORRUPTION PERCEPTIONS INDEX	6
RESULTS BY REGION	
AMERICAS	8
ASIA PACIFIC	9
EASTERN EUROPE AND CENTRAL ASIA	10
EUROPEAN UNION AND WESTERN EUROPE	11
MIDDLE EAST AND NORTH AFRICA	12
SUB-SAHARAN AFRICA	13
ANNEX A: SHORT METHODOLOGICAL NOTE	15
ANNEX B: SOURCES OF INFORMATION	16

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Every effort has been made to verify the accuracy of the information contained in this report. All information was believed to be correct as of October 2010. Nevertheless, Transparency International cannot accept responsibility for the consequences of its use for other purposes or in other contexts.

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TRANSPARENCY AND ACCOUNTABILITY ARE CRITICAL TO RESTORING TRUST AND TURNING BACK THE TIDE OF CORRUPTION

With governments committing huge sums to tackle the world's most pressing problems, from the instability of financial markets to climate change and poverty, corruption remains an obstacle to achieving much needed progress.

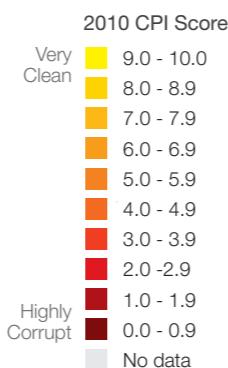
The 2010 *Corruption Perceptions Index* shows that nearly three quarters of the 178 countries in the index score below five, on a scale from 10 (very clean) to 0 (highly corrupt). These results indicate a serious corruption problem.

To address these challenges, governments need to integrate anti-corruption measures in all spheres, from their responses to the financial crisis and climate change to commitments by the international community to eradicate poverty. Transparency International advocates stricter implementation of the UN Convention against Corruption, the only global initiative that provides a framework for putting an end to corruption.

Denmark, New Zealand and Singapore are tied at the top of the list with a score of 9.3, followed closely by Finland and Sweden at 9.2. At the bottom is Somalia with a score of 1.1, slightly trailing Myanmar and Afghanistan at 1.4 and Iraq at 1.5.

Notable among decliners over the past year are some of the countries most affected by a financial crisis precipitated by transparency and integrity deficits. Among those improving in the past year, the general absence of OECD states underlines the fact that all nations need to bolster their good governance mechanisms.

The message is clear: across the globe, transparency and accountability are critical to restoring trust and turning back the tide of corruption. Without them, global policy solutions to many global crises are at risk.



COUNTRY/RANK	TERRITORY	SCORE	COUNTRY/RANK	TERRITORY	SCORE	COUNTRY/RANK	TERRITORY	SCORE
1	Denmark	9.3	30	Spain	6.1	59	Tunisia	4.3
1	New Zealand	9.3	32	Portugal	6.0	62	Croatia	4.1
1	Singapore	9.3	33	Botswana	5.8	62	FYR Macedonia	4.1
4	Finland	9.2	33	Puerto Rico	5.8	62	Ghana	4.1
4	Sweden	9.2	33	Taiwan	5.8	66	Rwanda	4.0
6	Canada	8.9	36	Bhutan	5.7	67	Italy	3.9
7	Netherlands	8.8	37	Malta	5.6	68	Georgia	3.8
8	Australia	8.7	38	Brunei	5.5	69	Brazil	3.7
8	Switzerland	8.7	39	Korea (South)	5.4	69	Cuba	3.7
10	Norway	8.6	39	Mauritius	5.4	69	Montenegro	3.7
11	Iceland	8.5	41	Costa Rica	5.3	69	Romania	3.7
11	Luxembourg	8.5	41	Oman	5.3	73	Bulgaria	3.6
13	Hong Kong	8.4	41	Poland	5.3	73	El Salvador	3.6
14	Ireland	8.0	44	Dominica	5.2	73	Panama	3.6
15	Austria	7.9	45	Cape Verde	5.1	73	Trinidad and Tobago	3.6
15	Germany	7.9	46	Lithuania	5.0	73	Trinidad and Tobago	3.6
17	Barbados	7.8	46	Macau	5.0	73	Vanuatu	3.6
17	Japan	7.8	48	Bahrain	4.9	78	China	3.5
19	Qatar	7.7	49	Seychelles	4.8	78	Colombia	3.5
20	United Kingdom	7.6	50	Hungary	4.7	78	Greece	3.5
21	Chile	7.2	50	Jordan	4.7	78	Lesotho	3.5
22	Belgium	7.1	50	Saudi Arabia	4.7	78	Peru	3.5
22	United States	7.1	53	Czech Republic	4.6	78	Serbia	3.5
24	Uruguay	6.9	54	Kuwait	4.5	78	Thailand	3.5
25	France	6.8	54	South Africa	4.5	85	Malawi	3.4
26	Estonia	6.5	56	Malaysia	4.4	85	Morocco	3.4
27	Slovenia	6.4	56	Namibia	4.4	87	Albania	3.3
28	Cyprus	6.3	56	Turkey	4.4	87	India	3.3
28	United Arab Emirates	6.3	59	Latvia	4.3	87	Jamaica	3.3
30	Israel	6.1	59	Slovakia	4.3	87	Liberia	3.3
						91	Bosnia and Herzegovina	3.2
						91	Djibouti	3.2
						91	Gambia	3.2
						91	Guatemala	3.2
						91	Kiribati	3.2
						91	Sri Lanka	3.2
						91	Swaziland	3.2
						98	Burkina Faso	3.1
						98	Egypt	3.1
						98	Mexico	3.1
						101	Dominican Republic	3.0
						101	Sao Tome & Principe	3.0
						101	Tonga	3.0
						101	Zambia	3.0
						105	Algeria	2.9
						105	Argentina	2.9
						105	Kazakhstan	2.9
						105	Moldova	2.9
						105	Senegal	2.9
						110	Benin	2.8
						110	Bolivia	2.8
						110	Gabon	2.8
						110	Indonesia	2.8
						110	Kosovo	2.8
						110	Mauritania	2.8
						110	Solomon Islands	2.8
						116	Ethiopia	2.7
						116	Guyana	2.7
						116	Mali	2.7
						116	Mongolia	2.7
						146	Haiti	2.2
						146	Iraq	1.5
						146	Côte d'Ivoire	2.2
						146	Haiti	2.2
						146	Iran	2.2
						178	Somalia	1.1

WHAT IS THE CORRUPTION PERCEPTIONS INDEX?

Transparency International (TI) defines corruption as the abuse of entrusted power for private gain. This definition encompasses corrupt practices in both the public and private sectors. The *Corruption Perceptions Index* (CPI) ranks countries according to perception of corruption in the public sector. The CPI is an aggregate indicator that combines different sources of information about corruption, making it possible to compare countries.

The 2010 CPI draws on different assessments and business opinion surveys carried out by independent and reputable institutions¹. It captures information about the administrative and political aspects of corruption. Broadly speaking, the surveys and assessments used to compile the index include questions relating to bribery of public officials, kickbacks in public procurement, embezzlement of public funds, and questions that probe the strength and effectiveness of public sector anti-corruption efforts.

For a country or territory to be included in the index a minimum of three of the sources that TI uses must assess that country. Thus inclusion in the index depends solely on the availability of information.

Perceptions are used because corruption – whether frequency or amount – is to a great extent a hidden activity that is difficult to measure. Over time, perceptions have proved to be a reliable estimate of corruption. Measuring scandals, investigations or prosecutions, while offering ‘non-perception’ data, reflect less on the prevalence of corruption in a country and more on other factors, such as freedom of the press or the efficiency of the judicial system. TI considers it of critical importance to measure both corruption and integrity, and to do so in the public and private sectors at global, national and local levels.² The CPI is therefore one of many TI measurement tools that serve the fight against corruption.

¹For detailed information on the sources of information please see Annex B and visit our website at www.transparency.org/cpi

²Examples include National Integrity System assessments, which evaluate the degree of integrity, transparency and accountability in a country’s anti-corruption institutions, and the Bribe Payers Index, which evaluates expert views of the supply of foreign bribery.

2010 FACTS

The 2010 CPI measures the degree to which public sector corruption is perceived to exist in 178 countries around the world. It scores countries on a scale from 10 (very clean) to 0 (highly corrupt).

The 2010 results are drawn from 13 surveys and assessments published between January 2009 and September 2010.

The 2010 CPI covers two countries fewer than last year’s edition. The slight change resulted from individual sources adjusting the range of countries they assess. These adjustments in coverage made it possible to include Kosovo for the first time, but led to the exclusion of Saint Lucia, Saint Vincent and the Grenadines, and Suriname, for which only two sources of information were available this year.

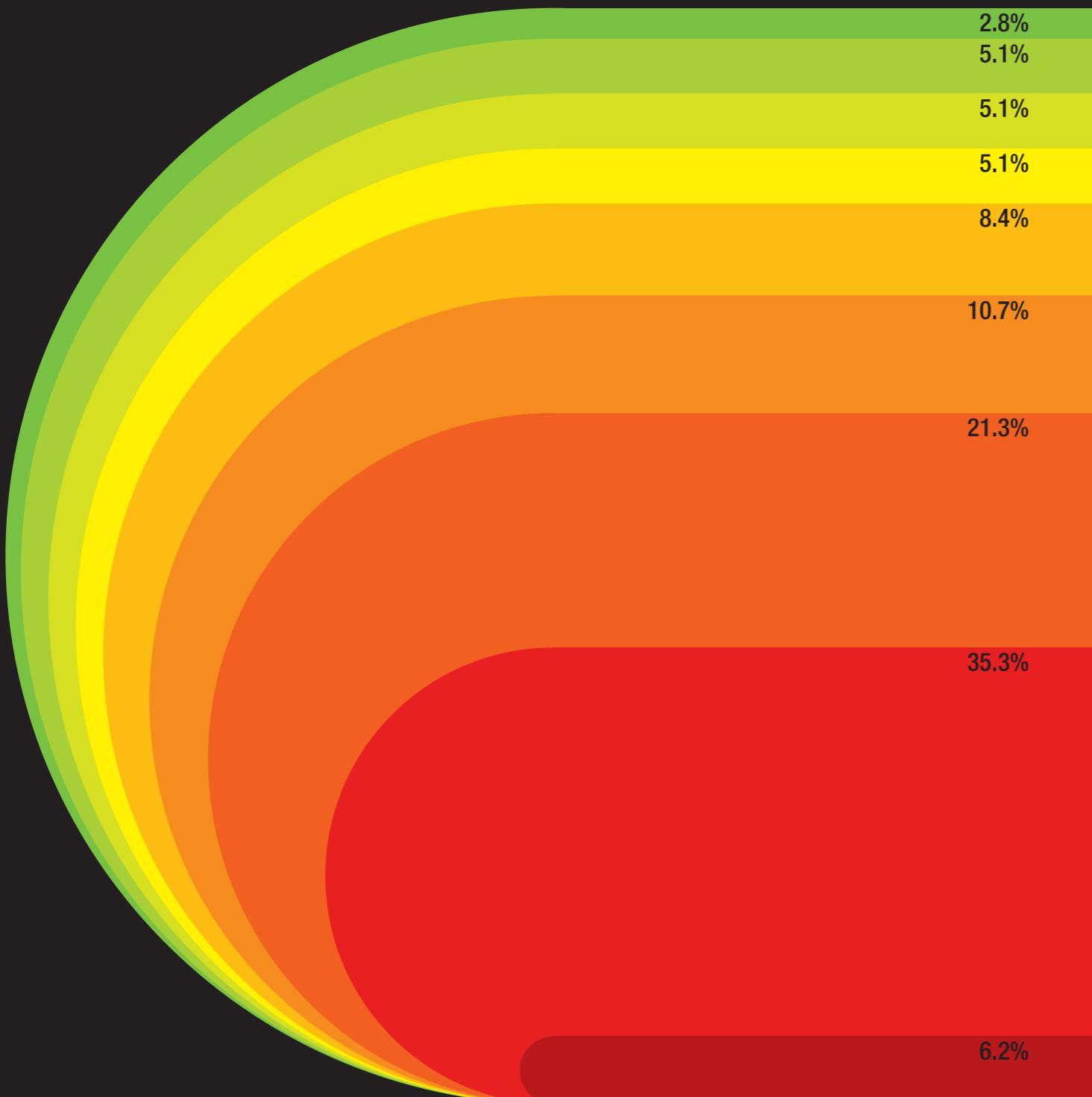
Given its methodology, the CPI is not a tool that is suitable for trend analysis or for monitoring changes in the perceived levels of corruption over time for all countries. Year-to-year changes in a country/territory’s score can result from a change in the perceptions of a country’s performance, a change in the ranking provided by original sources or changes in the methodology resulting from TI’s efforts to improve the index.

If a country is featured in one or more specific data sources for both of the last two CPIs (2009 CPI and 2010 CPI), those sources can be used to identify whether there has been a change in perceived levels of corruption in that particular country compared to the previous year. TI has used this approach in 2010 to assess country progress over the past year and to identify what can be considered to be a change in perceptions of corruption. These assessments use two criteria:

- (a) there is a year-on-year change of at least 0.3 points in a country’s CPI score, and
- (b) the direction of this change is confirmed by more than half of the data sources evaluating that country.

Based on these criteria, the following countries showed an improvement from 2009 to 2010: Bhutan, Chile, Ecuador, FYR Macedonia, Gambia, Haiti, Jamaica, Kuwait and Qatar. The following countries showed deterioration from 2009 to 2010: the Czech Republic, Greece, Hungary, Italy, Madagascar, Niger and the United States.

VISUALISING THE CORRUPTION PERCEPTIONS INDEX



DENMARK NEW ZEALAND SINGAPORE FINLAND SWEDEN
CANADA NETHERLANDS AUSTRALIA SWITZERLAND NORWAY
ICELAND LUXEMBOURG HONG KONG IRELAND
AUSTRIA GERMANY BARBADOS JAPAN QATAR
UNITED KINGDOM CHILE BELGIUM UNITED STATES
URUGUAY FRANCE ESTONIA SLOVENIA CYPRUS
UNITED ARAB EMIRATES ISRAEL SPAIN PORTUGAL
BOTSWANA PUERTO RICO TAIWAN BHUTAN MALTA
BRUNEI KOREA(SOUTH) MAURITIUS COSTA RICA OMAN
POLAND DOMINICA CAPE VERDE LITHUANIA MACAU
BAHRAIN SEYCHELLES HUNGARY JORDAN SAUDI ARABIA
CZECH REPUBLIC KUWAIT SOUTH AFRICA MALAYSIA
NAMIBIA TURKEY LATVIA SLOVAKIA TUNISIA CROATIA
FYR MACEDONIA GHANA SAMOA RWANDA
ITALY GEORGIA BRAZIL CUBA MONTENEGRO ROMANIA
BULGARIA EL SALVADOR PANAMA TRINIDAD AND TOBAGO
VANUATU CHINA COLOMBIA GREECE LESOTHO PERU
SERBIA THAILAND MALAWI MOROCCO ALBANIA INDIA
JAMAICA LIBERIA BOSNIA AND HERZEGOVINA DJIBOUTI
GAMBIA GUATEMALA KIRIBATI SRI LANKA SWAZILAND
BURKINA FASO EGYPT MEXICO DOMINICAN REPUBLIC
SAO TOME AND PRINCIPE TONGA ZAMBIA
ALGERIA ARGENTINA KAZAKHSTAN MOLDOVA
SENEGAL BENIN BOLIVIA GABON INDONESIA KOSOVO
SOLOMON ISLANDS ETHIOPIA GUYANA MALI MONGOLIA
MOZAMBIQUE TANZANIA VIETNAM ARMENIA ERITREA
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TAJIKISTAN DEMOCRATIC REPUBLIC OF THE CONGO
GUINEA KYRGYZSTAN VENEZUELA
ANGOLA EQUATORIAL GUINEA BURUNDI CHAD SUDAN TURKMENISTAN
UZBEKISTAN IRAQ AFGHANISTAN MYANMAR SOMALIA

Countries appear in order of rank. Please see country listing on p. 2 for exact country scoring and ranking.

RESULTS BY REGION: AMERICAS

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL*		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
6	1	Canada	8.9	8.7	9.0	6
17	2	Barbados	7.8	7.1	8.5	4
21	3	Chile	7.2	7.0	7.4	7
22	4	United States	7.1	6.5	7.7	8
24	5	Uruguay	6.9	6.5	7.1	5
33	6	Puerto Rico	5.8	5.3	6.4	4
41	7	Costa Rica	5.3	4.7	6.0	5
44	8	Dominica	5.2	4.7	5.8	3
69	9	Brazil	3.7	3.2	4.3	7
69	9	Cuba	3.7	2.6	5.1	3
73	11	El Salvador	3.6	3.4	3.8	5
73	11	Panama	3.6	3.2	4.1	5
73	11	Trinidad and Tobago	3.6	3.0	4.3	4
78	14	Colombia	3.5	3.2	4.0	7
78	14	Peru	3.5	3.4	3.6	7
87	16	Jamaica	3.3	3.0	3.4	5
91	17	Guatemala	3.2	3.0	3.4	5
98	18	Mexico	3.1	2.9	3.3	7
101	19	Dominican Republic	3.0	2.7	3.2	5
105	20	Argentina	2.9	2.6	3.2	7
110	21	Bolivia	2.8	2.5	3.1	6
116	22	Guyana	2.7	2.6	2.8	4
127	23	Ecuador	2.5	2.2	2.7	5
127	23	Nicaragua	2.5	2.2	2.7	6
134	25	Honduras	2.4	2.2	2.7	6
146	26	Haiti	2.2	2.1	2.3	3
146	26	Paraguay	2.2	1.9	2.5	5
164	28	Venezuela	2.0	1.8	2.1	7

*The confidence intervals reflect the precision of the CPI scores. They indicate the range within which the most accurate value of the CPI score is most likely to fall. The wider a confidence interval is, the less precise the score.

ASIA PACIFIC

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
1	1	New Zealand	9.3	9.2	9.5	6
1	1	Singapore	9.3	9.2	9.4	9
8	3	Australia	8.7	8.3	9.0	8
13	4	Hong Kong	8.4	8.1	8.7	8
17	5	Japan	7.8	7.5	8.2	8
33	6	Taiwan	5.8	5.5	6.2	9
36	7	Bhutan	5.7	5.1	6.2	4
38	8	Brunei	5.5	4.7	6.1	3
39	9	Korea (South)	5.4	5.1	5.7	9
46	10	Macau	5.0	3.4	5.8	3
56	11	Malaysia	4.4	3.9	4.9	9
62	12	Samoa	4.1	3.4	4.7	3
73	13	Vanuatu	3.6	2.3	5.8	3
78	14	China	3.5	3.0	4.0	9
78	14	Thailand	3.5	3.2	3.9	9
87	16	India	3.3	3.0	3.5	10
91	17	Kiribati	3.2	2.3	4.7	3
91	17	Sri Lanka	3.2	2.9	3.6	7
101	19	Tonga	3.0	2.6	3.3	3
110	20	Indonesia	2.8	2.3	3.2	9
110	20	Solomon Islands	2.8	2.3	3.4	3
116	22	Mongolia	2.7	2.4	3.0	6
116	22	Vietnam	2.7	2.4	3.1	9
127	24	Timor-Leste	2.5	2.1	2.8	5
134	25	Bangladesh	2.4	1.9	3.0	7
134	25	Philippines	2.4	2.1	2.7	9
143	27	Maldives	2.3	1.7	2.7	3
143	27	Pakistan	2.3	2.1	2.6	7
146	29	Nepal	2.2	1.9	2.5	6
154	30	Cambodia	2.1	1.9	2.2	9
154	30	Laos	2.1	1.6	2.6	4
154	30	Papua New Guinea	2.1	1.8	2.5	5
176	33	Afghanistan	1.4	1.2	1.6	4
176	33	Myanmar	1.4	0.9	1.9	3

EASTERN EUROPE AND CENTRAL ASIA

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
56	1	Turkey	4.4	4.0	4.8	7
62	2	Croatia	4.1	3.7	4.5	8
62	2	FYR Macedonia	4.1	3.7	4.5	5
68	4	Georgia	3.8	3.0	4.7	7
69	5	Montenegro	3.7	3.1	4.3	5
78	6	Serbia	3.5	3.1	3.9	6
87	7	Albania	3.3	3.0	3.6	6
91	8	Bosnia and Herzegovina	3.2	2.8	3.5	7
105	9	Kazakhstan	2.9	2.2	3.7	8
105	9	Moldova	2.9	2.7	3.2	6
110	11	Kosovo	2.8	2.7	3.1	3
123	12	Armenia	2.6	2.5	2.8	7
127	13	Belarus	2.5	2.1	3.1	3
134	14	Azerbaijan	2.4	2.1	2.7	7
134	14	Ukraine	2.4	2.1	2.6	8
154	16	Russia	2.1	1.9	2.3	8
154	16	Tajikistan	2.1	1.7	2.5	7
164	18	Kyrgyzstan	2.0	1.8	2.3	7
172	19	Turkmenistan	1.6	1.4	1.8	3
172	19	Uzbekistan	1.6	1.5	1.7	6

EUROPEAN UNION AND WESTERN EUROPE

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
1	1	Denmark	9.3	9.1	9.4	6
4	2	Finland	9.2	9.1	9.3	6
4	2	Sweden	9.2	9.1	9.4	6
7	4	Netherlands	8.8	8.7	9.0	6
8	5	Switzerland	8.7	8.3	9.1	6
10	6	Norway	8.6	8.1	9.0	6
11	7	Iceland	8.5	7.7	9.2	5
11	7	Luxembourg	8.5	8.0	8.9	5
14	9	Ireland	8.0	7.7	8.3	6
15	10	Austria	7.9	7.4	8.4	6
15	10	Germany	7.9	7.5	8.3	6
20	12	United Kingdom	7.6	7.3	7.9	6
22	13	Belgium	7.1	6.9	7.2	6
25	14	France	6.8	6.4	7.2	6
26	15	Estonia	6.5	6.1	6.8	8
27	16	Slovenia	6.4	5.9	6.8	8
28	17	Cyprus	6.3	6.0	6.6	4
30	18	Spain	6.1	5.7	6.5	6
32	19	Portugal	6.0	5.4	6.7	6
37	20	Malta	5.6	5.3	5.8	3
41	21	Poland	5.3	5.0	5.5	8
46	22	Lithuania	5.0	4.4	5.5	8
50	23	Hungary	4.7	3.9	5.5	8
53	24	Czech Republic	4.6	4.1	5.1	8
59	25	Latvia	4.3	3.7	4.8	6
59	25	Slovakia	4.3	3.8	4.9	8
67	27	Italy	3.9	3.5	4.4	6
69	28	Romania	3.7	3.3	4.2	8
73	29	Bulgaria	3.6	3.2	4.0	8
78	30	Greece	3.5	3.1	3.9	6

MIDDLE EAST AND NORTH AFRICA

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
19	1	Qatar	7.7	6.6	8.6	7
28	2	United Arab Emirates	6.3	5.4	7.3	5
30	3	Israel	6.1	5.7	6.6	6
41	4	Oman	5.3	4.1	6.4	5
48	5	Bahrain	4.9	4.1	5.7	5
50	6	Jordan	4.7	4.0	5.5	7
50	6	Saudi Arabia	4.7	3.3	6.0	5
54	8	Kuwait	4.5	3.3	5.9	5
59	9	Tunisia	4.3	3.0	5.6	6
85	10	Morocco	3.4	2.9	3.9	6
91	11	Djibouti	3.2	2.1	4.7	3
98	12	Egypt	3.1	2.9	3.4	6
105	13	Algeria	2.9	2.6	3.2	6
127	14	Lebanon	2.5	2.0	2.9	4
127	14	Syria	2.5	2.1	2.8	5
146	16	Iran	2.2	1.6	3.1	4
146	16	Libya	2.2	2.0	2.4	6
146	16	Yemen	2.2	2.0	2.5	4
175	19	Iraq	1.5	1.2	1.9	3

SUB-SAHARAN AFRICA

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
33	1	Botswana	5.8	5.4	6.2	6
39	2	Mauritius	5.4	4.9	5.9	6
45	3	Cape Verde	5.1	4.1	6.1	4
49	4	Seychelles	4.8	3.0	6.8	3
54	5	South Africa	4.5	4.1	4.8	8
56	6	Namibia	4.4	3.9	4.9	6
62	7	Ghana	4.1	3.4	4.7	7
66	8	Rwanda	4.0	3.2	5.1	5
78	9	Lesotho	3.5	2.8	4.4	6
85	10	Malawi	3.4	2.8	3.9	7
87	11	Liberia	3.3	2.7	3.9	4
91	12	Gambia	3.2	1.9	4.4	5
91	12	Swaziland	3.2	3.1	3.4	4
98	14	Burkina Faso	3.1	2.4	3.8	6
101	15	Sao Tome and Principe	3.0	2.6	3.3	3
101	15	Zambia	3.0	2.7	3.3	7
105	17	Senegal	2.9	2.6	3.1	7
110	18	Benin	2.8	2.3	3.3	6
110	18	Gabon	2.8	2.1	3.3	3
116	20	Ethiopia	2.7	2.4	2.9	7
116	20	Mali	2.7	2.2	3.2	6
116	20	Mozambique	2.7	2.4	3.0	7
116	20	Tanzania	2.7	2.4	2.9	7
123	24	Eritrea	2.6	1.7	3.7	4
123	24	Madagascar	2.6	2.2	2.9	6
123	24	Niger	2.6	2.3	2.9	4
127	27	Uganda	2.5	2.1	2.9	7
134	28	Nigeria	2.4	2.2	2.7	7
134	28	Sierra Leone	2.4	2.1	2.6	5
134	28	Togo	2.4	1.8	3.0	4
134	28	Zimbabwe	2.4	1.8	3.0	7
143	32	Mauritania	2.3	1.9	2.7	6
146	33	Cameroon	2.2	2.0	2.4	7
146	33	Côte d'Ivoire	2.2	1.9	2.5	7

Sub-Saharan Africa continued on next page.

SUB-SAHARAN AFRICA CONTINUED

RANK	REGIONAL RANK	COUNTRY / TERRITORY	CPI 2010 SCORE	90% CONFIDENCE INTERVAL		SURVEYS USED
				LOWER BOUND	UPPER BOUND	
154	35	Central African Republic	2.1	2.0	2.3	4
154	35	Comoros	2.1	1.7	2.6	3
154	35	Congo-Brazzaville	2.1	1.9	2.3	5
154	35	Guinea-Bissau	2.1	2.0	2.1	3
154	35	Kenya	2.1	2.0	2.3	7
Democratic Republic of the Congo						
164	40	Democratic Republic of the Congo	2.0	1.7	2.3	4
164	40	Guinea	2.0	1.8	2.2	5
168	42	Angola	1.9	1.8	2.0	6
168	42	Equatorial Guinea	1.9	1.7	2.1	3
170	44	Burundi	1.8	1.6	2.0	6
171	45	Chad	1.7	1.6	1.9	6
172	46	Sudan	1.6	1.4	1.9	5
178	47	Somalia	1.1	0.9	1.4	3

ANNEX A: SHORT METHODOLOGICAL NOTE

The *Corruption Perceptions Index* (CPI) 2010 is an aggregate indicator that brings together data from sources that cover the past two years. For the 2010 CPI, this includes surveys published between January 2009 and September 2010.

DATA SOURCES:

- The 2010 CPI is calculated using data from 13 sources by 10 independent institutions. All sources measure the overall extent of corruption (frequency and/or size of bribes) in the public and political sectors, and all sources provide a ranking of countries, i.e. include an assessment of multiple countries.
- Evaluation of the extent of corruption in countries/territories is done by two groups: country experts, both residents and non-residents, and business leaders. In the 2010 CPI, the following seven sources provided data based on expert analysis: African Development Bank, Asian Development Bank, Bertelsmann Foundation, Economist Intelligence Unit, Freedom House, Global Insight and the World Bank. Three sources for the CPI 2010 reflect the evaluations by resident business leaders of their own country, IMD, Political and Economic Risk Consultancy, and the World Economic Forum.
- For CPI sources that are surveys, and where multiple years of the same survey are available, data for the past two years is included.
- For sources that are scores provided by experts (risk agencies/country analysts), only the most recent iteration of the assessment is included, as these scores are generally peer reviewed and change very little from year to year.

STEPS TO CALCULATE THE CPI:

1. The first step to calculate the CPI is to standardise the data provided by the individual sources (that is, translate them into a common scale). We use what is called a matching percentiles technique that takes the ranks of countries reported by each individual source. This method is useful for combining sources that have different distributions. While there is some information loss in this technique, it allows all reported scores to remain within the bounds of the CPI, i.e. to remain between 0 and 10.
2. The second step consists of performing what is called a beta-transformation on the standardised scores. This increases the standard deviation among all countries included in the CPI and makes it possible to differentiate more precisely countries that appear to have similar scores.
3. Finally, the CPI scores are determined by averaging all of the standardised values for each country.

RESULTS:

- The CPI score and rank are accompanied by the number of sources, the highest and lowest values given to every country by the data sources, the standard deviation and the confidence range for each country.
- The confidence range is determined by what is called a bootstrap (non-parametric) methodology, which allows inferences to be drawn on the underlying precision of the results. A 90 per cent confidence range is then established, where there is only a five per cent probability that the value is below and a five per cent probability that the value is above this confidence range.

For a more detailed explanation of the CPI method please visit www.transparency.org/cpi

ANNEX B: SOURCES OF INFORMATION

NUMBER	1	2	3
ABBREVIATION	ADB	AFDB	BTI
SOURCE	Asian Development Bank	African Development Bank	Bertelsmann Foundation
NAME	Country Performance Assessment Ratings	Country Policy and Institutional Assessments	Bertelsmann Transformation Index
YEAR PUBLISHED	2010	2010	2009
INTERNET	www.adb.org/Documents/Reports/Country-Performance-Assessment-Exercise/default.asp	www.afdb.org/pls/portal/url/ITEM/5008432D529957FAE040C00A0C3D3A86	www.bertelsmann-transformation-index.de/english
WHO WAS SURVEYED?	Country teams, experts inside and outside the bank	Country teams, experts inside and outside the bank	Network of local correspondents and experts inside and outside the organisation
SUBJECT ASKED	Transparency, accountability, and corruption in the public sector	Transparency, accountability, and corruption in the public sector	The government's capacity to punish and contain corruption
NUMBER OF REPLIES	Not applicable	Not applicable	Not applicable
COVERAGE	28 countries (eligible for ADF funding)	53 countries	128 less developed and transition countries

NUMBER	4	5	6
ABBREVIATION	CPIA	EIU	FH
SOURCE	World Bank (IDA and IBRD)	Economist Intelligence Unit	Freedom House
NAME	Country Policy and Institutional Assessment	Country Risk Service and Country Forecast	Nations in Transit
YEAR PUBLISHED	2010	2010	2010
INTERNET	http://go.worldbank.org/S2THWI1X60	www.eiu.com	www.freedomhouse.hu/index.php?option=com_content&task=view&id=196
WHO WAS SURVEYED?	Country teams, experts inside and outside the bank	Expert staff assessment	Assessment by experts originating from or resident in the respective country
SUBJECT ASKED	Transparency, accountability, and corruption in the public sector	The misuse of public office for private (or political party) gain: including corruption in public procurement, misuse of public funds, corruption in public service, and prosecution of public officials	Extent of corruption as practiced in governments, as perceived by the public and as reported in the media, as well as the implementation of anti-corruption initiatives.
NUMBER OF REPLIES	Not applicable	Not applicable	Not applicable
COVERAGE	77 countries (eligible for IDA funding)	135 countries	29 countries/territories

NUMBER	7	8	9
ABBREVIATION	GI	IMD	
SOURCE	Global Insight	IMD International, Switzerland, World Competitiveness Center	
NAME	Country Risk Ratings	IMD World Competitiveness Yearbook	
YEAR PUBLISHED	2010	2009	2010
INTERNET	www.globalinsight.com	www.imd.ch/wcc	
WHO WAS SURVEYED?	Expert staff assessment	Executives in top and middle management in domestic and international companies	
SUBJECT ASKED	The likelihood of encountering corrupt officials, ranging from petty bureaucratic corruption to grand political corruption	Category Institutional Framework - State Efficiency: "Bribing and corruption exist/do not exist"	
NUMBER OF REPLIES	Not applicable	3,960	
COVERAGE	201 countries	57 countries	58 countries

NUMBER	12	13
ABBREVIATION	WEF	WEF
SOURCE	World Economic Forum	
NAME	Global Competitiveness Report	
YEAR PUBLISHED	2009	2010
INTERNET	www.weforum.org	
WHO WAS SURVEYED?	Senior business leaders, domestic and international companies	
SUBJECT ASKED	Undocumented extra payments or bribes connected with 1) exports and imports, 2) public utilities, 3) tax collection, 4) public contracts and 5) judicial decisions are common/never occur	
NUMBER OF REPLIES	More than 12,000	More than 13,000
COVERAGE	133 countries	139 countries

NUMBER	10	11
ABBREVIATION	PERC	
SOURCE	Political & Economic Risk Consultancy	
NAME	Asian Intelligence Newsletter	
YEAR PUBLISHED	2009	2010
INTERNET	www.asiarisk.com	
WHO WAS SURVEYED?	Expatriate business executives	
SUBJECT ASKED	How serious do you consider the problem of corruption to be in the public sector?	
NUMBER OF REPLIES	1,750	2,174
COVERAGE	16 countries	16 countries

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CORRUPTION RUINS LIVES.
FIGHT BACK.



Bribe Payers Index 2002

About the BPI 2002

Table 1: [Transparency International Bribe Bayers Index \(BPI\) 2002](#)

Table 2: [Bribery in business sectors](#)

Table 3: [Bribery in business sectors - by size of bribe](#)

Tables 4 & 5: [OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions \(Anti-Bribery Convention\)](#)

Table 6: [Solutions to corruption](#)

Table 7: [Sources of respondents' information](#)

Tables 8, 9 & 10: [Level of corruption, change, increase, decrease in levels of corruption](#)

Table 11: [Other means of gaining unfair advantage](#)

Table 12: [Other means Governments use to gain unfair advantage](#)

Table 13: [Countries using other unfair means to gain or retain business](#)

Table 14: [Perceived level of corruption in the public sector](#)

Press Release

FAQ

The Transparency International Bribe Payers Index (BPI) 2002, published on 14 May 2002, is based on surveys conducted in 15 emerging market countries by Gallup International Association. The BPI 2002 was conducted in: Argentina, Brazil, Colombia, Hungary, India, Indonesia, Mexico, Morocco, Nigeria, the Philippines, Poland, Russia, South Africa, South Korea and Thailand, which are among the very largest such countries involved in trade and investment with multinational firms. The questions relate to the likelihood of companies from 21 leading exporting countries to pay bribes to senior public officials in the surveyed emerging market countries.

A total of 835 interviews were carried out between December 2001 and March 2002, principally with senior executives of domestic and foreign companies, but also with executives at chartered accountancies, binational chambers of commerce, national and foreign commercial banks, and commercial law firms. The survey questions related to perceptions about multinational firms from 21 countries.

Transparency International Bribe Payers Index 2002

Table 1:

In the business sectors with which you are most familiar, please indicate how likely companies from the following countries are to pay or offer bribes to win or retain business in this country [respondent's country of residence?]				
Rank	2002	1999	OECD Convention (as of 14 May 2002)	
	Total sample	835	779	The question related to the likelihood of companies from leading exporting countries to pay bribes to senior public officials in the surveyed emerging market countries.
1	Australia	8.5	8.1	Ratified
	Sweden	8.4	8.3	A perfect score, indicating zero perceived likelihood to pay bribes, is 10.0, and thus the ranking starts with companies from countries that are seen to have a low likelihood for foreign bribe paying. In the 2002 survey, all the data indicated that domestically owned companies in the 15 countries surveyed have a very high likelihood to pay bribes higher than that of foreign firms.
2	Switzerland	8.4	7.7	
4	Austria	8.2	7.8	
5	Canada	8.1	8.1	* included as part of China in 1999

6	Netherlands	7.8	7.4	Ratified	** not included in 1999
	Belgium	7.8	6.8	Ratified	
8	United Kingdom	6.9	7.2	Ratified	
9	Singapore	6.3	5.7	not signed	
	Germany	6.3	6.2	Ratified	
11	Spain	5.8	5.3	Ratified	
12	France	5.5	5.2	Ratified	
13	USA	5.3	6.2	Ratified	
	Japan	5.3	5.1	Ratified	
15	Malaysia	4.3	3.9	not signed	
	Hong Kong	4.3	-.*	not signed	
17	Italy	4.1	3.7	Ratified	
18	South Korea	3.9	3.4	Ratified	
19	Taiwan	3.8	3.5	not signed	
20	China (People's Republic)	3.5	3.1	not signed	
21	Russia	3.2	- **	not signed	
	Domestic companies	1.9	- **		

Bribery in business sectors

Table 2:

How likely is it that senior public officials in this country [respondent's country of residence] would demand or accept bribes, e.g. for public tenders, regulations, licensing in the following business sectors?		
2002		
Total sample	835	
Public works/construction	1.3	The scores are mean figures from all the responses on a 0 to 10 basis where 0 represents very high perceived levels of corruption, and 10 represents zero perceived corruption.
Arms and defence	1.9	
Oil and gas	2.7	Precise comparisons between the 1999 and 2002 figures are not possible as the categories have been modified significantly
Real estate/property	3.5	
Telecoms	3.7	
Power generation/transmission	3.7	
Mining	4.0	
Transportation/storage	4.3	
Pharmaceutical/medicare	4.3	
Heavy manufacturing	4.5	
Banking and finance	4.7	
Civilian aerospace	4.9	
Forestry	5.1	
IT	5.1	
Fishery	5.9	
Light manufacturing	5.9	
Agriculture	5.9	

Bribery in business sectors - by size of bribe

Table 3:

Among the business sectors mentioned previously, which are the two sectors where the biggest bribes are likely to be paid?
--

2002			
Total sample	835		The results reflect the percentage of respondents who mentioned the particular sector. This question was not posed in the BPI 1999.
Public works/construction	46%		
Arms and defence	38%		
Oil and gas	21%		
Banking and finance	15%		
Real estate/property	11%		
Pharmaceutical/medicare	10%		
Power generation/transm.	10%		
Telecoms	9%		
IT	6%		
Forestry	5%		
Mining	5%		
Transportation/storage	5%		
Heavy manufacturing	4%		
Agriculture	3%		
Fishery	3%		
Civilian aerospace	2%		
Light manufacturing	1%		

OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (Anti-Bribery Convention)

Table 4:

Which of the following best describes how much you know about the convention?								
2002 Survey								
	2002	1999	FC	NC	Acc	CoC	Ba	Le
Total	835	779	261 31%	261 31%	84 10%	71 9%	80 10%	78 9%
I am familiar with the Convention	7%	6%	7%	4%	8%	13%	8%	12%
I know something about it	12%	13%	12%	10%	18%	18%	9%	14%
I have only heard about it	32%	43%	30%	33%	26%	28%	36%	38%
I have not heard about it	42%	38%	44%	45%	40%	38%	41%	29%
Not stated	7%	-	7%	7%	7%	3%	6%	6%

FC = Foreign Companies

NC = National Companies

Acc = Accountants

CoC = Chambers of Commerce

Ba = Banks

Le = Legal

Table 5:

Do you know how your organisation is responding to this OECD Convention?		
	2002	1999
Total sample	164	146
Review of practices being undertaken	13%	19%
Compliance programme already exists	35%	-
No action required, doesn't apply	30%	43%
No decision has been taken yet	13%	18%

Don't know how org. is responding	9%	12%
Not stated	-	8%

Table 6:

Solutions to Corruption

If you had a magic wand and you could eliminate corruption from one of the following institutions, what would your first choice be?		
2002		
Total sample	835	
Courts	21%	
Political parties	19%	
Police	13%	
Customs	9%	
Education (schools, university)	7%	
Tax revenue	6%	
Private sector	4%	
Building and zoning permits	4%	
Medical services	3%	
Employment & workplace regulation	2%	
Utilities (telephone, electricity, water etc.)	2%	
Immigration & passports	1%	
Other	3%	

Table 7:

Sources of respondents' information

Please describe where your knowledge about this subject comes from?		
2002		
Total sample	835	
Information from colleagues, friends, clients	58%	
Press, media reports	55%	
Personal experience	52%	
Sources in other companies	38%	
Direct experience of people in your company	34%	
Government and diplomatic sources	13%	
The Internet	12%	
Don't know / other	12%	
Transparency International	8%	

Level of corruption

Table 8:

Overall, has there been a change in the level of corruption by foreign companies of senior public officials in this country [respondent's country of residence] in the past 5 years?		
	2002	1999
Total sample	835	779
Increased significantly	10%	
Increased somewhat	13%	
Total increased	23%	33%

Stayed the same	37%	22%
Decreased somewhat	21%	
Decreased significantly	6%	
Total decreased	27%	25%
Don't know	13%	20%

Table 9:

This question was posed to all those saying that the level of corruption by foreign companies of senior public officials had increased somewhat or increased significantly in the past five years.

Table 10:

Have changes and developments in any of the following factors contributed significantly to [a decrease in the level of corruption by foreign companies of senior public officials in the past 5 years]?		
2002		
Greater freedom of the press	52%	This question was posed to all those saying that the level of corruption by foreign companies of senior public officials had decreased somewhat or decreased significantly in the past five years
Government anti-corruption investigations	48%	
Greater transparency in government	47%	
Greater transparency in government	47%	
Improvements in corporate governance	42%	
Stronger controls of money laundering	39%	
Increase in globalisation and competition	38%	
Improvements in public procurement practices	33%	
Privatisation of state assets	33%	
Greater accountability of public officials	33%	
Increased financial liberalisation	29%	
Changes in political party funding	10%	
Other	1%	

Other means of gaining unfair advantage

Table 11:

In the business sectors with which you are familiar, are there other means by which some Governments gain unfair business advantage for companies from their countries?		
	2002	1999
Total sample	835	779
Yes	68%	69%
No	26%	31%
Not stated	7%	-

"Other means" are means besides corruption used to unfairly influence international trade and investment.

Other means governments use to gain unfair advantage

Table 12:

What means do these governments use?	2002	1999
Total sample	567	537
Diplomatic or political pressure	66%	53%
Financial pressure	66%	45%

Commercial, pricing issues etc.	66%	49%
Tied foreign aid	54%	35%
Threat of reduced foreign aid	46%	n.a.*
Tied defence/arms deals	41%	28%
Favours/gifts to officials	39%	36%
Tied scholarships/education/ healthcare	22%	16%
Other means	8%	11%
Not stated	5%	2%

* included under tied foreign aid in 1999

Countries using other unfair means to gain or retain business

Table 13:

Which three governments do you principally associate with practices such as those mentioned above [other means – besides bribery - used to gain unfair advantage in international trade and investment]?		
2002		
Total sample	567	The score reflects the percentage of responses where the country featured among the three countries cited as principally associated with other unfair practices
USA	58%	
France	26%	
United Kingdom	19%	
Japan	18%	
China (People's Rep.)	16%	
Russia	13%	
This country	12%	
Germany	11%	
Spain	9%	
Italy	5%	
Taiwan	5%	
South Korea	4%	
Switzerland	4%	
Malaysia	3%	
Canada	3%	
Netherlands	3%	
Singapore	1%	
Belgium	1%	
Australia	1%	
Austria	1%	
Hong Kong	1%	
Sweden	<1%	

Perceived level of corruption in the public sector

Table 14:

	How common are payments (e.g. bribes) to obtain or retain business or other improper advantages to senior public officials, like politicians, senior civil servants, and judges in the following countries?	How significant of an obstacle are the costs associated with such payments for doing business?	
--	---	--	--

2002		
835	835	Respondents only answered on the countries of which they have experience
1.87	2.19	Questions relate to the likelihood of public officials, politicians and judges from exporting countries to receive bribes from companies in the 15 surveyed emerging market countries.
2.48	1.86	
1.84	1.68	A perfect score indicating zero likelihood to receive bribes is 0.0. The higher scores indicate a higher level of corruption within public officials in those countries.
1.78	1.73	
2.96	2.35	
2.37	2.10	
2.01	1.89	
2.28	1.96	
3.00	2.68	
2.45	2.17	
2.77	2.80	
1.88	1.72	
2.98	2.48	
1.70	1.80	
3.15	2.58	
2.64	2.20	
1.50	1.40	
1.62	1.19	
2.74	2.13	
1.81	1.72	
2.07	1.96	

Questions and Answers
on the TI Bribe Payers Index (BPI) 2002

- [What is the Bribe Payers Index?](#)
- [When and where was the survey carried out?](#)
- [How is the BPI the "bribery in business sectors" ranking reached?](#)
- [Why did TI focus on the bribe-payers in emerging market economies?](#)
- [What is the significance of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions?](#)
- [Who funds the TI Bribe Payers Index?](#)
- [What can a country do to improve its ranking in the BPI?](#)
- [Why does the BPI not rank companies instead of countries?](#)
- [Media contacts](#)

What is the Bribe Payers Index?

The Transparency International Bribe Payers Index ranks leading exporting countries in terms of the degree to which international companies with their headquarters in those countries are likely to pay bribes to senior public officials in key emerging market economies. In that sense, it measures the supply side of bribery in the countries where the bribes are paid. Countries are ranked on a mean score from the answers given by respondents to the question "in the business sectors with which you are most familiar, please indicate how likely companies from the following countries are to pay or offer bribes to win or retain business in this country?"

The 21 exporters listed in the BPI 2002 are: Australia, Austria, Belgium, Canada, China, France, Germany, Hong Kong, Italy, Japan, Malaysia, Netherlands, Russia, Singapore, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom, USA, in addition to "this country" (the emerging market economy where the respondent is

resident). The survey also included a range of questions on the prevalence of bribery by foreign companies in different sectors, on levels of awareness of the OECD Anti-Bribery Convention, and company policies to implement the legislation resulting from the Convention. In drawing up the survey, TI was advised and guided by a Steering Committee of leading international experts in the fields of corruption, econometrics, and statistics. The selection of Gallup International Association ensures the highest professional standards in the survey work.

When and where was the survey carried out?

The BPI 2002 was conducted by Gallup International Association in 15 emerging market economies, via a total of 835 interviews. The interviews were conducted with 261 senior executives from foreign companies, 261 senior executives from domestic companies, 84 top executives at chartered accountancies, 71 representatives of binational chambers of commerce, 80 executives from national and foreign commercial banks, and 78 at commercial law firms.

The BPI 2002 survey was carried out between December 2001 and March 2002 in Argentina, Brazil, Colombia, Hungary, India, Indonesia, Mexico, Morocco, Nigeria, the Philippines, Poland, Russia, South Africa, South Korea, and Thailand. These countries account for more than 60% of all foreign direct investment into the developing world. It was not, unfortunately, possible to conduct a survey in China, the largest emerging market economy, due to the difficulties involved in commissioning a survey on this subject in China.

How is the BPI the "bribery in business sectors" ranking reached?

In the BPI 2002, two questions were asked: (a) how likely is it that senior public officials in this country would demand or accept bribes, e.g. for public tenders, regulations, licensing in the following business sectors? (b) among the business sectors mentioned, which are the two sectors where the biggest bribes are likely to be paid?

This second question was introduced in the BPI 2002 to see if there was any difference between frequency and size of bribe-paying. It turned out that public works contracts & construction emerged as the most prevalent sector for bribe payment in terms of both frequency and size of payment. The arms and defence sector emerged as the second most prone to bribery in respondents' answers to both questions.

Why did TI focus on the bribe-payers in emerging market economies?

The BPI survey was conducted exclusively in key emerging market countries because TI's work is focused to a large degree on international corruption affecting developing countries and transition countries. In addition, given the high levels of bribery in these countries, the BPI is conducted using interviews with senior decision-makers resident in countries where the awareness about corruption is the highest, not at the international headquarters.

What is the significance of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (Anti-Bribery Convention)? The OECD Anti-Bribery Convention came into force in February 1999, and by May 2002 it had been ratified by 34 of the 35 signatory countries. These countries account for more than three-quarters of global trade. The Convention outlaws bribery of foreign public officials. The BPI looks directly at bribery by international companies abroad, most of whom have their headquarters in countries whose governments are signatories of the OECD Convention. For the convention to be effective, anti-bribery compliance codes need to be implemented not only in a company's headquarters, but also in its foreign subsidiaries, branches and at local partners of the company. This requires training "in the field" as well as in the country where the company has its headquarters. In 2002, three years after the Convention came into force, only 7% of respondents were familiar with the Convention while 12% stated that they knew something about it. This is the same combined figure as in the first BPI, conducted in 1999. For more information about the OECD Convention, please see: <http://www1.oecd.org/daf/nocorruption/ref.htm>

Who funds the TI Bribe Payers Index?

Transparency International is funded by governmental agencies, foundations and corporations. To learn more about Transparency International, please visit www.transparency.org.

What can a country do to improve its ranking in the BPI?

As well as passing laws outlawing bribery, the leading exporting countries need to properly enforce those laws. That means providing resources to ensure that investigations and court proceedings will take place. It also means strong educational campaigns to ensure that the corporate sector is aware that bribery is illegal, at home and abroad, and that they introduce anti-corruption compliance codes in all their offices around the world, and provide appropriate training.

Why does the BPI not rank companies instead of countries?

There are more than 60,000 multinational corporations operating around the world with more than 600,000 foreign affiliates. It is almost impossible to measure and rank all these corporations. By asking senior executives to answer questions about companies from particular countries, rather than asking them to name companies, the survey was able to focus on clearly identifiable patterns rather than specific cases.

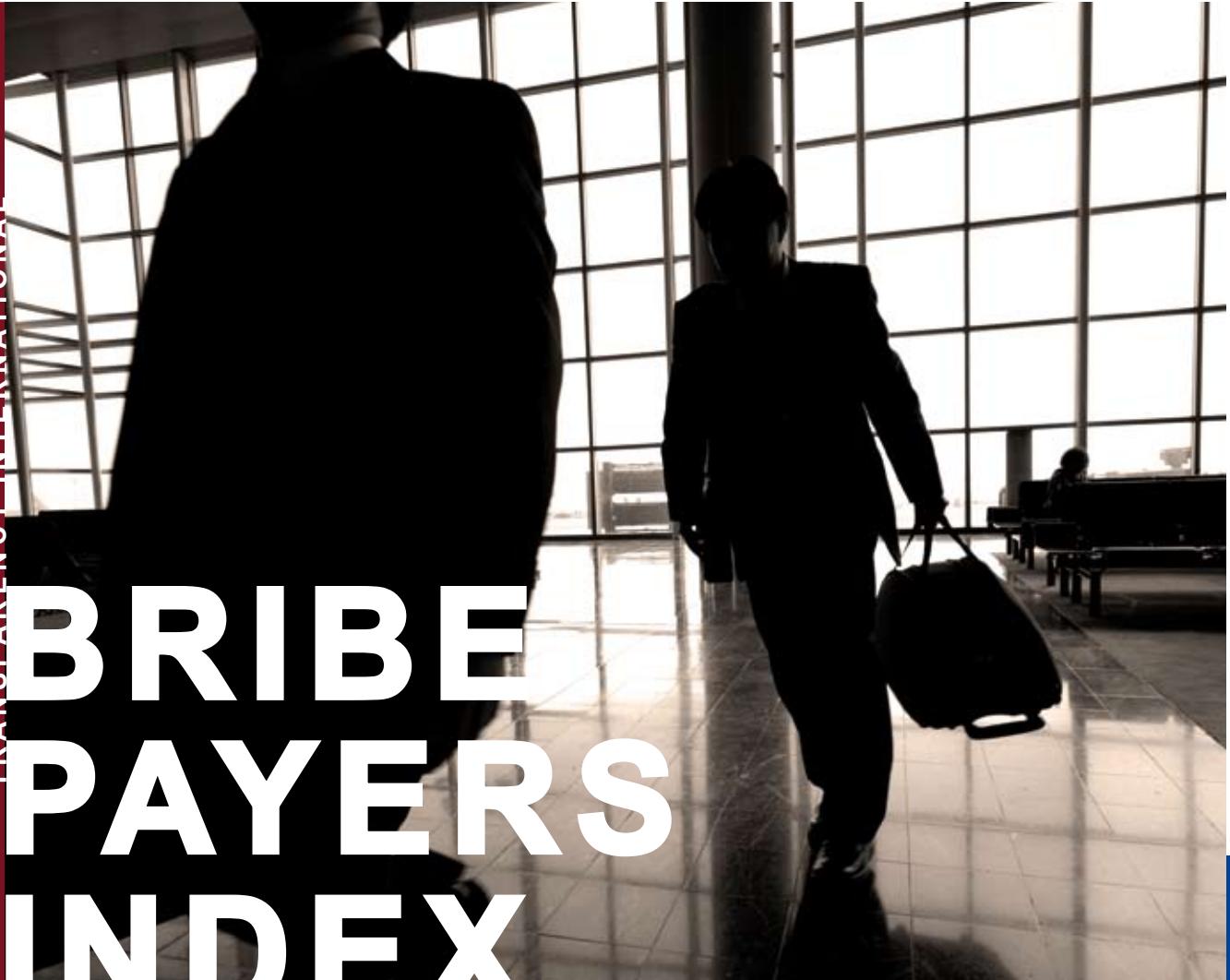


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BRIBE PAYERS INDEX



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Every effort has been made to verify the accuracy of the information contained in this report. All information was believed to be correct as of December 2008. Nevertheless, Transparency International cannot accept responsibility for the consequences of its use for other purposes or in other contexts.

TRANSPARENCY INTERNATIONAL BRIBE PAYERS INDEX 2008

TABLE OF CONTENTS

INTRODUCTION	2
Bribe Payers Survey 2008	
Bribe Payers Index 2008	
Sectoral Rankings	
Survey Methodology in Brief	
 BRIBE PAYERS INDEX 2008	 4
Foreign Bribery as Viewed from Regions	
Types of Foreign Bribery	
Knowledge of the Law: Awareness of the OECD Anti-Bribery Convention	
 BRIBERY IN SECTORS:	 10
SECTORAL BRIBERY OF PUBLIC OFFICIALS	
AND SECTORAL STATE CAPTURE	
Analysis by Region, Country Income and Company Ownership	
 BUSINESS AND GOVERNMENT	 12
Are Governments Doing Enough to Curb Bribery?	
Prevalence of Corruption in Public and Other Institutions	
 APPENDIX ONE	 14
Detailed Methodology and Survey Protocol	
 APPENDIX TWO	 17
Lists of Countries, Regions and Sectors	
 APPENDIX THREE	 18
Country Tables:	
Table A1. Type of bribery, by ranked country/territory	
Table A2. Governments' efforts to fight corruption, by country/territory interviewed	
Table A3. Perceptions of prevalence of corruption in different sectors and institutions, by country/territory interviewed	
 ENDNOTES	 21

INTRODUCTION

BRIBE PAYERS SURVEY 2008 BRIBE PAYERS INDEX 2008 THE SECTORAL RANKINGS

Corruption and bribery are complex transactions that involve both someone who offers a benefit, often a bribe, and someone who accepts, as well as a variety of specialists or intermediaries to facilitate the transaction. By perpetuating the 'abuse of entrusted power for private gain' – Transparency International's (TI) definition of corruption – both the bribe payer and bribe taker cause damage in a number of ways. Ultimately, their corrupt dealings create extreme inequity – both in markets and in societies.

Much blame has been apportioned over the years to the bribe takers – those who pocket the wealth and take advantage of the influence and authority that corruption affords them. And, indeed, bribe takers must be exposed, prosecuted and appropriately punished. The systems that breed this behaviour require holistic reform, so that bribes are not demanded in the first place.

TI believes it is also critical to shine a spotlight on the bribe payers – whose supply of bribes, irregular payments and other forms of influence-buying fuel the machinery of corruption. It has been part of TI's mission for the past 15 years to curb the so-called supply side of corruption, both domestically and across borders.

This report presents highlights of a brand new survey commissioned by TI, the 2008 Bribe Payers Survey.¹ It looks in detail at the sources of corruption in the international marketplace, both in terms of where the bribes are paid and by which businesses. Above all, the Bribe Payers Survey illustrates how the supply of corruption is viewed by a global selection of senior business executives, who understand the markets and market pressures in their own countries, some of which drive corruption.

Based on the results of the 2008 Bribe Payers Survey, TI has produced an index and two sectoral rankings:

- **The 2008 Bribe Payers Index (BPI):** a ranking of 22 of the world's most economically influential countries according to the likelihood of their firms to bribe abroad.
- **Two new rankings of industrial sectors:** one that ranks sectors according to the likelihood of firms in that sector to bribe public officials; and another that ranks sectors according to the degree to which their firms use contributions to politicians and political parties to achieve undue influence on government policies, laws or regulations – a phenomenon often referred to as state capture.

The findings of the 2008 BPI and the sectoral rankings show that many of the world's most influential economies, and some key industrial sectors, continue to be viewed as greatly compromised by international corruption. As such, TI calls on governments and the private sector to renew their efforts to curb the supply side of corruption. It is only with concerted and continued effort that we can stop the abuse of power for private gain and mitigate the devastating impact it has on lives and livelihoods the world over.

SURVEY METHODOLOGY IN BRIEF²

The 2008 Bribe Payers Survey consists of 2,742 interviews with senior business executives in 26 countries and territories completed between 5 August and 29 October 2008. The survey was carried out on behalf of TI by Gallup International, which was responsible for the overall implementation of the survey and the data quality control process.³ Gallup International relied on a network of partner institutions to carry out the survey locally.

The countries surveyed were selected on the basis of their Foreign Direct Investment (FDI) inflows and imports, and importance in regional trade. Total inflows of FDI and imports of goods from these 26 countries amounted to 54 percent of world flows in 2006.⁴

In each country there were a minimum of 100 senior business executives interviewed and samples in each country were designed taking into consideration the following variables: the size of firms, sector and location. Additionally, due to the nature of the phenomenon under analysis, the survey oversampled large and foreign-owned firms.

The 26 countries where executives were surveyed are:

Africa and Middle East	Asia Pacific	Central and Eastern Europe	Latin America	Western Europe and the United States
Egypt	India	Czech Republic	Argentina	France
Ghana	Indonesia	Hungary	Brazil	Germany
Morocco	Japan	Poland	Chile	United States
Nigeria	Malaysia	Russia	Mexico	United Kingdom
Senegal	Pakistan			
South Africa	Philippines			
	Singapore			
	South Korea			

BRIBE PAYERS INDEX

2008

To assess the international supply side of bribery reflected in the 2008 Bribe Payers Index (BPI), senior business executives were asked about the likelihood of foreign firms from countries they have business dealings with to engage in bribery when doing business in the respondents' country. In short, senior business executives provided their informed perceptions of the sources of foreign bribery, and these views formed the basis of the 2008 BPI.

The 2008 BPI ranks 22 countries. The countries chosen are some of the world's largest and most influential economies, with combined global exports of goods and services and outflows of FDI that represented 75 percent of the world total in 2006.⁵ Australia, Brazil, India and South Africa were also included for their role as major regional trading powers.

The 2008 BPI is calculated based on two questions from the Bribe Payers Survey.⁶ Senior business executives were first asked which of the 22 countries to be ranked they have commercial relationships with. For those countries that they selected,⁷ they were then asked to assess the frequency with which companies from these countries engage in bribery when operating in their own (the respondents') countries.

To construct the Index, the 5-point response scale used in the survey was reversed, converted into a 10-point scale system and then a simple average was calculated for each country. Assessments of a respondent's own country (12 countries in total)⁸ were not included. The countries are then ranked based on the mean scores obtained for each country.

Table 1 (page 5) shows the 2008 BPI results along with additional statistical information that indicate the level of agreement among respondents about each country's performance, and the precision of the results.⁹ Scores range from 0 to 10, indicating the likelihood of firms headquartered in these countries to bribe when operating abroad: the higher the score for a country, the lower the likelihood of companies from this country to engage in bribery when doing business abroad.

According to the senior business executives interviewed around the world, companies from Belgium and Canada were least likely to engage in bribery when operating abroad. These two countries are followed closely by the Netherlands and Switzerland.

At the other end of the spectrum, respondents ranked companies from Russia as those most likely to engage in bribery when doing business abroad.

No country receives a 9 or 10 in the 2008 BPI. This means that all of the world's most influential economies were viewed, to some degree, as exporting corruption.

Table 1. Bribe Payers Index 2008

Rank	Country/Territory	BPI 2008 Score	Standard Deviation	Confidence Interval 95%	
				Lower Bound	Upper Bound
1	Belgium	8,8	2,00	8,5	9,0
1	Canada	8,8	1,80	8,5	9,0
3	Netherlands	8,7	1,98	8,4	8,9
3	Switzerland	8,7	1,98	8,4	8,9
5	Germany	8,6	2,14	8,4	8,8
5	Japan	8,6	2,11	8,3	8,8
5	United Kingdom	8,6	2,10	8,4	8,7
8	Australia	8,5	2,23	8,2	8,7
9	France	8,1	2,48	7,9	8,3
9	Singapore	8,1	2,60	7,8	8,4
9	United States	8,1	2,43	7,9	8,3
12	Spain	7,9	2,49	7,6	8,1
13	Hong Kong	7,6	2,67	7,3	7,9
14	South Africa	7,5	2,78	7,1	8,0
14	South Korea	7,5	2,79	7,1	7,8
14	Taiwan	7,5	2,76	7,1	7,8
17	Brazil	7,4	2,78	7,0	7,7
17	Italy	7,4	2,89	7,1	7,7
19	India	6,8	3,31	6,4	7,3
20	Mexico	6,6	2,97	6,1	7,2
21	China	6,5	3,35	6,2	6,8
22	Russia	5,9	3,66	5,2	6,6

Source: Transparency International Bribe Payers Survey 2008.

Scores range from 0 to 10. The higher the score for the country, the lower the likelihood of companies from this country to engage in bribery when doing business abroad.

For number of observations see Appendix one.

Cluster Analysis

As in previous editions of the BPI, cluster analysis was applied to gain greater insight into the 2008 BPI results.

Cluster analysis of the 2008 BPI groups countries whose companies exhibit similar tendencies to engage in bribery when operating abroad. This analysis produced four groups of countries. Cluster 1 consists of countries from which companies are least likely to bribe when doing business abroad and Cluster 4 comprises those that are most likely to bribe, according to the senior business executives surveyed.

Cluster 1: Australia, Belgium, Canada, Germany, Japan, the Netherlands, Switzerland and the United Kingdom.

Cluster 2: France, Singapore, Spain and the United States.

Cluster 3: Brazil, Hong Kong, Italy, South Africa, South Korea and Taiwan.

Cluster 4: China, India, Mexico and Russia.

It is important to note that although Cluster 1 represents the best performers among the 22 countries, the BPI highlights that companies from all countries in the survey show some likelihood to pay bribes. As such, all countries need to improve their enforcement of anti-corruption legislation governing the private sector, and no company can be complacent about the strength of its anti-corruption systems along its entire supply chain.

Table 2. Bribe Payers Index 2008, as viewed by regions*

Africa and Middle East		Asia Pacific		Europe and the United States		Latin America	
Country/Territory	Score	Country/Territory	Score	Country/Territory	Score	Country/Territory	Score
Netherlands	9,1	Germany	8,7	Belgium	8,5	Germany	8,4
Japan	9,0	Canada	8,6	Switzerland	8,5	United States	7,9
Belgium	8,9	France	8,4	Germany	8,4	France	7,8
Germany	8,8	Japan	8,4	Netherlands	8,4	Brazil	7,5
United Kingdom	8,8	Australia	8,3	United Kingdom	8,3	Italy	7,5
United States	8,6	United Kingdom	8,3	France	7,8	Spain	7,4
Spain	8,4	Singapore	8,1	United States	7,6	China	7,3
France	8,3	Hong Kong	7,7	Spain	7,5		
Italy	8,1	Italy	7,6	Italy	6,5		
China	7,8	Taiwan	7,5	China	5,6		
South Africa	7,7	South Korea	7,4				
India	7,5	India	6,5				
		China	6,0				

Source: Transparency International Bribe Payers Survey 2008.

Scores range from 0 to 10. The higher the score for the country, the lower the likelihood of companies from this country to engage in bribery when doing business abroad.

*Scores only for the countries with more than 70 observations.

FOREIGN BRIBERY AS VIEWED BY REGIONS

When assessed on a regional rather than global basis, four regional groupings of senior business executives offered somewhat distinct views of the likelihood of foreign companies to bribe.¹⁰

- **Africa and Middle East:** Respondents in these countries (Egypt, Ghana, Morocco, Nigeria, Senegal and South Africa) suggested that when operating in the African continent, companies from the Netherlands and Japan are the least likely to engage in bribery. At the bottom of their ranking were companies from India. It is worth noting that South African companies were seen as likely to pay bribes when doing business abroad within the region.
- **Asia Pacific:** According to the informed perception of business executives interviewed in these countries (India, Indonesia, Japan, Malaysia, Pakistan, the Philippines, Singapore and South Korea), companies from Germany and Canada are seen to be the least likely to pay bribes. By comparison, companies from China were judged to be most likely to pay bribes when doing business in the region.
- **Europe and the United States:** For respondents in these countries (the Czech Republic, France, Germany, Hungary, Poland, Russia, the United States and the United Kingdom), Swiss and Belgian companies are seen to be the least likely to engage in bribery, while companies at the bottom include those from China. Italian companies are also judged to be more likely to bribe in this region than many of their European neighbours.
- **Latin America:** For Latin American executives (Argentina, Brazil, Chile and Mexico), Chinese companies were viewed as the most likely to engage in bribery when doing business in the region, while German companies were seen as the least prone to engage in such practices.

TYPES OF BRIBERY

The 2008 Bribe Payers Survey allows us to evaluate the informed views of foreign bribery by companies from the 22 countries even further, by exploring the frequency of different types of foreign bribery.

The three types of bribery assessed included:

- **bribery of high-ranking politicians or political parties**
- **bribery of low-level public officials to 'speed things up'**
- **the use of personal or familiar relationships to win public contracts.**

To evaluate these types of bribery, senior business executives were asked how often companies headquartered in each of the countries they knew about engaged in each form of bribery.¹¹ Figure 1 (page 8) depicts the results (see the full set of results in Table A1 in Appendix three).¹²

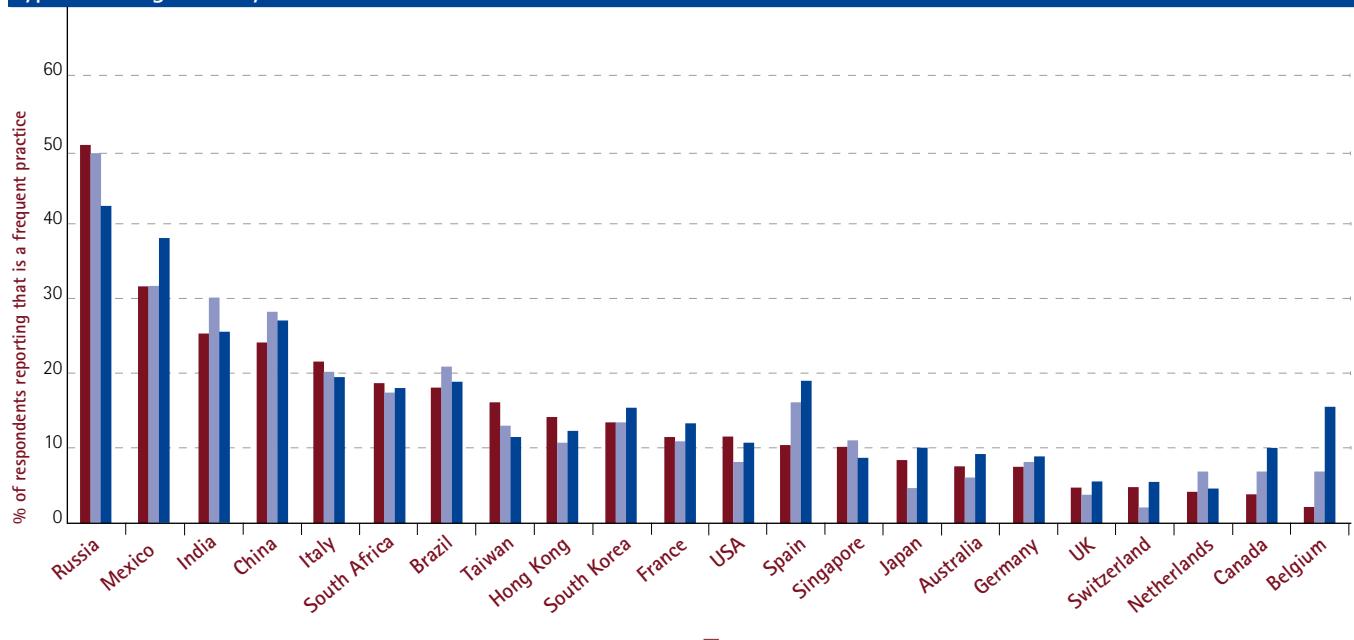
Overall, the results from this analysis agree with findings from the 2008 BPI. Companies from China, India, Mexico and Russia were reported by respondents to engage most often in the three practices. Similarly, the top 2008 BPI performers are seen to engage in them less frequently.

According to business executives with extensive knowledge of business practices in countries at the bottom of the index, companies headquartered there exhibit different bribery patterns when operating abroad. For example:

- About half of the respondents reported that companies from Russia often bribe high-level politicians and political parties and engage in bribery of low-level public officials, while somewhat fewer considered it common practice for Russian companies to use personal and familiar relationships to win public contracts.
- Companies from Mexico were reported by 38 percent of respondents to be likely to use personal and familiar relationships to win public contracts, but only by 32 percent to bribe high-level politicians, political parties or low-level public officials.
- 30 percent of respondents indicated that companies from India are likely to bribe low-level public officials to speed things up, which was a higher result than the other two types of foreign bribery assessed.

Figure 1.

Type of Foreign Bribery



Source: Transparency International Bribe Payers Survey 2008.

Figures were calculated as percentage of respondents answering 4 or 5 to the question:

"how often companies from these countries engage in..."

(1=never, 5=almost always)

"Don't know" responses were excluded.

■ Bribery to high-ranking politicians or political parties

■ Bribery to low-level public officials to "speed things up"

■ Use of personal and familiar relationships on public contracting

Even top 2008 BPI performers were reported to be weaker in some areas than others:

- 16 percent of respondents considered Belgian companies to 'often' or 'almost always' use familiar or personal relationships to win public contracts.
- Ten percent reported that use of familiar or personal relationships is often engaged in by Canadian companies when operating abroad.

- Seven percent of respondents reported that companies headquartered in the Netherlands often engage in bribery to low-level public officials to 'speed things up' when operating abroad.
- When asked about the behaviour of Swiss companies, five percent of respondents reported that Swiss companies often engage in bribery to high-ranking politicians or to political parties or used personal and familiar relationships to obtain public contracts.

KNOWLEDGE OF THE LAW: AWARENESS OF THE OECD ANTI-BRIBERY CONVENTION

The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, commonly called the OECD Anti-Bribery Convention, is a crucial international legal instrument that focuses on the supply side of international bribery. The Convention came into force in 1999 and there are currently 37 parties to the Convention, including all G7 countries.

While the Convention's enforcement has been inconsistent across OECD countries, it remains a primary reference point for the fight against international bribery.¹³ It is therefore both a surprise and a concern that three-quarters of senior business executives participating in the 2008 Bribe Payers Survey indicated that they were not at all familiar with the OECD Anti-Bribery Convention – with the least familiarity of all indicated by respondents from Western Europe and the United States.

It was also surprising that senior business executives from higher income countries were less familiar with the Convention than those from lower income countries: 79 percent as opposed to 68 percent respectively were 'not at all familiar' with the Convention. Furthermore, respondents from foreign-owned companies showed less knowledge than those from domestically-owned firms: 67 percent as opposed to 77 percent respectively were 'not at all familiar' with the Convention.

Table 3: Degree of Familiarity with the OECD Anti-Bribery Convention, by Region

	Not at all	Slightly	Moderately	Very	Extremely
Africa and Middle East	68%	15%	7%	6%	3%
Asia Pacific	74%	16%	8%	2%	0%
Central and Eastern Europe	79%	16%	5%	0%	0%
Latin America	73%	12%	8%	5%	1%
Western Europe and the United States	85%	10%	3%	1%	1%

Source: Transparency International Bribe Payers Survey 2008.

BRIBERY IN SECTORS

To provide a fuller picture of how corruption affects the private sector, TI has used data from the 2008 Bribe Payers Survey to create two new rankings of industry sectors. The first ranks sectors according to the degree to which firms in each sector are likely to bribe public officials. The second ranks sectors according to the degree to which firms in each sector use contributions to politicians and political parties to achieve undue influence on government policies, laws or regulations, a phenomenon often referred to as 'state capture'. These rankings, unlike the BPI, do not focus specifically on foreign bribery, but assess views of overall sector-specific corruption.

To tackle the supply-side of corruption, it is crucial to understand the vulnerabilities of different sectors to corruption risks. The sectoral indices show two of the significant ways that industries are seen to engage in corrupt practices. The first – the bribery of public officials – is a primary form of corrupt transaction. In this case, certain sectors, namely public works contracts/construction, real estate and property development, oil and gas, and heavy manufacturing and mining, are believed to bribe officials in their business dealings more than others. The cleanest sectors, in terms of bribery of public officials, were identified as information technology, fisheries, and banking and finance.

For the second sectoral ranking, TI sought to evaluate how certain sectors might exert undue influence on the policy process using financial or other means at their disposal. This practice is commonly referred to as state capture, a term coined by the World Bank and European Bank for Reconstruction and Development in their 2000 report on the Business Environment and Enterprise Performance Survey (BEEPS). In the report, state capture is defined as 'the efforts of firms to shape and influence the underlying rules of the game (i.e. legislation, laws, rules and decrees) through private payments to public officials'.¹⁴ These payments may be legal or illegal, but they create a distortion of both the legal framework and policy process, with a negative impact on the broader economy and society.

The practice of state capture is of particular concern because it extends beyond efforts to secure a particular deal or business opportunity. State capture implies that the very framework governing a sector, or even the economy, is guided by a particular interest, rather than by the public interest. This practice obscures policy decisions and undermines public accountability.

In the 2008 Bribe Payers Survey, senior business executives indicated that public works contracts/construction, oil and gas, mining, and real estate and property development were the sectors most likely to engage in practices of state capture. Banking and finance was seen to perform considerably worse in terms of state capture than in public sector bribery, meaning it exerts considerable influence on the rules of the game. At the other end of the spectrum, agriculture, fisheries and light manufacturing are believed to be the sectors least likely to engage in state capture.

A total of 19 sectors have been evaluated in the 2008 Bribe Payers Survey.¹⁵ For the rankings of both public sector bribery and state capture, respondents were asked their views on up to five sectors in which they had business relationships. As with the 2008 BPI, these sectoral rankings therefore draw on informed perceptions of senior business executives, each of whom evaluated an average of three sectors.

Table 4: Bribery of Public Officials by Sectors

Industrial Sector	Score 2008	Standard Deviation	Confidence Interval 95%	
			Lower Bound	Upper Bound
Public works contracts & construction	5,2	3,29	4,9	5,5
Real estate & property development	5,7	3,08	5,4	6,0
Oil & gas	5,9	3,18	5,5	6,2
Heavy manufacturing	6,0	2,93	5,7	6,3
Mining	6,0	3,13	5,4	6,5
Pharmaceutical & medical care	6,2	3,16	5,9	6,5
Utilities	6,3	3,06	6,1	6,6
Civilian aerospace	6,4	3,13	5,8	7,0
Power generation & transmission	6,4	3,03	6,0	6,7
Forestry	6,5	3,19	5,8	7,1
Telecommunications & equipment	6,6	2,74	6,4	6,8
Transportation & storage	6,6	2,91	6,4	6,7
Arms & defence	6,7	3,31	6,0	7,3
Hotels, restaurant & leisure	6,7	2,85	6,4	7,0
Agriculture	6,9	2,91	6,6	7,2
Light manufacturing	6,9	2,69	6,7	7,1
Information technology (computers & software)	7,0	2,75	6,8	7,2
Banking & finance	7,1	2,77	7,0	7,3
Fisheries	7,1	3,07	6,4	7,7

Source: Transparency International Bribe Payers Survey 2008.

Possible scores range from 0 to 10, with 0 representing the view that 'bribes are almost always paid' and 10 that 'bribes are never paid' by a sector.

For number of observations see Appendix one.

Table 5: State Capture by Sector

Industrial Sector	Score 2008	Standard Deviation	Confidence Interval 95%	
			Lower Bound	Upper Bound
Public works contracts & construction	5,6	3,23	5,3	5,9
Oil & gas	5,7	3,15	5,3	6,0
Mining	5,8	3,35	5,2	6,5
Real estate & property development	5,9	3,10	5,6	6,2
Heavy manufacturing	6,1	3,01	5,8	6,5
Pharmaceutical & medical care	6,2	3,15	5,9	6,5
Civilian aerospace	6,3	2,92	5,7	6,9
Arms & defence	6,4	3,21	5,8	7,1
Power generation & transmission	6,5	3,01	6,1	6,8
Telecommunications & equipment	6,5	2,87	6,3	6,7
Utilities	6,5	3,07	6,3	6,8
Banking & finance	6,6	2,95	6,5	6,8
Forestry	6,7	3,17	6,1	7,4
Transportation & storage	6,7	2,83	6,5	6,9
Hotels, restaurant & leisure	7,0	2,75	6,7	7,3
Information technology (computers & software)	7,0	2,78	6,8	7,2
Agriculture	7,1	2,81	6,8	7,4
Fisheries	7,1	2,87	6,5	7,7
Light manufacturing	7,2	2,75	7,0	7,4

Source: Transparency International Bribe Payers Survey 2008.

Possible scores range from 0 to 10, with 0 representing the view that 'bribes are almost always paid' and 10 that 'bribes are never paid' by a sector.

For number of observations see Appendix one.

BUSINESS AND GOVERNMENT

Are Governments Doing Enough to Curb Bribery?

In the 26 countries where the Bribe Payers Survey was carried out, two-thirds of senior business executives surveyed expressed the view that governments are ineffective in the fight against corruption. This result shows that senior representatives of the business community in many countries do not feel that governments are adequately addressing the issue of bribery and corruption.

Views vary across regions, however, almost half of all businesspeople polled in Latin American countries called government efforts to curb corruption 'very ineffective'. Western European and US senior business executives were more likely to express a positive response, with about 3 in 10 deeming government efforts effective.

Of the 26 countries surveyed, businesspeople in Pakistan, Senegal and South Africa were the most extreme in their criticism of government efforts.

At the other end of the spectrum, Singapore represented a unique case: nearly three-quarters of those surveyed felt the government was very effective in fighting corruption. Senior business executives from France and Indonesia were also overwhelmingly satisfied; more so than those in other countries surveyed.

Table 6: How would you assess the actions of the government in [your] country in the fight against corruption?

	Very Ineffective	Ineffective	Neither	Effective	Very Effective	DK/NA*
Africa and Middle East	39%	28%	8%	19%	4%	1%
Asia Pacific	31%	31%	12%	16%	10%	0%
Central and Eastern Europe	34%	33%	21%	7%	2%	2%
Latin America	49%	32%	6%	11%	2%	0%
Western Europe and the United States	18%	40%	7%	28%	4%	3%

Source: Transparency International Bribe Payers Survey 2008.

*Don't know/not applicable.

Table 7: To what extent do you perceive the following institutions/agencies in this country to be affected by corruption?

	Total Sample	Africa and Middle East	Asia Pacific	Central and Eastern Europe	Latin America	Western Europe and United States
Political parties	3,8	3,7	3,6	4,0	4,2	3,5
Parliament/ legislature	3,4	3,5	3,4	3,5	3,8	3,0
Business/ private sector	2,9	3,0	2,8	3,3	2,8	2,9
Media	3,0	3,1	2,7	3,3	3,0	3,1
The military	2,5	2,5	2,6	3,0	2,4	2,1
NGOs (non governmental organisations)	2,5	2,4	2,5	2,8	2,5	2,5
Religious bodies	2,4	2,1	2,5	2,4	2,5	2,4
Education system	2,8	3,1	2,8	2,8	3,0	2,2
Judiciary	3,1	3,2	2,9	3,3	3,8	2,5
Medical services	2,9	3,0	2,7	3,6	3,0	2,5
Police	3,5	4,0	3,5	3,5	3,9	2,4
Registry and permit services (construction permits, licenses, permits, etc.)	3,4	3,7	3,3	3,6	3,5	2,7
Utilities (telephone, electricity, water, etc.)	2,6	2,7	2,7	2,4	2,8	2,4
Tax revenue authorities	2,8	3,1	3,0	2,6	2,9	2,3
Customs	3,1	3,6	3,2	2,9	3,4	2,2

Source: Transparency International Bribe Payers Survey 2008

(1=not at all corrupt, 5=extremely corrupt)

Score shown is average score; highlighting indicates institution is viewed as most corrupt.

Prevalence of Corruption in Public and Other Institutions

Senior business executives judged political parties, parliaments/legislatures, police and registry and permit services to be the public institutions most affected by corruption in their respective countries. The military and religious bodies were viewed as least corrupt.

Lower-income country respondents offered the view that a number of institutions and agencies are more affected by corruption than their counterparts in wealthier countries. Many of these institutions, such as parliament/ legislature, education, police, registry and permit services, utilities, tax revenue authority and customs, are the public bodies often associated with petty corruption in the developing world.

Important differences emerge in the business executives' view of corruption in institutions across countries. Political parties are considered to be the most affected by corruption for respondents in Argentina, Brazil, Chile, the Czech Republic, France, Germany, Hungary, Japan, the United Kingdom and the United States. Meanwhile, for respondents in Ghana, India, Malaysia, Mexico, Nigeria, Pakistan and South Africa, the police are seen as the most affected. For respondents in Russia, the police share first place with registry and permit services. In Egypt, registry and permit services are viewed as most corrupt, while in the Philippines it is customs, and in Senegal, both sectors are given the worst scores. According to respondents from Indonesia and South Korea, the most serious challenge in terms of corruption is faced by the parliament and legislature. Business executives interviewed in Singapore rated religious bodies as most affected by corruption while, for respondents in Morocco, the judiciary faces the biggest challenge. (See Table A3 in Appendix 3)

APPENDIX ONE

DETAILED METHODOLOGY AND SURVEY PROTOCOL

The 2008 Bribe Payers Survey is a survey of senior business executives that includes a wide range of questions about the nature, scope and impact of bribery and corruption. The 2008 Bribe Payers Survey interviewed 2,742 respondents in 26 countries. It was designed and commissioned by Transparency International and implemented on behalf of Transparency International by Gallup International Association.

Coverage

The Bribe Payers Survey was conducted in 26 countries: Argentina, Brazil, Chile, the Czech Republic, Egypt, France, Germany, Ghana, Hungary, India, Indonesia, Japan, Malaysia, Mexico, Morocco, Nigeria, Pakistan, the Philippines, Poland, Russia, Senegal, Singapore, South Africa, South Korea, the United Kingdom and the United States.

These countries were selected on the basis of their Foreign Direct Investment (FDI) inflows and imports and their importance in regional trade patterns. Total inflows of foreign direct investment and imports of goods from these 26 countries amount to 54 percent of the world flows in 2006.¹⁶

Timing of fieldwork

The fieldwork for the survey was conducted between 5 August and 29 October 2008.

Sampling procedure

The sample was independent for each country included in the survey. The sample was stratified and probabilistic. Stratification was carried out by size of firms, sector and location. There was an oversampling of large and foreign-owned companies.

Definitions:

- Large: 100 employees or more
- Foreign-owned: 20 percent or more of a firm's capital is owned by a foreign company.

Sample units

The unit of sampling and information were business establishments defined as an outlet with a distinct location and management.

Sample size

The total size of the sample was 2,742 respondents. In each country there were a minimum of 100 interviews. Interviews in which over 20 percent of the questions were not answered were not accepted.

Sample distribution

The tables opposite (page 15) show the distribution of the sample by job title of respondent, type of company and size of company.

Survey method

In each country the methodology most suitable for carrying out the survey was applied: 15 countries conducted the survey face-to-face, nine conducted the survey by phone, one conducted it online and one used a mixed mode (telephone or face-to-face depending on the respondent's preference).¹⁷

Data coding, quality check and analysis

The data coding and quality check was done by Gallup International. The data was analysed by Juanita Riaño of the Policy and Research Department at Transparency International's Secretariat.

Job title of respondent	Percentage
Chief Executive	14%
Owner/ Proprietor	15%
Partner	5%
Director	16%
General Manager	9%
Manager	24%
Finance Officer/ Accountant	8%
Legal Counsel	1%
Compliance/ Ethics officer	1%
Corporate Affairs Director	1%
Other	7%
Total Sample	2.742

Type of Company	Percentage
Foreign (>20% of capital is foreign)	20%
Domestic	80%
Total Sample	2.742

Company Size	Percentage
Small (5 to 49 employees)	53%
Medium (50 to 99 employees)	18%
Large (100 employees or more)	29%
Total Sample	2.742

Country	Methodology	Fieldwork date
Argentina	Face to Face	From 06/08 to 01/10
Brazil	Telephone	From 10/09 to 29/09
Chile	Face to Face	From 13/08 to 26/09
Czech Republic	Face to Face/ Telephone	From 14/08 to 30/09
Egypt	Face to Face	From 14/08 to 29/10
France	Telephone	From 02/09 to 23/09
Germany	Telephone	From 22/08 to 23/09
Ghana	Face to Face	From 29/08 to 02/10
Hungary	Face to Face	From 24/08 to 22/09
India	Face to Face	From 06/08 to 30/08
Indonesia	Face to Face	From 18/08 to 17/09
Japan	Telephone	From 17/08 to 09/09
Malaysia	Face to Face	From 05/08 to 16/09
Mexico	Face to Face	From 15/08 to 22/09
Morocco	Telephone	From 27/08 to 22/09
Nigeria	Face to Face	From 27/08 to 29/09
Pakistan	Face to Face	From 02/09 to 08/10
Philippines	Face to Face	From 11/08 to 16/09
Poland	Face to Face	From 20/08 to 27/09
Russia	Face to Face	From 17/08 to 28/09
Senegal	Face to Face	From 18/08 to 26/09
Singapore	Telephone	From 18/08 to 05/09
South Africa	Telephone	From 01/09 to 19/09
South Korea	Telephone	From 25/08 to 29/09
United Kingdom	Telephone	From 13/08 to 04/09
United States	Online	From 11/09 to 17/09

APPENDIX ONE

DETAILED METHODOLOGY AND SURVEY PROTOCOL

BPI 2008	
Country/Territory	Observations
Australia	240
Belgium	252
Brazil	225
Canada	264
China	634
France	462
Germany	513
Hong Kong	288
India	257
Italy	421
Japan	316
Mexico	123
Netherlands	255
Russia	114
Singapore	243
South Africa	177
South Korea	231
Spain	355
Switzerland	256
Taiwan	287
United Kingdom	506
United States	718

Industrial Sector – Bribery to Public Officials	
Industrial Sector	Observations
Agriculture	348
Arms & defence	99
Banking & finance	1325
Civilian aerospace	109
Fisheries	92
Forestry	99
Heavy manufacturing	333
Hotels, restaurant & leisure	446
Information technology (computers & software)	697
Light manufacturing	644
Mining	117
Oil & gas	305
Pharmaceutical & medical care	376
Power generation & transmission	274
Public works contracts & construction	477
Real estate & property development	402
Telecommunications & equipment	836
Transportation & storage	941
Utilities	639

Industrial Sector – State Capture	
Industrial Sector	Observations
Agriculture	324
Arms & defence	92
Banking & finance	1298
Civilian aerospace	105
Fisheries	89
Forestry	93
Heavy manufacturing	323
Hotels, restaurant & leisure	425
Information technology (computers & software)	666
Light manufacturing	598
Mining	112
Oil & gas	296
Pharmaceutical & medical care	368
Power generation & transmission	272
Public works contracts & construction	447
Real estate & property development	393
Telecommunications & equipment	811
Transportation & storage	889
Utilities	599

APPENDIX TWO

LISTS OF COUNTRIES, REGIONS AND SECTORS

Country/Territory	
Ranked in the 2008 BPI:	Where survey was conducted:
Australia	Argentina
Belgium	Brazil
Brazil	Chile
Canada	Czech Republic
China	Egypt
France	France
Germany	Germany
Hong Kong	Ghana
India	Hungary
Italy	India
Japan	Indonesia
Mexico	Japan
Netherlands	Malaysia
Russia	Mexico
Singapore	Morocco
South Africa	Nigeria
South Korea	Pakistan
Spain	Philippines
Switzerland	Poland
Taiwan	Russia
United Kingdom	Senegal
United States	Singapore
	South Africa
	South Korea
	United Kingdom
	United States

List of regions used for respondent countries

Africa and Middle East:

Egypt, Ghana, Morocco, Nigeria, Senegal, South Africa.

Asia Pacific:

India, Indonesia, Japan, Malaysia, Pakistan, Philippines, Singapore, South Korea.

Central and Eastern Europe*:

Czech Republic, Hungary, Poland, Russia.

Latin America:

Argentina, Brazil, Chile, Mexico.

Western Europe and the United States:

France, Germany, United Kingdom, United States.

* Where data was limited, responses from this region were grouped with Western Europe and the United States for purposes of more robust analysis.

List of sectors surveyed

Agriculture

Arms & defence

Banking & finance

Civilian aerospace

Fisheries

Forestry

Heavy manufacturing

Hotels, restaurant & leisure

Information technology (computers & software)

Light manufacturing

Mining

Oil & gas

Pharmaceutical & medical care

Power generation & transmission

Public works contracts & construction

Real estate & property development

Telecommunications & equipment

Transportation & storage

Utilities

APPENDIX THREE

FULL COUNTRY TABLES

Table A1

Type of bribery, by ranked country/territory			
Percentage of respondents who indicate that the following forms of foreign bribery are prevalent			
Source country/territory	Bribery to high-ranking politicians or political parties	Bribery to low-level public officials to "speed things up"	Use of personal and familiar relationships on public contracting
Total Sample	13 %	13 %	15 %
Australia	7%	5%	9%
Belgium	3%	7%	16%
Brazil	17%	21%	18%
Canada	4%	7%	10%
China	24%	28%	26%
France	12%	11%	14%
Germany	7%	8%	9%
Hong Kong	15%	11%	13%
India	25%	30%	25%
Italy	22%	20%	20%
Japan	8%	4%	10%
Mexico	32%	32%	38%
Netherlands	4%	7%	5%
Russia	51%	50%	43%
Singapore	10%	11%	9%
South Africa	19%	16%	17%
South Korea	14%	14%	16%
Spain	11%	16%	19%
Switzerland	5%	2%	5%
Taiwan	17%	14%	12%
United Kingdom	5%	4%	7%
United States	12%	8%	11%

Source: Transparency International Bribe Payers Survey 2008.

Figures were calculated as the percentage of respondents answering 4 or 5 to the question of: 'how often companies from these countries engage in....'

(1= never, 5= almost always)

"Don't know" responses were excluded.

Table A2**How would you assess the actions of the government in this country in the fight against corruption?**

(By country where business executives were interviewed)

Country/Territory	Very Ineffective	Ineffective	Neither	Effective	Very Effective	DK/NA*	Respondents
Total Sample	34 %	32 %	11 %	16 %	5 %	1 %	2,742
Argentina	51%	38%	7%	3%	0%	1%	109
Brazil	51%	22%	3%	21%	3%	0%	100
Chile	41%	39%	13%	5%	2%	0%	100
Czech Republic	48%	39%	10%	1%	1%	1%	100
Egypt	29%	23%	13%	25%	7%	3%	103
France	11%	43%	0%	41%	4%	1%	100
Germany	14%	58%	2%	22%	2%	2%	100
Ghana	27%	31%	9%	27%	4%	3%	104
Hungary	41%	29%	16%	9%	2%	3%	104
India	42%	30%	20%	9%	0%	0%	117
Indonesia	13%	27%	15%	41%	4%	0%	100
Japan	19%	43%	22%	15%	1%	0%	100
Malaysia	27%	46%	9%	12%	6%	0%	100
Mexico	50%	30%	3%	15%	1%	0%	151
Morocco	27%	40%	3%	27%	3%	0%	100
Nigeria	32%	36%	6%	17%	7%	1%	108
Pakistan	72%	18%	4%	6%	0%	0%	100
Philippines	60%	32%	1%	7%	0%	0%	100
Poland	20%	34%	28%	13%	0%	5%	109
Russia	29%	32%	28%	7%	4%	1%	101
Senegal	60%	24%	8%	7%	1%	1%	106
Singapore	0%	1%	1%	26%	72%	0%	100
South Africa	56%	17%	10%	14%	2%	1%	101
South Korea	14%	55%	19%	10%	2%	0%	100
United Kingdom	21%	37%	7%	27%	5%	3%	100
United States	25%	26%	16%	22%	6%	6%	129

Source: Transparency International Bribe Payers Survey 2008.

* Don't know/not applicable.

APPENDIX THREE

FULL COUNTRY TABLES

Table A3

Institutions/ agencies	Political parties	Parliament/ legislature	Business/ private sector	Media	The military	NGOs (non governmental organisations)	Religious bodies	Education system	Judiciary	Medical services	Police	Registry and permit services	Utilities	Tax revenue authorities	Customs
Total Sample	3,8	3,4	2,9	3,0	2,5	2,5	2,4	2,8	3,1	2,9	3,5	3,4	2,6	2,8	3,1
Argentina	4,1	3,9	2,7	3,2	2,5	1,8	1,8	2,3	3,7	2,7	3,9	3,3	2,6	2,6	3,6
Brazil	4,2	3,6	2,9	2,8	2,7	3,1	2,9	2,9	3,3	3,4	3,8	3,4	3,2	3,4	3,2
Chile	4,1	3,7	2,9	2,8	2,2	2,7	2,4	3,3	3,5	2,8	2,7	2,7	2,6	2,4	2,7
Czech Republic	4,3	3,9	3,1	3,2	3,6	2,7	2,5	2,7	3,5	3,4	3,9	3,7	2,5	2,6	2,8
Egypt	2,5	3,1	2,9	3,0	1,6	2,3	1,5	3,5	2,0	3,2	3,3	3,6	2,4	2,9	3,1
France	3,4	2,7	2,8	3,0	1,8	2,1	1,9	1,9	2,5	2,3	2,3	2,2	1,8	1,8	1,8
Germany	3,4	2,8	3,0	3,0	2,2	2,8	2,5	2,2	2,1	2,8	2,1	2,8	2,6	1,9	2,0
Ghana	4,0	3,4	3,2	3,9	2,2	2,9	2,3	3,5	3,7	3,2	4,6	4,1	3,4	3,7	4,1
Hungary	4,0	3,5	3,4	3,5	2,4	2,8	2,2	2,4	2,7	3,6	3,2	3,4	2,1	2,4	2,4
India	4,1	3,8	2,9	2,8	2,1	2,6	2,9	2,9	2,9	2,9	4,2	3,7	3,0	3,1	3,3
Indonesia	3,9	4,1	2,9	2,4	2,9	2,5	2,1	2,8	3,8	2,6	3,9	3,7	2,9	3,5	3,9
Japan	3,3	2,9	2,9	2,6	2,4	2,2	3,1	2,8	1,7	2,9	2,6	2,4	2,7	2,0	2,0
Malaysia	3,8	3,3	3,0	2,7	2,6	2,0	1,8	2,7	3,2	2,3	4,0	3,6	2,2	2,2	3,3
Mexico	4,5	3,9	2,7	3,2	2,4	2,3	2,7	3,3	4,3	3,1	4,7	4,1	2,8	3,2	3,7
Morocco	3,1	2,8	2,4	2,5	2,5	1,9	1,8	2,4	3,6	3,0	3,4	3,1	1,8	2,9	3,1
Nigeria	4,6	4,0	3,2	3,0	3,3	2,5	2,2	3,6	3,2	2,5	4,7	3,9	3,7	3,7	4,3
Pakistan	4,2	3,9	3,2	3,2	2,9	3,5	2,9	3,3	3,9	3,7	4,7	4,3	4,0	4,2	4,2
Philippines	4,0	3,8	2,8	2,8	3,4	2,3	2,1	3,0	3,5	2,8	4,1	4,0	2,6	4,1	4,4
Poland	3,8	3,5	3,1	3,2	2,4	2,6	2,8	2,6	3,1	3,9	3,0	3,3	2,3	2,3	2,7
Russia	3,7	3,4	3,4	3,2	3,3	3,0	2,3	3,5	3,9	3,7	4,0	4,0	2,6	3,2	3,6
Senegal	3,9	3,8	3,2	3,3	2,3	2,2	3,1	2,7	3,7	3,0	4,0	4,2	2,2	3,4	4,2
Singapore	1,5	1,4	1,9	1,7	1,3	1,8	2,0	1,4	1,4	1,5	1,4	1,4	1,3	1,4	1,4
South Africa	3,9	3,5	2,9	2,5	3,0	2,6	1,9	3,0	2,9	3,0	4,0	3,5	2,8	2,0	2,9
South Korea	3,9	4,0	3,1	3,6	3,0	2,9	3,1	3,4	3,1	3,2	3,4	3,5	2,5	3,2	3,0
United Kingdom	3,2	2,8	2,5	2,8	1,9	2,5	2,3	1,9	2,1	1,8	2,3	2,5	2,5	2,3	2,2
United States	3,8	3,6	3,2	3,3	2,5	2,6	2,8	2,7	3,1	2,8	3,0	3,1	2,8	3,2	2,8

Source: Transparency International Bribe Payers Survey 2008.

(1=not at all corrupt, 5=extremely corrupt)

Shaded scores are the highest for that particular country.

ENDNOTES

- 1 In addition to this report, Transparency International anticipates publishing more analysis of the 2008 Bribe Payers Survey findings in 2009.
- 2 See Appendix One for a more detailed methodological description of the survey.
- 3 Gallup International Association was selected by TI through a competitive public tendering process.
- 4 United Nations Conference on Trade and Development (UNCTAD) 'Handbook of Statistics 2008': (<http://www.unctad.org/Templates/Page.asp?intItemID=1890&lang=1>, 2008).
- 5 United Nations Conference on Trade and Development (UNCTAD) 'Handbook of Statistics 2008': (<http://www.unctad.org/Templates/Page.asp?intItemID=1890&lang=1>, 2008).
- 6 The two questions on which the 2008 BPI draws are:
'In your principal lines of business in this country, do you have business relationships (for example as a supplier, client, partner or competitor) with companies whose headquarters are located in these countries listed above?' Respondents are presented a list of 22 countries. Then, for each country selected, respondents had to score the country on a 5-point scale system (from 1=never to 5=almost always) answering the following question: 'How often do firms headquartered in (country name) engage in bribery in this country?'
- 7 The average number of countries rated by each respondent was four.
- 8 Brazil, France, Germany, India, Japan, Mexico, Russia, Singapore, South Africa, South Korea, the United Kingdom and the United States.
- 9 The standard deviation is provided to give an indication of the degree of agreement among respondents in relation to each country: the smaller the standard deviation, the broader the consensus among respondents. The confidence intervals show the range of minimum and maximum values where with 95 per cent confidence the true value of the score lies. For number of observations please see Appendix Three.
- 10 For each regional grouping, only the scores of countries for which there were more than 70 observations were estimated.
- 11 From the BPI 2008 list of 22 countries, business executives from the 26 countries surveyed were asked to select up to five countries with which they have had the most business contact when working in their region during the past five years. Only these countries were then evaluated. 0.6 percent of respondents answered the question for more than five countries and their responses were also used for the analysis as they did not alter results.
- 12 All percentages in this section are estimated as the percentage of respondents answering 'often' or 'almost always' relative to total respondents, i.e. 'Don't know' responses are excluded.
- 13 For more information on the OECD Anti-Bribery Convention, including TI's latest progress report, please see:
(http://www.transparency.org/global_priorities/international_conventions)
- 14 World Bank and European Bank for Reconstruction and Development, 'Measuring Governance and State Capture: the Role of Bureaucrats and Firms in Shaping the Business Environment', (<http://www.ebrd.com/pubs/econo/wp0051.pdf>, 2000) page 1.
- 15 For number of observations per sector, please see Appendix Three.
- 16 United Nations Conference on Trade and Development (UNCTAD) 'Handbook of Statistics 2008': (<http://www.unctad.org/Templates/Page.asp?intItemID=1890&lang=1>, 2008).
- 17 See table on page 15 for details.



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**BLACK
EXHIBIT 89**

CHAPTER 1.1

The Growth Competitiveness Index: Recent Economic Developments and the Prospects for a Sustained Recovery¹

PETER K. CORNELIUS, World Economic Forum

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World output growth has slowed to one of its lowest rates in decades. According to the September 2002 issue of the International Monetary Fund's *World Economic Outlook*, global output expanded by only 2.2 percent in 2001. In 2002, a moderate recovery to 2.8 percent is expected, which would still be the second-lowest reading since the global slowdown in the early 1990s. These estimates mask important regional differences: although the slowdown in the advanced countries has been remarkably synchronized, it has been particularly pronounced in the United States where economic growth fell from 3.8 percent in 2000 to just 0.3 percent in 2001. In Japan, output actually shrank in 2001, and in the European Union economic growth more than halved to just 1.6 percent in that year.

The developing countries have not remained unaffected by the economic slowdown in the industrialized world. The adverse external environment has had a particularly pronounced impact on Latin America, exacerbating the domestic economic problems in several countries, notably in the Southern Cone—Argentina's output fell by almost 4.5 percent in 2001—but also in Mexico, where economic activity shrank after an expansion of more than 6.5 percent the year before. In developing Asia, by contrast, output growth remained relatively robust, registering an increase of around 5.5 percent in 2001. Similarly, in the transition countries in central and eastern Europe, the decline in economic growth from 3.8 percent in 2000 to 3 percent in 2001 was relatively modest. The only region where economic growth accelerated in 2001 was Africa.

The short-term economic outlook remains clouded with exceptional uncertainty. Although the United States seems to have weathered the economic impact of the terrorist attacks of September 11, 2001, reasonably well, global asset prices continue to show a high degree of volatility. Taking into account that the terrorist attacks were not the only shock—Enron and other corporate scandals, the severe tensions in the Middle East, and the financial crises in some emerging markets could each have caused serious effects—the recent recession in the United States and the global slowdown appear relatively mild. At the same time, however, the recovery seems rather slow, and important risks exist that could derail the expected return to a steeper growth trajectory. Private institutions, governments, and international organizations have continued to lower their economic forecasts for 2002 and 2003. According to the consensus forecasts, a considerable output gap is expected to persist in the short term in the advanced economies. In the developing world, output growth is expected to accelerate markedly in 2003. However, important interregional differences are forecast to remain.

Although the short-term outlook for a sustained recovery is currently subject to a huge amount of uncertainty, the longer-term growth itself is determined by the set of institutions, market structures, and economic policies supportive of higher productivity growth and increases in output. This set of factors is precisely what the Growth Competitiveness Index (GCI) is concerned with. Rather than attempt to make short-term economic forecasts, we are interested primarily in the potential of a large cross-section of countries to achieve sustained economic growth over the next five to eight years.

To put our analysis in an appropriate context, we begin by reviewing global economic developments over the last five years and discuss the extent to which these developments were broadly consistent with our assessment of national competitiveness five years ago. We then review the recent growth performance in the industrialized countries and the main emerging-market economies and discuss the short-term risks countries are currently facing in struggling to return to a sustained growth path. In the second part of the chapter, we outline the construction of the Index and then discuss the empirical results.

Recent economic developments and short-term outlook

Global economic growth since 1997

In the last few years of the past decade, the world economy enjoyed a period of rapid economic growth. Between 1997 and 2000, global output expanded by almost 4 percent per year (IMF 2002). As far as the industrialized countries are concerned, the United States outperformed most other advanced economies, with real activity expanding by more than 1 percentage point per annum faster than in the European Union. In Japan, by contrast, economic growth averaged less than 1 percent during that period. In 2001, however, economic growth in virtually all industrialized countries fell in a remarkably synchronized fashion.

Most Asian economies recovered reasonably well from the financial crises in 1997–98. Korea, for example, achieved a turnaround in output from a decline of almost 7 percent (year-over-year) in 1998 to gains of almost 11 and 10 percent in 1999 and 2000, respectively. In Malaysia, the Philippines, and Thailand, the recovery was somewhat less pronounced, but still considerable. China proved largely unaffected by the crisis and has continued to grow at a rapid rate of around 7 to 8 percent per year.

The Asian financial crisis radiated more widely, however, affecting especially Brazil where market forces led the authorities to introduce a flexible exchange rate regime in January 1999. Greater exchange rate flexibility helped Brazil recover after output growth was essentially flat in 1998 and 1999. In Argentina, whose economy had

enjoyed rapid economic growth in the mid 1990s, serious doubts emerged as to whether the currency board arrangement could be sustained. In contrast to Brazil, the crisis in Argentina deepened beginning in the late 1990s. With output shrinking at an increasing rate—real activity in 2001 is estimated to have fallen by around 4.5 percent—the currency board of Argentina was abandoned and the exchange rate has depreciated by around 70 percent since then. In Chile, economic growth also slowed markedly in 1998–99, but recovered strongly thereafter. Mexico, finally, has largely followed the US economy, recording strong economic growth in the second half of the 1990s and a significant slowdown in 2001.

In Africa, average economic growth in 1997–2001 hovered around 3 to 3.5 percent per year. However, with population growth remaining relatively strong, standards of living have not much improved. In many African countries, economic growth continues to be driven primarily by commodity prices and domestic factors. By contrast, few countries are integrated enough to have felt the global business cycle. One exception is, of course, South Africa, whose economy suffered in 1998–99 from the flight to quality in the wake of the Asian financial crisis. Since then, South Africa has enjoyed a moderate recovery. One of the worst performers remains Zimbabwe, where the economic downturn accelerated substantially in 2001 and 2002.

Finally, regarding the transition economies in central and eastern Europe, Russia has shown a sharp turnaround, after having defaulted on its foreign debt and moving to a flexible exchange rate regime in 1998. Although real output shrank by almost 5 percent in 1998, economic growth was already positive in 1999, and in 2000 activity expanded by 9 percent. In the Ukraine, the turnaround was achieved somewhat later, but in 2000 and 2001 the country outperformed most other economies in the region. Among the EU accession candidates, the Baltic countries have shown solid economic performance, although they all suffered in 1999 from a temporary slowdown in growth. Among the more advanced transition economies, Hungary and Poland have enjoyed the relatively fastest growth rates.

How do the competitiveness rankings we published in 1997 appear in light of the actual performance over the past five years? Recall that the competitiveness index "... is intended to identify factors determining economic growth. More specifically, it is designed to measure the capacity of national economies to achieve high rates of per capita GDP growth in the medium term..." (Hu and Sachs 1997, p 23).

Table 1 shows the growth performance in 1997–2001 of the 53 countries included in the 1997 competitiveness rankings, with the first column showing average annual economic growth in percent and the second column showing the countries' relative position ranging from 1(best) to 53 (worst). In general, countries that were found

to be relatively competitive tended to outperform those that were found to be less competitive. Note that the table shows average absolute economic growth rates rather than growth rates per capita, which represents the endogenous (or left-hand side variable) in the competitiveness analysis. In some cases where population growth has remained particularly rapid (eg, Egypt) or slow or even negative (eg, Germany and Japan), this will obviously affect the results. Overall, however, the picture remains materially unchanged.

Although the 1997 Competitiveness Index was adjusted for income levels, in a period as short as 1997–2001 it is difficult to detect a catch-up effect. Of the ten best growth performers, five belonged to the group of high-income countries (Ireland, Luxembourg, Singapore, Finland, and Iceland). Among the low-income countries, China, India, and Vietnam enjoyed the highest average growth rates in absolute terms.

There are four broad groups of countries where the 1997 rankings clearly missed something: a group of Asian economies (Thailand, Indonesia, Hong Kong SAR, and Korea); post-socialist countries (China, Vietnam, Hungary, Poland, Czech Republic, Ukraine, and Russia); countries in the European periphery (Ireland, Spain, Portugal, and Greece); and “banking centers” (Luxembourg and Switzerland).

The experience in Asia is particularly interesting. Clearly, the 1997 rankings missed the negative impact of the financial crisis. To the extent that this crisis was precipitated by international financial panic, this is precisely the kind of surprise that the rankings were not designed to predict and in fact never were expected to predict. With the important exception of Indonesia, five of the countries hit by this crisis in 1997 or 1998 have bounced back with positive and fairly high economic growth, suggesting that despite the crisis, there remains a strong underlying growth potential. Korea had two years with growth above 7 percent, Hong Kong grew just under 6 percent in 2000, Malaysia had back-to-back growth of 3.5 and 4 percent in 1999 and 2000, Singapore achieved growth of 3.9 and 6.4 percent in the same two years, and even Thailand achieved a more modest 3.2 and 4.0 percent in 1999 and 2000. Most Asian countries subsequently suffered from the global demand slowdown in 2001–02.

The 1997 rankings also underpredicted the performance of European post-socialist economies such as Hungary and Poland. Since these economies were in the midst of restructuring toward private enterprises, it is probably not surprising that a framework designed to explain global growth of countries not in this circumstance did poorly in accounting for growth in these countries. For these countries, the transition entailed a major structural change characterized by a massive movement of resources from state industries and the elimination of subsidies for ineffi-

Table 1: Average annual growth 1997–2001 and 1997 competitiveness index rankings

Country	Average annual real GDP growth 1997–2001 (in %)	Growth rate rankings	Competitiveness index rankings
Argentina	0.66	50	37
Australia	3.88	16	17
Austria	2.38	36	27
Belgium	2.70	33	31
Brazil	2.04	40	42
Canada	2.94	15	20
Chile	3.20	24	13
China	9.00	2	20
Colombia	0.78	48	41
Czech Republic	1.05	47	37
Denmark	2.36	37	20
Egypt	5.08	6	28
Finland	4.40	9	19
France	1.92	30	23
Germany	1.78	44	25
Greece	3.42	19	48
Hong Kong SAR	2.66	34	2
Hungary	2.54	8	45
Iceland	4.36	18	38
India	5.40	33	45
Indonesia	0.05	51	15
Ireland	3.54	10	16
Israel	3.08	26	24
Italy	0.75	41	29
Japan	0.70	49	14
Jordan	5.52	11	43
Korea	4.30	12	21
Lithuania	6.36	2	11
Malaysia	2.96	29	9
Mexico	4.54	10	35
Netherlands	3.35	21	12
New Zealand	2.74	35	35
Norway	2.74	32	10
Peru	2.10	39	31
Philippines	3.12	25	34
Poland	3.13	13	33
Portugal	3.36	22	30
Russian Federation	1.08	57	57
Singapore	4.72	7	1
Slovak Republic	3.28	23	35
South Africa	2.22	38	44
Spain	3.88	17	26
Sweden	3.00	28	22
Switzerland	1.92	43	21
Taiwan	4.14	14	8
Thailand	3.22	52	48
Turkey	1.20	46	36
Ukraine	1.98	42	51
United Kingdom	2.74	33	7
United States	3.88	20	24
Venezuela	1.30	45	47
Vietnam	2.26	55	51
Zimbabwe	-1.72	53	51

Sources: IMF (2002); WEF (1997)

cient enterprises. In this context, the post-socialist countries remain a difficult case for our competitiveness rankings, since there is so little empirical history on which to base the rankings.

On the whole, however, if we take into account the fact that we do not pretend to predict the unpredictable, such as the Asian financial crisis, the rankings appear moderately satisfactory. Nevertheless, there remains considerable room for improvement. Since 1997, we have changed the ranking procedure in a number of ways. We are now placing more emphasis on fundamental drivers of growth such as technology and innovation. Moreover, since the 2000 Report, we are no longer sticking to a one-size-fits-

all approach. Introduced in last year's *Report*, we distinguish between two groups of countries, the "core innovators" and the "non-core innovators" (a terminology not to be construed as a value judgment, as explained below). This year's approach remains basically unchanged, with one slight refinement. We review the rankings in more detail after considering the current economic situation.

The current situation and short-term prospects

Seldom has there been a period with greater uncertainty than the year after the publication of last year's *Global Competitiveness Report* in October 2001. In the two weeks following the terrorist attacks of September 11, 2001, the world equity markets lost approximately two trillion US dollars, with 20 of the world's major stock exchanges dropping more than 10 percent. There was widespread agreement that in the near term the horrific event would accelerate and deepen the slowdown in the global economy that had already been underway, by causing substantial disruptions of the global transport networks and production chains and also by causing a steep drop in consumer and business confidence. There was less agreement, however, as to how fast the global economy would recover and return to a sustained growth path in the medium term. Even greater uncertainty existed with regard to the long-term impact of the terrorist attacks.

A year later, the global economic outlook still remains clouded by tremendous uncertainty. Asset prices have remained subject to substantial volatility. In the two-and-a-half-year period between March 2000, when equity prices peaked, and end-September 2002, some of the major stock indices lost up to two-thirds of their value, with the Nikkei having hit a 19-year low. The NASDAQ and other tech-laden stock exchanges have suffered even greater losses, with some markets—including Germany's Neuer Markt and Switzerland's New Market—being dissolved. Moreover, the latest GDP revisions in the United States confirm that the situation a year ago was actually worse than thought. Rather than merely slowing, we now know that the largest economy in the world was already in recession when the terrorist attacks occurred, with output having shrunk for the first nine months of 2001.

Nevertheless, in each of the three subsequent quarters GDP growth has been positive, and judged by the fears many had a year ago, one might argue that the US economy has weathered the economic impact of the tragic events of September 11 reasonably well. In fact, from the peak to trough, GDP fell by only 0.6 percent, compared with an average decline of over 2 percent during recessions in the post-war era. Although it is true that nominal GDP growth in the G-7 countries fell to its slowest rates for decades, it is important to bear in mind that the terrorist attacks were not the only shock. The failure of Enron, WorldCom, and other high-profile corporate scan-

dals; the collapse of Argentina's currency board; and the severe tensions in the Middle East might each have been expected to have a considerable impact on the global economic outlook, too. Taken together, their impact could have been far more serious, possibly pushing the world economy into a prolonged recession. Considering the potential damage these shocks could have caused, the world economy and the global financial system seems to have proved surprisingly resilient thus far.

One important reason for the robustness that the global economy has shown so far is the resilience of the global financial system. The infrastructure of the system proved strong, and even in the immediate aftermath of massive disruptions in New York City, the world's leading financial center, the system continued to function effectively. The same can be said with regard to the energy market after the collapse of Enron, one of the world's biggest energy traders. Although the US commercial paper market was most affected, corporate bond issuance rose to record levels and many firms were able to fall back on prenegotiated arrangements with their banks. Moreover, consumers in many industrialized countries as well as in some emerging-market economies gained greater access to consumer and mortgage credit, helping private consumption and residential construction to hold up well.

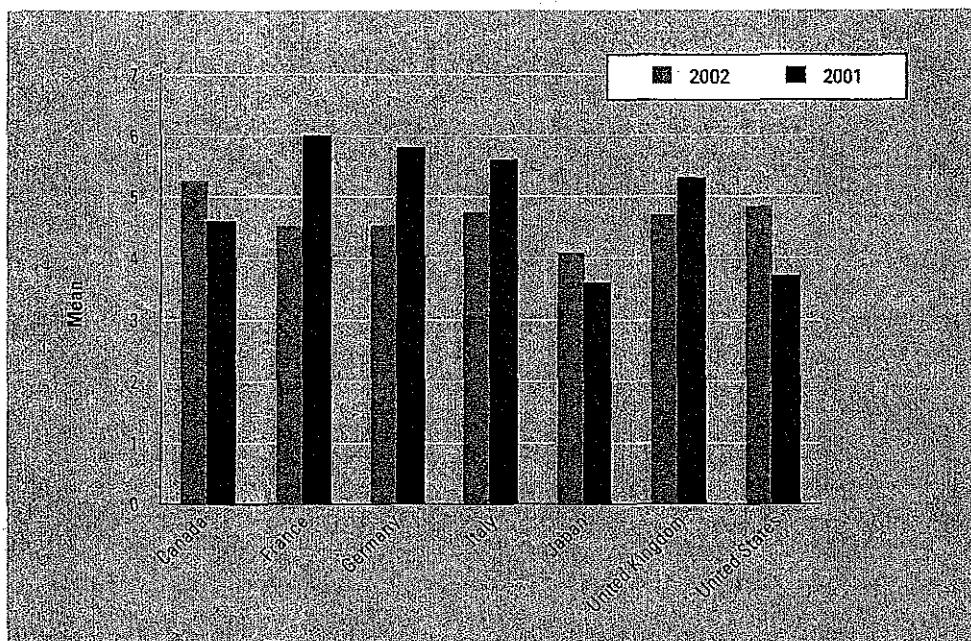
Another remarkable aspect of the robustness of the global economy is that, unlike the cases of the Long-Term Capital Management (LTCM) and Russian crises in 1998, in 2001 there was no panic flight to liquidity (Bank for International Settlements 2002, pp 3 ff); nor was there a sudden drying up of financing for countries with current account deficits due to increased risk aversion. The external funding requirements of the United States continued to be met, and emerging markets of good credit standing seeking funds in the international bond markets still had ready access, with sovereign spreads actually narrowing for several countries.

Much credit for the global economy's resilience is due to the sharp monetary easing in most countries, especially in the United States where at the time of this writing the federal funds target rate stood at just 1.25 percent. This monetary easing has been accompanied by a more expansionary fiscal stance. In the United States, sizeable tax cuts were implemented and public expenditure has been rising strongly, especially in the aftermath of the terrorist attacks, and in 2002, the easing of the budgetary stance is estimated to amount to around 1.5 percent of GDP. Fiscal policy has become significantly more expansionary in several other countries, including Canada, Norway, Sweden, and especially the United Kingdom.

That the global economy has been relatively resilient should not lead to complacency, however. The short- and medium-term economic risks are considerable, and they exist regardless of the enormous uncertainties associated

Figure 1: Recession expectations

(1 = your country's economy will likely be in a recession next year; 7 = your country's economy will have strong growth next year)



with the possibility of a protracted war in Iraq or new terrorist threats. For one thing, corporate and private debts still appear rather large in the United States. Lower interest rates have encouraged a boom in the housing market that has partially offset losses in the stock market, helping insulate private wealth and maintain consumer spending. Once households reduce their borrowing propped up by higher mortgages, they will spend less and save more, which could lead to a prolonged period of sluggish growth. US monetary policy has not much ammunition left if, under such a scenario, the economy stumbles. The rest of the world would not remain unaffected, and with the US current account deficit becoming harder to finance, there is concern that a sharp fall in the US dollar could help export deflationary pressures to other countries. At the same time, to the extent that the economy has become more open, fiscal policy might have become less effective to cushion downturns than in previous cycles.

Given the enormous uncertainties that continue to exist, forecasters have continually lowered their 2003 forecasts for the United States and most other OECD countries. Although economic activity in the "Triad" of the United States, Europe, and Japan is expected to increase, the recovery is forecast to be rather gradual, with output remaining below production potential for the foreseeable future. Under this scenario, inflation is expected to remain tame, but unemployment in many countries will remain high or even rising. A slower-than-expected recovery in the OECD countries has obvious implications for the

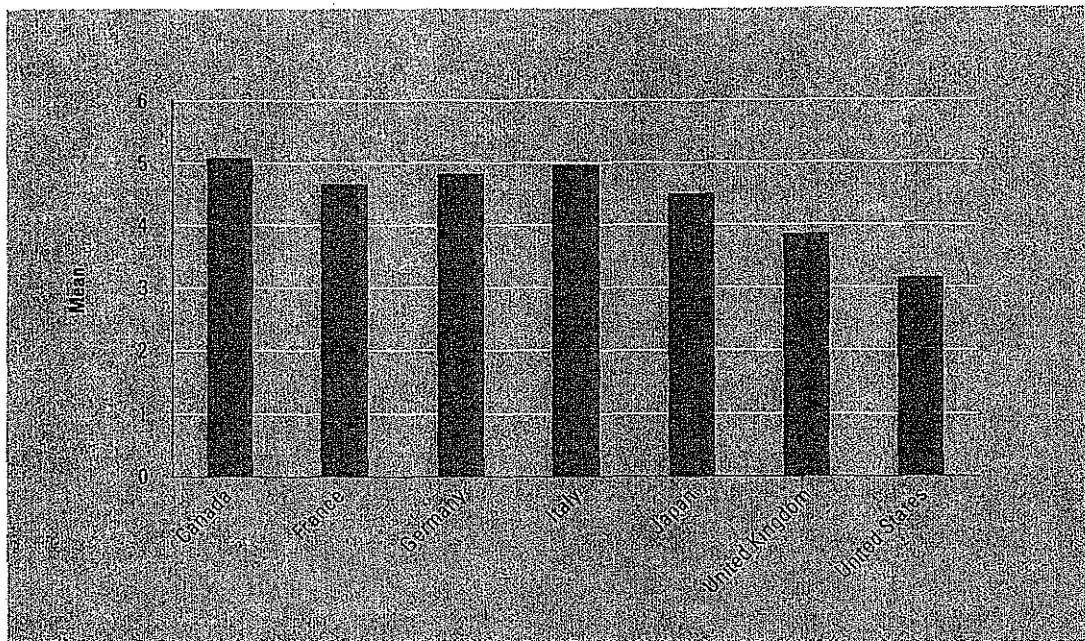
developing world, where in many countries economic growth has also slowed considerably.

This scenario is more or less in line with the responses to our Executive Opinion Survey, which was conducted in the spring of 2002. Asked about their recession expectations (1 = very high probability of a recession next year; 7 = very low probability of a recession next year), respondents from Canada were most optimistic among G-7 participants, with a mean score of 5.3 (see Figure 1). By contrast, Japanese executives showed the highest degree of pessimism, with a mean score of 4.1. Overall, however, the Survey results show relatively little variation. Although a rapid recovery does not appear to be in the cards, responses of the senior executives who participated in the Survey do not suggest a particular fear of a recession in any of the G-7 countries.

Interestingly, US executives were actually considerably more optimistic in early 2002, with a mean score of 4.8, than they had been 12 months earlier, when the mean response to our question was a 3.7. Although in retrospect US executives showed a considerable degree of foresight—the unforeseeable terrorist attacks and other shocks notwithstanding—the global slowdown took their European counterparts by surprise, with their mean responses ranging from 5.3 (United Kingdom) to 6.0 (France) in early 2001. Japanese executives have also become slightly more optimistic, with the mean response increasing from 3.6 in early 2001 (for 2002) to 4.1 in early 2002 (for 2003).

Figure 2: Terrorism and the cost of doing business

(1 = the threat of terrorism imposes significant costs on business; 7 = the threat of terrorism does not impose significant costs on business)



Asked about the cost impact of the threat of terrorism on their business, US executives show by far the highest degree of skepticism, followed by their fellow executives in the United Kingdom. Although executives in continental European countries and in Japan were less pessimistic, the results suggest a high degree of caution in the sense that none of the respondents ruled out the possibility that terrorism could seriously affect their businesses (see Figure 2).

Notwithstanding the tremendous short-term uncertainties currently facing the world economy, those countries that have in place the set of institutions, policies, and regulations that support high levels of productivity and drive productivity growth should be expected to return to a sustained growth path faster than less competitive countries. Which are these countries? How much growth can they reasonably expect once the clouds of uncertainty disappear? This is precisely what the growth competitiveness rankings are concerned with: estimating the underlying prospects for growth over the next five to eight years in a large number of individual economies. Our analysis includes 80 economies, with six new countries being covered by the Growth Competitiveness Index this year: Botswana, Croatia, Haiti, Morocco, Namibia, and Tunisia. Egypt, however, had to be dropped this year due to the lack of Survey data.

The Growth Competitiveness Index

The overall Growth Competitiveness Index (GCI) aims to measure the capacity of the national economy to achieve sustained economic growth over the medium term, controlling for the current level of development.

There are several issues in this definition that are worth noting. First of all, we say *sustainable* to emphasize that we are thinking beyond the shorter-term business cycle. Moreover, our calculations aim to track growth potential after taking into account the temporary catch-up phenomena, whereby poorer countries can grow quickly for a time as they catch up to richer countries. The catch-up phenomenon is temporary because it disappears after countries have caught up to richer countries; however, it can take many years for this to happen. Roughly speaking, our rankings rate growth potential after taking out the part of growth that is related to catching up. For a poorer country such as China, this adjustment can make a large difference. China's growth rate during the period 1991–2001 was over 8 percent per year, the highest of the 80 countries in the Report. If our rankings were keyed to unadjusted growth rates, China would look highly competitive.

The rankings are fact driven in the sense that we aspire to include in the rankings only those factors that have some demonstrated correlation with rates of economic growth over the medium term. We construct the rankings on the basis of recent theoretical literature on the

determinants of economic growth, as well the past 10 years' empirical evidence on economic growth. The Index is tested each year to confirm that it does indeed correlate with rates of economic growth from the recent past.

The rankings provide a "rough guide" to the potential for growth. There are two reasons that the rankings are rough. The first is that the rankings inevitably leave out any special circumstances in each country. This means essentially that a significant fraction of growth is left unexplained. Sometimes the rankings are criticized for encouraging the view that there is a single recipe that all countries should follow to achieve competitiveness and fast growth. There is nothing in the *Global Competitiveness Report* that denies the importance of each country's special circumstances. At the same time, the international evidence shows that there are indeed important common factors that influence growth in all countries.

The second reason the rankings are rough is that there is little meaningful distinction between countries ranked close to each other. Very fine differences in the data can shift countries up or down in the rankings if the countries happen to be similar in terms of the underlying indicators. Therefore small changes in the rankings are best attributed to statistical error. A reasonable rule of thumb is that any given country could easily have been ranked five positions in either direction due to random differences in the data. However, if two countries differ by more than ten positions, it is very likely that the difference reflects something real rather than a random error.

Therefore the rankings provide a rough summary of the environment for rapid growth in each country, as best as can be judged by recent evidence. We identify critical determinants of growth and use them to construct the index. As in previous years, the rankings are built from a base that starts with an extensive data set. This data set includes information from official sources such as national statistical agencies and international organizations such as the United Nations (UN), the World Bank, the World Trade Organization (WTO), the International Monetary Fund (IMF), and the World Intellectual Property Organization (WIPO). It also includes data collected through the annual Executive Opinion Survey of the *Global Competitiveness Report*. The Executive Opinion Survey is relied on to provide qualitative data or data on issues that are not measured by alternative sources. A discussion of the characteristics and methodology behind this year's Executive Opinion Survey can be found in Part 4 of this *Report*.

The construction of the GCI essentially follows last year's approach. Developed by Jeffrey D. Sachs and John W. McArthur (McArthur and Sachs 2002), this approach represents the result of continuous research efforts published in previous *Global Competitiveness Reports*. As outlined in

detail in last year's *Report* and summarized in the Appendix of this chapter, the GCI is based on three broad categories of variables that are found to drive economic growth in the medium- and long-term. These categories are technology, public institutions, and the macroeconomic environment.

Without technological progress, countries may achieve a higher standard of living, for example, through a higher rate of capital accumulation, but they will not be able to enjoy continuously high economic growth. Institutions are crucial for their role in ensuring the protection of property rights, the objective resolution of contract and other legal disputes, efficiency of government spending, and transparency in all levels of government. In the absence of good governance, the division of labor is likely to be impeded and the allocation of resources inefficient. Monetary and fiscal policies, and the stability of financial institutions, have important effects on short-term economic dynamics as well as on the long-term capacity to grow.

The role of technology in the growth process has attracted a particularly great deal of attention in the literature. Since the onset of the first industrial revolution, economists have struggled to understand why growth proceeds slowly at some times and in some nations, but rapidly in others. During the past two decades, a new growth theory has taken the economics profession by storm, identifying technological change as a key factor in economic development.

Given the central role technology plays in the growth process, the key question for the future, of course, is whether a brisk pace of technological advance can be sustained. As Scherer (1999, p 119) emphasizes, "(t)here is a centuries-old tradition of gazing with wonder at recent technological achievements, surveying the difficulties that seem to thwart further improvements, and concluding that the most important inventions have been made and that it will be much more difficult in the future to achieve comparable rates of advance. Such views have always proved to be wrong in the past, and there is no reason to believe that they will be any more valid in the foreseeable future."

Whether the recent pace of technological progress can be sustained is also a key issue in the present *Report*. Perhaps the most hotly debated question in this regard is currently whether the acceleration in US productivity growth in the second half of the 1990s can be expected to continue, an issue that represents the focus of Chapter 3.2 by Robert Gordon. But even if this acceleration in productivity growth proved to be a temporary phenomenon, the most fundamental observation in the growth literature remains intact—namely that each new technological innovation triggers yet further innovation, in a kind of chain reaction that fuels long-term economic growth. Examining

national competitiveness thus requires, first and foremost, analyzing the extent to which individual countries are able to achieve technological progress.

Technology plays a critical role at all stages of economic development, but the way this driver affects economic growth varies according to the level of economic prosperity a country has already achieved. At early stages of economic development, a country's ability to launch its economy on a steeper growth path depends primarily on the transfer of technology from abroad. Countries that have experienced rapid economic growth are typically those that are successful in adopting and adapting a technology that has been developed abroad, a process known as *technological diffusion*. At more advanced stages of economic development, technological diffusion becomes increasingly important for countries to sustain rapid economic growth.

Taking into account the different channels through which technology affects economic growth at different stages of development, in this *Report* we continue to distinguish between two groups of countries. The group of *core innovators* comprises those countries whose companies have registered at least 15 US utility patents granted per million population in 2001. This criterion is met in 24 economies (see Table 2). All other countries are said to be *non-core innovators*. Empirical tests find that technology plays a particularly critical role in the core innovating countries, a finding that is reflected in the weights we attach to the different growth drivers. In these countries, technology has a weight of 50 percent in the overall GCI, compared with 25 percent each for public institutions and the macroeconomic environment. By contrast, equal weights of one third are attached to each of the three drivers in the case of the non-core innovators.

For the core innovators, the technology index is a simple average of the innovation subindex and the information and communication technology subindex, both of which are comprised of hard and soft data (note that the innovation subindex is different from the "innovative capacity index" constructed by Michael E. Porter and Scott Stern in Chapter 3.1. While the innovation subindex seeks to explain the elements of innovation that are linked to economic growth, the innovative capacity index seeks to explain the underlying factors that contribute to innovation). In the case of non-core innovators, by contrast, technology transfer plays a considerably more important role than innovation, which is reflected in relative weights of three eighths for the technology transfer index versus one eighth in the innovation subindex. Information and communication technology represents the other subindex of the technology index, with a weight of one half.

This year's *Report* includes one important adjustment: the technology transfer subindex includes new Survey evidence on the licensing of foreign technology as an impor-

Table 2: Core technology-innovating economies in the 1980s and in 2001

Country	Average annual US utility patents granted per million population, 1980 to 1999	1980s rank	US utility patents granted per million population, 2001	2001 rank
1980s Core technology innovators				
Switzerland	189.70	1	195.65	4
United States	152.00	2	234.42	1
Japan	101.30	3	260.99	2
Sweden	94.40	4	195.67	5
Germany	85.10	5	135.73	8
Netherlands	52.00	6	89.27	10
Canada	50.40	7	115.80	9
United Kingdom	47.30	8	106.44	17
France	43.00	9	68.15	16
Denmark	42.20	10	103.32	10
Austria	40.40	11	72.43	13
Finland	37.10	12	140.21	7
Denmark	31.80	13	89.55	10
Belgium	29.50	14	70.25	15
Norway	22.70	15	58.82	19
Australia	21.50	16	44.99	20
Italy	16.50	17	29.64	24
New Zealand	15.20	18	32.28	23
1980s Non-core economies that became core innovators by 2001				
Taiwan	12.80	19	239.78	3
Malaysia	9.00	20	163.33	18
Ireland	8.80	22	37.24	21
Hong Kong SAR	5.50	23	47.84	22
Singapore	2.40	25	72.12	14
Korea	0.20	26	173.99	12

Source: US Patent and Trademark Office, April 2002

tant source of new technology. This evidence replaces a variable that was created to measure the extent of manufacturing technology in the export structure of non-core innovators. The reasoning behind including this variable was that countries with a technology-based export sector may be expected to be more adept at absorbing technologies from abroad than economies with a primary commodity-based export structure. Empirical tests suggest that the new variable has significant explanatory power.

Technology can not be examined in isolation. As discussed in Chapter 3.1, Porter and Stern find a substantial degree of variation among a large sample of countries in terms of their innovative capacity. Although this study focuses primarily on innovation rather than technology transfer, a country's ability to adopt and adapt new technologies developed abroad also depends on a complex set of factors determining the quality of the business environment. Reviewing the growth and technology literature, Scherer (1999, p 124) emphasizes three main barriers in developing countries. The most important one is the lack of, or critical shortcomings in, a legal and institutional framework that encourages vigorously independent risk-taking and dynamic competition. The second barrier lies in the scarcity of business entrepreneurs willing and able to take advantage of the opportunities for development offered by modern technology. And third, because devel-

oping countries have, by definition, low real per capita incomes, they face particularly harsh constraints in allocating funds to research and development whose benefits tend to accrue only after considerable lags.

Although the boundaries between core and non-core innovators are not rigid, the progress from non-core to core innovator is not a simple one. The lack of an appropriate legal and institutional framework, the scarcity of entrepreneurship, and extremely limited funds for research and development are the most important—but not the only—barriers that explain why the group of core innovators has remained so small as a share of the world's population. The non-core countries often achieve very high rates of growth, but catch-up growth has its inherent limits. As the income gap with the technological leaders narrows, the ability to narrow the income gap still further diminishes and may even disappear. The non-core economy must become a technological innovator to close the income gap fully. This final step of becoming part of the core is typically the most difficult one, and understanding this process requires assessing technology in a broader context of economic development.

As mentioned earlier, and discussed in detail in Daniel Kaufmann's essay on governance in this *Report* (Chapter 3.6), public institutions play a particularly important role. Reflecting this importance, this year's Executive Opinion Survey includes several new questions in this area. For example, four questions alone were added to understand the role of corruption in an economy better. We also asked new questions, for example, on whether newspapers can publish stories of their choosing without fear of censorship or retaliation, and whether illegal donations to political parties are common. The average answers to these and other questions are reported in Part 4 of this *Report*. However, in order to allow for inter-temporal comparisons of the public institutions rankings, we decided to keep its structure unchanged. As detailed in the Appendix, the public institutions index consists of two subindexes with equal weights: one that reflects the perceived degree of corruption and one that focuses on the role of contracts and law. Both subindexes are based solely on Survey evidence.

The macroeconomic environment index has also remained unchanged. It includes a subindex on macroeconomic stability (mirroring, among other things, inflation, national savings, and real exchange rate developments) as well as country credit ratings and general government expenditure. Although the rationale of the construction of the macroeconomic environment index has been discussed in detail by McArthur and Sachs (2002), a few points of clarification appear warranted. To begin with, the optimal level of government expenditures is a highly complex issue to which our simple index is unable to do justice. High levels of government expenditure relative to GDP

are usually found to be associated with low economic growth (see, for example, Barro 1997). But to infer from this that economic growth would be maximized at zero government expenditures (though the index could be interpreted this way) would certainly be incorrect. When government spending is too low, then the public sector does not meet even the core needs for education, health, and other public services. The most extreme case in this regard is Haiti, a new entrant in this year's rankings, whose government expenditure-to-GDP ratio was only around 10 percent in 2001.

Similarly, it would be incorrect to infer from the inflation rankings that extremely low inflation is always desirable. In 2001, three countries—Argentina, Hong Kong, and Japan—actually recorded negative consumer price inflation (year-over-year). Deflation can be extremely dangerous for jump-starting an economy and bringing it back to a sustainable growth path, as evidenced by Japan's recent experience. Moreover, the jury is still out as to where inflation begins to be harmful for economic growth. High inflation, say, above 40 percent annually, is widely viewed as bad for growth, but there is much less agreement on the effects of less severe inflation. This lack of consensus may reflect possible complexities of the inflation-growth relationship: nonlinearities, interaction effects with other growth determinants, and differences between short-run and steady state relationships. In a recent study, Ghosh and Philipps (1998), for example, find that at very low inflation rates (less than 2 to 3 percent), inflation and growth are positively correlated; otherwise, they are negatively related, but the relationship is convex, so that the decline in growth associated with an increase from 10 to 20 percent inflation is much larger than that associated with moving from 40 to 50 percent.²

Competitiveness rankings 2002–2003

This year's rankings are presented in Table 3. The United States tops the GCI rankings, followed by Finland, last year's number 1. Taiwan, Singapore, and Sweden follow. Switzerland enjoys the relatively biggest improvement to the 6th position in this year's rankings from number 15 in the previous year. Japan's position also improves considerably, to the 13th rank. Other economies that move up on the GCI include China and India, the world's two most populous countries. Conversely, there are several countries that have slipped considerably this year. Ranked 30th, France is one of the least competitive economies within the European Union, outperforming only Greece (38th) and Italy (39th).³ The most dramatic decline concerns Turkey, which slips to the 69th place this year, compared with a rank of 54 in 2001. Argentina, having suffered from a similarly severe financial crisis and an even larger fall in output, drops by 14 places to 63 on this year's rankings.

Table 3: Growth Competitiveness Index rankings and 2001 comparisons

Country	GCI 2002 rank	GCI 2002 score	GCI 2002 rank among GCI 2001 countries*	GCI 2001 rank
United States	1	5.83	1	2
United Kingdom	2	5.74	2	1
Taiwan	3	5.50	3	7
Singapore	4	5.42	4	6
Sweden	5	5.40	5	9
Switzerland	6	5.36	6	15
Australia	7	5.36	7	5
Canada	8	5.25	8	10
Norway	9	5.24	9	6
Belarus	10	5.23	10	14
United Kingdom	11	5.17	11	12
Iceland	12	5.16	12	10
Japan	13	5.08	13	21
Germany	14	5.06	14	17
Netherlands	15	5.03	15	8
New Zealand	16	5.03	16	11
Hong Kong SAR	17	4.93	17	13
Australia	18	4.93	18	18
Israel	19	4.93	19	24
United States	20	4.93	20	23
Korea	21	4.89	21	23
Spain	22	4.86	22	22
Portugal	23	4.87	23	25
France	24	4.86	24	21
Belgium	25	4.81	25	19
Malta	26	4.73	26	24
Malaysia	27	4.70	27	30
Slovenia	28	4.64	28	31
Hungary	29	4.63	29	28
France	30	4.62	30	20
Thailand	31	4.52	31	33
South Africa	32	4.47	32	34
China	33	4.37	33	39
Kenya	34	4.35	34	53
Mauritius	35	4.34	34	32
Argentina	36	4.35	35	45
Trinidad and Tobago	37	4.32	36	38
Costa Rica	38	4.32	37	45
Italy	39	4.31	38	26
Czech Republic	40	4.29	39	20
Botswana	41	4.22	—	—
Colombia	42	4.19	40	46
Costa Rica	43	4.19	41	35
Latvia	44	4.14	42	47
Mexico	45	4.11	43	42
Brazil	46	4.09	44	43
Jordan	47	4.07	45	45
India	48	4.03	46	57
Slovak Republic	49	4.02	47	40
Ukraine	50	4.00	48	55
Poland	51	3.98	49	41
Georgian Republic	52	3.96	50	40
Namibia	53	3.93	—	—
Malta	54	3.87	51	25
Morocco	55	3.86	—	—
Colombia	56	3.86	52	55
El Salvador	57	3.85	53	58
Uruguay	58	3.80	54	61
Sri Lanka	59	3.80	54	61
Guatemala	60	3.76	55	52
Philippines	61	3.70	56	48
Guatemala	62	3.58	57	59
Argentina	63	3.66	58	49
Russian Federation	64	3.64	59	63
Vietnam	65	3.63	60	60
Indonesia	66	3.62	61	56
Indonesia	67	3.36	62	64
Venezuela	68	3.34	63	50
Turkey	69	3.31	64	54
Malta	70	3.29	65	50
Nigeria	71	3.17	66	74
Ecuador	72	3.16	67	52
Ecuador	73	3.13	68	68
Barbados	74	3.12	69	51
Nicaragua	75	2.99	70	73
Honduras	76	2.98	71	70
Ukraine	77	2.97	72	69
Malta	78	2.95	73	67
Zimbabwe	79	2.80	74	75
Malta	80	2.77	75	76

* Only 74 countries out of the 75 covered last year are shown, as Egypt is not included in this year's Report.

Argentina's and Turkey's declines would have been slightly less dramatic in an unchanged sample, but still very substantial. With the exception of Haiti, all new entrants are ranked higher than Argentina and Turkey, technically exacerbating the decline in their competitiveness rankings. Tunisia is the highest new entrant at number 34. Further down the list are Botswana at number 41, Namibia at 53, Morocco at number 55, and Croatia at number 58. Haiti, at the bottom, is known to be going through one of the most difficult periods in its history.

What explains the relative country positions on the GCI, and what are the factors that have resulted in the changes in the rankings? As Tables 4 and 5 show, the United States' owes its position mainly to its stellar performance on technology-related factors. As was the case last year, the United States tops the rankings on the technology index. A deeper analysis reveals that this performance is due to a wide range of factors. Research and development, collaboration between universities and businesses, the level of tertiary education, and a sophisticated and innovative business and academic community all contribute to the high ranking of the United States, topping the innovation subindex and enjoying a 4th position on the information and communication technology subindex index (see Table 6).

The United States' macroeconomic environment is also found to be favorable, at least in comparison with most other economies (see Table 7). Clearly, most macroeconomic indicators have deteriorated quite significantly over the last two years. However, relative to other economies, the United States continues to show important competitive advantages. For example, the US budgetary situation still looks considerably better than it does in many other countries, particularly Japan and several European Union countries where the global slowdown has also had a major impact on public finances. Furthermore, the United States scores very well with regard to its creditworthiness. On the other hand, the national savings rate in the United States has remained among the lowest in the world, posing substantial risks in the current fragile environment.

Another area where the United States faces important challenges is the perceived quality of its public institutions (see Table 8). Overall, the United States is ranked only 16th on the public institutions index, occupying the 15th and the 20th position on the contracts and law subindex and the corruption subindex, respectively. Note that on both subindexes the United States has dropped this year, especially on the corruption subindex. Irregular payments paid in relation to the supply of public utilities or in connection with tax payments, for example, are perceived to be a serious issue by the Survey respondents.

Table 4: Growth Competitiveness Index component indexes

Technology index			Public institutions index			Macroeconomic environment index		
Country	Rank	Score	Country	Rank	Score	Country	Rank	Score
United States	1	6.36	Finland	1	6.60	Singapore	1	5.72
Malta	2	5.87	Denmark	2	6.50	United States	2	5.26
Finland	3	5.83	Iceland	3	6.39	Hong Kong SAR	3	5.10
Sweden	4	5.77	New Zealand	4	6.35	Costa Rica	4	5.09
Japan	5	5.34	United Kingdom	5	6.15	Switzerland	5	5.00
Switzerland	6	5.19	Singapore	7	6.17	Barbados	6	4.90
Israel	7	5.16	Canada	8	6.07	Norway	7	4.99
Canada	8	5.13	Belgium	9	6.00	China	8	4.88
Australia	9	5.05	Netherlands	10	5.99	Ireland	9	4.88
Norway	10	5.03	Austria	11	5.98	Korea	10	4.86
Denmark	11	5.03	Norway	12	5.89	Thailand	11	4.85
Germany	12	4.94	Hong Kong SAR	13	5.88	Canada	12	4.81
Portugal	13	4.91	Germany	14	5.85	Chile	13	4.71
Portugal	14	4.91	Sweden	15	5.81	Finland	14	4.70
United Kingdom	15	4.91	United States	16	5.78	Spain	15	4.70
Iceland	16	4.86	Israel	17	5.76	United Kingdom	16	4.69
Singapore	17	4.89	Ireland	18	5.75	New Zealand	17	4.66
Korea	18	4.87	Chile	19	5.62	India	18	4.57
Netherlands	19	4.82	Uruguay	20	5.54	Netherlands	19	4.55
Czech Republic	20	4.81	Portugal	21	5.50	Malaysia	20	4.53
Hungary	21	4.77	Belgium	22	5.36	Mexico	21	4.50
Belgium	22	4.73	Slovenia	23	5.33	Germany	22	4.49
Austria	23	4.68	Ukraine	24	5.31	Austria	23	4.47
Spain	24	4.68	Japan	25	5.27	Iceland	24	4.43
Slovenia	25	4.65	Spain	26	5.25	Trinidad and Tobago	25	4.41
Malaysia	26	4.62	Taiwan	27	5.25	Belgium	26	4.40
New Zealand	27	4.57	Estonia	28	5.24	Italy	27	4.39
France	28	4.46	France	29	5.15	France	28	4.39
Latvia	29	4.41	Hungary	30	5.14	Japan	29	4.36
Greece	30	4.41	Botswana	31	5.14	South Africa	30	4.35
Ireland	31	4.40	Korea	32	4.98	Denmark	31	4.35
Hong Kong SAR	32	4.37	Malaysia	33	4.94	Philippines	32	4.29
Chile	33	4.35	South Africa	34	4.93	El Salvador	33	4.29
Slovak Republic	34	4.31	Mauritius	35	4.91	Sweden	34	4.25
Brazil	35	4.30	Guatemala	36	4.89	Russian Federation	35	4.23
Poland	36	4.21	Italy	37	4.71	Mauritius	36	4.22
Costa Rica	37	4.13	China	38	4.68	Tunisia	37	4.22
South Africa	38	4.11	Thailand	39	4.68	Vietnam	38	4.21
Italy	39	4.08	Ukraine	40	4.67	Bangladesh	39	4.21
Guatemala	40	4.05	Namibia	41	4.65	Portugal	40	4.20
Thailand	41	4.04	Ukraine	42	4.65	Dominican Republic	41	4.14
Guatemala	42	3.99	Trinidad and Tobago	43	4.56	Kenya	42	4.13
Croatia	43	3.98	Norway	44	4.53	Costa Rica	43	4.10
Argentina	44	3.98	Brazil	45	4.45	Morocco	44	4.07
Mauritius	45	3.90	Costa Rica	46	4.33	Lithuania	45	4.06
Jamaica	46	3.85	Bulgaria	47	4.30	Estonia	46	4.06
Mexico	47	3.84	El Salvador	48	4.24	Greece	47	4.02
Dominican Republic	48	3.83	Peru	49	4.24	Botswana	48	4.01
Panama	49	3.82	Czech Republic	50	4.20	Hungary	49	3.98
Juday	50	3.78	Jamaica	51	4.18	Slovenia	50	3.95
Jordan	51	3.72	Latvia	52	4.12	Colombia	51	3.95
Philippines	52	3.69	Slovak Republic	53	4.11	Peru	52	3.95
Venezuela	53	3.64	Colombia	54	4.10	Indonesia	53	3.92
Turkey	54	3.62	Panama	55	4.08	Poland	54	3.90
Romania	55	3.60	Morocco	56	4.05	Latvia	55	3.89
Bulgaria	56	3.55	Croatia	57	4.04	Guatemala	56	3.83
India	57	3.55	Mexico	58	3.99	Jordan	57	3.83
Colombia	58	3.53	India	59	3.96	Romania	58	3.79
Namibia	59	3.52	Dominican Republic	60	3.93	Czech Republic	59	3.77
Jonisia	60	3.51	Poland	61	3.83	Sri Lanka	60	3.70
Botswana	61	3.51	Vietnam	62	3.83	Nigeria	61	3.67
Morocco	62	3.47	Turkey	63	3.52	Israel	62	3.66
China	63	3.45	Nicaragua	64	3.50	Paraguay	63	3.65
Peru	64	3.45	Russian Federation	65	3.46	Slovak Republic	64	3.54
Indonesia	65	3.27	Argentina	66	3.43	Argentina	65	3.62
Russian federations	66	3.23	Ukraine	67	3.38	Namibia	66	3.61
Sri Lanka	67	3.12	Romania	68	3.30	Brazil	67	3.51
Vietnam	68	3.04	Uzbekistan	69	3.29	Haiti	68	3.48
El Salvador	69	3.02	Bolivia	70	3.13	Ecuador	69	3.43
Ecuador	70	2.99	Philippines	70	3.11	Croatia	70	3.38
Nigeria	71	2.94	Paraguay	71	3.09	Honduras	71	3.35
Ukraine	72	2.85	Ukraine	72	3.08	Venezuela	72	3.33
Nicaragua	73	2.82	Venezuela	73	3.07	Uruguay	73	3.26
Guatemala	74	2.80	Guatemala	74	2.98	Jamaica	74	3.25
Zimbabwe	75	2.74	Ecuador	75	2.98	Bulgaria	75	3.20
Bolivia	77	2.66	Indonesia	77	2.90	Bolivia	76	3.10
Bangladesh	78	2.65	Indonesia	78	2.89	Ukraine	77	2.99
Bangladesh	79	2.60	Bangladesh	79	2.56	Turkey	78	2.60
Malta	80	2.52	Malta	80	2.50	Nicaragua	79	2.63

Table 5: GCI component indexes ranking comparison

Country	GCI ranking			Technology ranking			Public institutions ranking			Macroeconomic environment ranking		
	2002	2001*	Difference	2002	2001*	Difference	2002	2001*	Difference	2002	2001*	Difference
Argentina	63	49	-14	44	48	4	66	54	-12	65	40	-25
Australia	7	55	-28	29	53	-24	39	34	-5	17	43	-26
Austria	19	18	0	23	16	-7	11	15	-4	23	26	3
Bangladesh	79	70	-9	79	73	-4	79	71	-2	39	48	-9
Belgium	25	19	-6	22	13	-9	22	22	0	26	24	-2
Bolivia	70	66	-4	72	65	-7	61	61	0	76	70	-6
Botswana	41	—	—	61	—	—	31	—	—	48	—	—
Brazil	46	47	-1	35	49	-14	39	46	-7	67	53	-14
Bulgaria	62	58	-4	56	50	-6	47	50	3	75	69	-6
Canada	3	3	—	5	2	-3	10	11	-1	12	13	1
Chile	20	27	7	33	42	-9	19	21	2	13	21	8
China	33	39	6	53	53	0	38	49	11	8	6	-2
Colombia	56	64	8	58	56	-2	54	56	2	51	66	15
Costa Rica	43	35	-8	47	32	-15	46	36	-10	45	42	-3
Croatia	58	—	—	43	—	—	57	—	—	70	—	—
Czech Republic	40	37	-3	20	20	0	50	52	-2	59	49	-10
Denmark	10	14	4	11	12	1	2	3	1	31	31	0
Dominican Republic	52	60	-8	48	144	-96	60	54	-6	41	45	4
Ecuador	73	67	-6	70	68	-2	75	67	-8	69	62	-7
El Salvador	57	57	0	69	58	-11	49	59	10	43	50	-7
Estonia	26	29	3	14	8	-6	28	29	1	46	43	-3
Finland	2	—	—	3	3	0	—	—	—	18	19	1
France	30	20	-10	28	17	-11	29	20	-9	28	22	-6
Germany	14	17	3	12	15	3	16	17	1	22	19	-3
Greece	38	36	-2	30	36	8	44	39	-5	47	32	-15
Guatemala	70	66	-4	74	67	-7	74	66	-8	56	52	-4
Haiti	80	—	—	80	—	—	80	—	—	68	—	—
Honduras	76	69	-7	78	59	-19	76	71	5	71	72	1
Hong Kong SAR	17	13	-4	32	33	1	13	10	-3	3	4	1
Hungary	29	28	1	21	21	0	20	26	6	49	58	-9
Iceland	12	16	4	16	19	3	3	2	-1	24	34	10
India	48	56	8	47	65	-18	59	48	-11	18	15	-3
Indonesia	67	63	-4	65	61	-4	77	65	-12	53	41	-12
Ireland	26	11	-15	21	20	-3	18	16	-2	9	12	3
Israel	19	24	5	7	26	19	17	14	-3	62	61	-1
Italy	39	26	-13	39	31	-8	37	27	-10	52	23	-29
Jamaica	60	51	-9	46	43	-3	51	42	-9	74	71	-3
Japan	13	21	8	15	23	-8	25	19	-6	53	18	-35
Jordan	47	45	-2	51	54	3	40	28	-12	57	54	-3
Korea	21	23	2	18	19	1	32	33	1	10	9	-1
Latvia	44	47	3	29	34	5	52	47	-5	55	59	4
Lithuania	36	43	7	40	41	1	25	23	-2	45	56	-11
Malaysia	27	30	3	26	22	-4	33	38	5	20	20	0
Mauritius	35	32	-3	45	37	-8	35	32	-3	36	30	-6
Mexico	45	42	-3	47	36	-11	58	55	-3	21	36	15
Morocco	65	—	—	62	—	—	50	—	—	44	—	—
Namibia	53	—	—	59	—	—	41	—	—	66	—	—
Netherlands	15	18	3	19	14	-5	10	51	-41	19	29	-10
New Zealand	16	10	-6	27	11	-16	4	4	0	17	14	-3
Nicaragua	75	72	-3	73	70	-3	69	66	-3	79	74	5
Nigeria	71	73	2	71	74	3	78	72	-6	61	55	-6
Norway	29	36	7	10	7	-3	23	16	-7	4	5	-1
Panama	50	52	2	49	57	8	55	58	3	42	44	2
Paraguay	72	71	-1	76	72	-4	70	63	-7	85	85	0
Peru	54	54	0	64	62	-2	49	44	-5	52	58	6
Philippines	51	49	-2	52	40	-12	50	59	7	52	59	-7
Poland	51	41	-10	36	35	-1	61	40	-21	54	50	-4
Portugal	23	25	2	13	25	-12	24	25	1	40	35	-5
Romania	66	55	-11	55	47	-8	67	51	-16	58	67	9
Russian Federation	64	62	-2	56	60	4	65	50	-15	57	57	0
Singapore	4	4	0	17	18	1	7	6	-1	1	1	0
Slovak Republic	49	40	-9	24	29	5	53	37	-16	64	64	0
Slovenia	28	31	3	25	30	5	23	30	7	50	39	-11
South Africa	32	34	2	38	34	-4	34	34	0	30	27	-3
Spain	22	22	0	24	27	3	26	23	-3	15	11	-4
Sri Lanka	59	60	1	67	59	-8	42	57	15	50	50	0
Sweden	5	9	4	4	8	2	15	7	-8	34	29	-5
Switzerland	5	11	6	6	4	-2	18	15	-3	51	53	2
Taiwan	3	7	4	2	4	2	27	24	-3	6	15	9
Tunisia	51	53	2	41	59	-18	39	41	2	10	10	0
Trinidad and Tobago	37	38	1	42	52	10	43	35	-8	25	25	0
USA	44	—	—	60	—	—	24	—	—	37	—	—
Turkey	69	53	-16	54	51	-3	63	45	-18	78	68	-10
Ukraine	7	65	-58	12	63	-2	12	10	-2	73	73	0
United Kingdom	11	12	1	15	10	-5	6	9	3	16	12	-4
United States	4	—	—	15	10	-5	16	12	4	2	7	5
Uruguay	42	46	4	50	45	-5	20	31	11	73	63	-10
Venezuela	68	61	-7	63	52	-11	73	54	-19	72	53	-19
Vietnam	65	59	-6	68	64	-4	62	62	0	38	37	-1
Zimbabwe	79	73	-6	75	70	-5	68	68	0	30	75	-45

* Only 74 countries out of the 75 covered last year are shown, as Egypt is not included in this year's Report.

Table 6: Technology index components

Country	Technology index	Innovation subindex						ICT subindex						Technology transfer subindex*							
		OVERALL			HARD DATA			SURVEY DATA			OVERALL			HARD DATA			SURVEY DATA			Rank Score	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Argentina	44	3.98	30	2.84	29	2.68	66	3.32	47	3.51	41	3.79	71	2.95	20	4.98					
Australia	19	5.05	14	4.14	15	3.65	120	2.13	14	5.70	12	5.07	15	4.95							
Austria	23	4.68	16	3.88	18	3.48	12	5.08	18	5.48	18	5.74	14	4.95							
Bangladesh	70	2.60	79	1.93	77	1.13	76	2.56	78	1.71	80	1.02	89	1.10	45	4.13					
Belgium	22	4.73	15	4.09	14	3.77	14	5.03	20	5.38	19	5.68	22	4.78							
Bhutan	77	2.66	58	1.09	59	1.67	59	2.79	72	2.50	60	2.03	73	2.85	55	3.33					
Botswana	61	3.51	77	1.72	79	1.08	53	3.54	59	2.95	58	2.58	50	3.70	23	4.84					
Bolivia	35	3.30	53	2.19	60	1.46	26	2.58	41	3.65	46	3.01	55	3.57	59	5.50					
Bulgaria	56	3.55	39	2.63	32	2.52	75	2.87	44	3.58	43	3.74	66	3.26	50	3.82					
Canada	18	5.13	8	4.43	18	4.19	11	5.14	11	5.83	18	5.99	4	5.50							
Chile	33	4.35	37	2.67	39	2.20	38	4.10	33	4.37	35	4.25	27	4.60	24	4.89					
China	53	3.45	61	1.97	75	1.18	26	2.84	62	2.88	62	2.50	40	4.05	29	4.70					
Colombia	58	3.53	55	2.15	52	1.68	57	3.57	58	3.19	55	2.81	42	3.95	40	4.43					
Costa Rica	37	4.13	36	2.68	41	2.10	24	4.20	45	3.55	44	3.63	62	4.42	77	5.37					
Croatia	43	3.98	50	2.24	43	2.03	78	2.66	37	3.39	38	4.16	51	3.67	35	4.54					
Czech Republic	20	4.81	42	2.51	40	1.92	27	4.37	28	4.85	30	5.34	16	4.61		5.55					
Denmark	11	5.03	13	4.12	13	3.82	15	5.00	7	5.94	4	6.45	18	4.91							
Dominican Republic	48	3.85	49	2.08	51	1.80	35	4.14	55	3.22	53	2.10	65	3.86	14	5.12					
Ecuador	70	2.99	60	2.00	57	1.60	69	3.20	66	2.51	63	2.27	70	3.00	47	3.94					
El Salvador	69	3.02	59	2.07	55	1.72	65	3.11	65	2.57	60	2.03	56	3.62	74	3.93					
Estonia	14	4.81	28	3.05	28	2.70	37	4.10	23	5.18	23	5.13	10	5.28	11	5.16					
Finland	13	5.03	13	4.14	11	3.54	13	5.57	13	5.19	13	5.57	11	5.57							
France	28	4.46	18	3.84	19	3.46	17	4.56	25	5.09	26	5.36	29	4.56							
Germany	12	4.95	10	3.66	11	3.93	10	5.01	15	5.51	15	5.80	15	4.52							
Greece	30	4.41	27	3.05	27	2.80	46	3.81	31	4.59	28	5.08	53	3.63	31	4.62					
Honduras	74	2.60	75	1.76	63	1.26	68	2.25	71	2.34	67	2.17	55	2.69	51	3.72					
Haiti	80	1.83	80	1.33	80	1.00	80	2.32	80	1.43	78	1.18	80	1.93	56	2.53					
Honduras	78	2.65	71	1.90	61	1.33	77	2.89	75	1.65	74	1.52	78	2.51	54	3.99					
Hong Kong SAR	32	4.37	32	2.78	36	2.28	31	4.25	6	5.97	7	6.34	11	5.24							
Iceland	16	4.30	21	3.54	22	3.04	13	5.04	2	6.21	2	6.71	9	5.40							
India	57	3.55	62	1.95	72	1.22	63	4.16	69	2.26	76	1.31	31	4.52	2	5.65					
Indonesia	65	3.27	63	1.95	64	1.37	47	3.71	73	2.22	71	1.57	65	3.32	15	5.09					
Ireland	31	4.90	22	2.47	24	2.97	16	5.00	23	5.33	20	5.64	23	4.71							
Israel	7	5.16	6	4.71	7	4.29	2	5.95	15	5.61	21	5.54	3	5.74							
Italy	39	4.08	25	2.22	26	2.97	40	3.98	23	4.94	24	5.38	38	4.06							
Jamaica	46	3.85	69	1.88	68	1.28	49	3.69	48	3.49	50	3.27	43	3.93	19	4.99					
Japan	5	5.54	5	3.16	5	3.05	7	5.59	5	5.50	15	5.94	25	4.61							
Jordan	51	3.72	57	2.15	53	1.67	56	3.57	50	3.38	58	2.72	24	4.71	30	4.69					
Korea	18	4.57	11	3.33	19	4.13	18	5.91	18	5.40	25	5.38	27	5.45							
Latvia	29	4.41	26	3.09	26	2.82	43	3.89	35	4.24	33	4.33	39	4.05	16	5.09					
Lithuania	40	4.05	33	2.77	34	2.47	21	3.63	34	4.04	39	4.04	49	3.75		5.16					
Malaysia	26	4.62	52	2.19	62	1.39	22	4.59	32	4.43	37	4.21	19	4.87	1	5.68					
Mexico	47	3.80	72	1.98	71	1.22	61	3.51	60	3.65	40	4.02	48	3.81		5.63					
Micronesia	62	2.47	62	1.44	67	1.30	45	3.85	64	2.61	70	1.95	44	3.91	13	5.19					
Namibia	59	3.52	68	1.88	70	1.22	42	3.89	61	2.95	60	2.49	47	3.85	26	4.82					
Netherlands	19	4.82	17	3.86	17	3.54	20	4.82	12	5.77	9	6.25	20	4.82							
New Zealand	27	4.57	19	3.76	16	3.55	25	4.39	21	5.37	17	5.76	28	4.60							
Nicaragua	73	2.82	70	1.81	63	1.33	73	3.08	75	2.69	72	1.58	79	2.49	42	3.40					
Nigeria	71	2.84	78	1.64	78	1.10	67	3.27	78	1.67	79	1.08	72	2.85	17	5.07					
Norway	10	5.03	12	4.43	12	3.90	19	4.82	13	5.33	13	6.66	22	4.48							
Panama	49	3.82	41	2.54	40	2.17	52	3.65	53	3.27	51	3.16	58	3.49	21	4.97					
Paraguay	76	2.69	79	1.78	66	1.33	72	3.12	68	2.41	65	2.27	74	2.69	51	3.34					
Peru	64	3.43	48	2.38	44	2.01	62	3.48	60	2.95	56	2.81	60	3.23	41	4.41					
Philippines	52	3.69	45	2.40	46	1.97	50	3.67	63	2.85	65	2.24	37	4.08	19	5.23					
Poland	38	4.21	28	2.80	31	2.58	44	3.86	36	4.03	34	4.25	56	3.58	23	4.90					
Portugal	13	4.91	31	2.83	30	2.50	50	3.52	24	4.12	23	5.40	30	4.55	8	5.31					
Romania	55	3.60	54	2.17	50	1.85	71	3.14	54	3.23	52	3.10	59	3.49	34	4.56					
Russian Federation	68	3.23	35	2.73	35	2.46	59	3.54	58	3.07	53	2.90	62	3.26	32	3.62					
Singapore	17	4.89	20	3.76	20	3.24	59	5.31	5	6.02	10	6.13	2	5.79							
Slovak Republic	30	4.31	47	2.95	47	1.95	39	4.01	31	4.28	32	4.59	52	3.66		4.95					
Slovenia	25	4.65	24	3.33	23	3.00	30	4.31	26	5.08	22	5.42	33	4.42	38	4.50					
South Africa	50	3.11	45	2.51	50	1.51	23	3.42	42	3.72	46	3.55	41	4.03		4.03					
Spain	24	4.68	23	3.37	21	3.06	29	4.31	30	4.75	29	4.93	36	4.29	18	5.01					
Sri Lanka	67	3.12	71	1.76	76	1.15	55	3.01	71	2.34	73	1.57	45	3.60	33	3.62					
Sweden	4	5.77	4	5.25	4	5.11	6	5.66	1	6.29	1	6.71	5	5.46							
Switzerland	10	5.15	15	4.51	10	4.15	15	5.58	8	6.20	12	6.04	6	5.45							
Taiwan	2	5.87	2	5.89	2	6.07	8	5.33	10	5.86	13	6.06	6	5.45							
Thailand	41	4.04	40	2.67	40	2.05	68	3.11	45	3.29											

Table 7: Macroeconomic environment index components

Country	Macroeconomic environment index		Macroeconomic stability subindex		Country credit rating*		Government expenditure	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Argentina	65	3.62	65	3.63	72	1.89	20	5.32
Australia	23	4.08	20	4.65	20	6.10	27	5.90
Austria	23	4.47	17	4.70	8	6.62	75	1.86
Bangladesh	39	4.21	42	4.28	71	2.06	65	1.93
Belgium	26	4.40	25	4.58	12	6.52	72	1.95
Bolivia	76	3.10	57	3.58	68	2.95	57	2.98
Botswana	48	4.01	21	4.52	34	4.22	65	2.35
Brazil	67	3.51	61	3.75	54	3.06	48	3.49
Bulgaria	75	3.20	68	3.55	56	2.94	61	2.74
Canada	12	4.81	13	4.77	10	6.55	52	5.77
Chile	13	4.71	33	4.39	28	4.75	21	5.29
China	9	4.98	5	4.95	32	4.30	16	5.22
Colombia	51	3.95	66	3.60	55	3.00	18	5.58
Costa Rica	43	3.10	59	3.44	50	3.35	7	6.18
Croatia	70	3.38	41	4.29	49	3.40	77	1.54
Czech Republic	59	3.72	51	4.12	30	4.56	66	2.90
Denmark	31	4.35	12	4.77	9	6.56	79	1.29
Dominican Republic	4	4.11	58	3.82	60	2.77	19	5.93
Ecuador	69	3.43	63	3.64	76	1.58	30	4.84
Egypt	25	3.29	54	3.02	55	2.29	14	5.63
Estonia	46	4.06	38	4.33	36	4.20	50	3.38
Finland	14	4.70	19	5.07	65	6.51	69	2.94
France	28	4.39	19	4.66	5	6.84	78	1.39
Germany	22	4.49	26	4.55	69	6.89	74	1.98
Greece	47	4.02	27	4.54	22	5.45	76	1.54
Guatemala	56	3.83	75	3.10	67	2.56	2	5.56
Haiti	68	3.48	78	2.85	79	1.22	1	7.00
Honduras	71	3.35	70	3.37	73	1.87	31	4.81
Hong Kong SAR	3	5.10	9	4.85	25	4.93	15	5.78
Hungary	49	3.98	47	4.17	27	4.62	60	2.76
Iceland	24	4.43	44	4.20	24	5.32	39	4.02
India	18	3.57	16	4.36	46	3.61	19	5.56
Indonesia	53	3.92	45	4.20	74	1.73	19	5.54
Ireland	19	4.88	28	4.49	74	6.32	36	4.21
Israel	62	3.66	43	4.26	35	4.20	73	1.33
Italy	27	4.39	24	4.55	17	6.27	70	2.12
Jamaica	74	3.25	64	3.63	78	2.08	46	3.63
Japan	19	4.30	22	4.62	11	6.31	7	5.90
Jordan	57	3.83	40	4.29	58	2.85	40	3.88
Kuwait	10	4.96	10	4.98	23	6.65	23	2.10
Latvia	55	3.89	32	4.40	44	3.63	53	3.13
Lithuania	45	3.09	35	3.93	11	4.49	36	4.03
Malaysia	20	4.53	7	4.93	37	4.13	37	4.14
Mauritius	25	4.22	56	3.99	33	4.88	24	5.00
Mexico	21	4.50	60	3.75	33	4.27	4	6.23
Morocco	44	4.07	18	4.66	51	3.31	45	3.64
Namibia	66	3.61	48	4.15	57	2.94	51	3.19
Netherlands	19	4.55	24	4.37	53	6.87	64	2.59
New Zealand	17	4.66	16	4.71	21	5.78	49	3.44
Nicaragua	79	2.69	26	3.06	77	5.51	53	2.90
Nigeria	61	3.67	55	4.01	78	1.46	22	5.21
Norway	17	4.99	2	5.27	77	6.75	163	2.08
Panama	42	4.13	39	4.39	48	3.47	35	4.43
Paraguay	63	3.61	73	5.23	69	2.18	13	5.84
Peru	52	3.95	49	4.15	59	2.84	34	4.65
Philippines	32	3.29	50	4.13	53	3.21	17	5.71
Poland	54	3.90	62	3.71	31	4.44	43	3.76
Portugal	40	4.20	57	3.99	19	6.12	52	2.72
Romania	58	3.79	71	3.31	66	2.38	6	6.18
Russian Federation	35	3.29	53	4.03	64	2.99	33	5.36
Singapore	1	5.72	1	5.39	18	6.23	11	5.88
Slovak Republic	53	3.66	52	4.01	13	5.67	55	2.77
Slovenia	50	3.95	35	4.36	26	4.88	68	2.21
South Africa	19	3.19	50	3.63	16	5.74	53	4.71
Spain	15	4.70	15	4.72	16	6.31	54	3.06
Sweden	20	4.74	13	4.26	15	6.51	59	6.63
Switzerland	34	4.23	14	4.75	13	6.44	80	1.00
Taiwan	6	5.00	11	4.83	23	5.39	26	4.93
Thailand	11	3.85	8	4.93	45	3.63	10	5.92
Trinidad and Tobago	25	4.41	29	4.48	39	3.83	28	4.88
Tunisia	17	5.22	23	4.60	14	5.83	12	5.04
Turkey	78	2.80	74	3.20	63	2.55	67	2.26
Ukraine	77	3.99	72	4.29	75	1.73	24	3.68
United Kingdom	16	4.69	31	4.43	4	6.86	56	3.04
United States	12	5.26	46	4.70	6	5.78	12	5.81
Uruguay	73	3.26	79	2.74	42	3.68	41	3.88
Venezuela	12	3.35	77	3.89	61	2.64	25	4.97
Vietnam	38	4.21	6	4.94	67	2.28	33	4.68
Zimbabwe	100	2.56	80	2.45	80	1.00	77	3.51

*The underlying values for these data are the Institutional Investor country credit ratings. © institutionalinvestor.com, 2002. No further copying or transmission of this material is allowed without the express permission of institutionalinvestor.com. Mail to: publisher@institutionalinvestor.com

Table 8: Public institutions index components

Country	Public institutions index		Contracts and law subindex		Corruption subindex	
	Rank	Score	Rank	Score	Rank	Score
Argentina	66	3.38	76	2.35	58	4.42
Australia	2	6.23	1	6.03	1	6.44
Austria	11	5.90	8	5.79	19	6.02
Bangladesh	79	2.66	68	2.43	80	2.20
Belgium	22	5.36	22	5.14	30	5.58
Bolivia	69	3.13	70	2.69	71	3.56
Botswana	31	5.14	23	5.01	38	5.27
Brazil	45	4.45	45	4.08	46	4.82
Bulgaria	47	4.30	67	2.87	27	5.73
Canada	19	6.00	14	5.52	71	6.39
Chile	19	5.62	24	4.90	10	6.34
China	38	4.68	44	4.18	35	5.19
Colombia	54	4.10	64	3.05	41	5.14
Costa Rica	46	4.33	43	4.25	59	4.41
Croatia	57	4.04	60	3.26	45	4.83
Czech Republic	50	4.20	44	3.75	51	4.65
Denmark	2	6.50	2	6.28	3	6.72
Dominican Republic	60	3.93	58	3.42	57	4.43
Ecuador	75	2.98	78	2.29	69	3.67
El Salvador	38	2.45	59	3.33	40	4.11
Estonia	28	5.22	36	4.58	25	5.86
Finland	2	6.60	2	6.32	2	6.93
France	29	5.15	32	4.62	28	5.69
Germany	21	5.95	20	5.65	17	6.86
Greece	44	4.53	40	4.46	52	4.61
Guatemala	74	2.98	79	2.15	66	3.81
Haiti	80	2.11	80	1.80	79	2.41
Honduras	76	2.93	75	2.45	74	3.41
Hong Kong SAR	13	5.88	13	5.53	15	6.24
Hungary	20	5.15	50	4.65	29	5.65
Iceland	3	6.39	3	6.05	2	6.73
India	59	2.96	39	3.18	73	3.43
Indonesia	77	2.90	68	2.80	77	2.98
Ireland	98	3.76	20	5.25	14	6.26
Israel	17	5.76	12	5.55	22	5.97
Italy	37	4.71	47	4.03	32	5.39
Jamaica	51	4.18	52	3.61	49	4.75
Japan	25	5.27	37	4.55	23	5.94
Jordan	40	4.67	27	4.78	54	4.56
Korea	52	4.96	28	4.72	50	5.20
Latvia	52	4.12	50	3.66	53	4.59
Lithuania	59	2.99	51	3.69	34	4.13
Malaysia	33	4.94	34	4.59	34	5.29
Mauritius	25	5.21	25	5.05	24	5.94
Mexico	58	3.89	62	3.17	47	4.82
Morocco	66	3.06	46	3.07	64	4.02
Namibia	41	4.85	31	4.82	50	4.68
Netherlands	10	5.95	11	5.59	13	5.30
New Zealand	4	6.32	5	5.95	4	6.69
Nicaragua	64	3.80	69	2.69	60	3.51
Nigeria	78	2.89	61	3.18	78	2.80
Norway	12	5.89	16	4.45	12	5.32
Panama	55	4.06	53	3.60	55	4.52
Paraguay	71	3.09	22	2.63	72	3.55
Peru	49	4.24	59	3.27	37	5.21
Philippines	70	3.11	63	3.11	76	3.07
Poland	61	3.83	54	3.55	62	4.11
Portugal	21	5.50	17	4.45	31	5.97
Romania	67	3.38	65	2.95	67	3.80
Russian Federation	55	3.45	71	2.69	61	4.22
Singapore	7	6.17	9	5.78	5	6.55
Slovak Republic	23	4.11	57	3.49	54	4.84
Slovenia	23	5.33	26	4.83	26	5.82
South Africa	24	4.95	51	4.24	52	5.26
Spain	26	5.25	41	4.46	18	6.05
Switzerland	12	5.87	16	4.67	15	5.98
Sweden	15	5.81	18	5.28	11	6.33
Taiwan	67	3.07	79	2.67	70	3.58
Taiwan	27	5.25	33	4.61	23	5.89
Thailand	39	4.86	58	4.38	53	4.66
Trinidad and Tobago	43	4.56	42	4.35	48	4.78
Tunisia	24	5.81	19	5.20	23	5.34
Turkey	63	3.52	48	3.78	75	3.27
Ukraine	72	3.07	73	2.67	70	3.58
United Kingdom	6	6.19	6	5.85	6	6.54
United States	16	5.76	15	5.50	20	6.01
Uruguay	20	5.54	21	5.20	24	5.88
Venezuela	73	3.07	70	2.28	75	3.65
Vietnam	62	3.65	55	3.50	68	3.80
Zimbabwe	168	3.51	174	2.54	153	4.07

Finland, swapping positions with the United States this year, continues to perform extremely well with regard to its public institutions. Moreover, it is one of the most technologically advanced economies in the world, ranked number 3 on both the innovation subindex and the information and communication technology subindex.

However, Finland falls to the 14th rank in terms of its macroeconomic environment, a decline that is primarily due to Finland's deteriorating position with regard to government expenditure.

Taiwan, ranked 7th last year, overtakes Singapore, whose overall position remains unchanged. Taiwan owes the improvement to the 3rd rank to very high scores on the technology index. Although Taiwan enjoys a macroeconomic environment that is quite favorable relative to most other countries, considerable competitive disadvantages are perceived to exist with regard to Taiwan's public institutions.

Switzerland and Japan have also been able to improve their overall positions. In both cases, technology represents the key driver behind these improvements. In the case of Switzerland, the country's dramatic rise in the technology index by 18 positions mirrors a 7-percent increase in the number of utility patents Swiss firms have registered in the United States in 2001. Swiss public institutions are also perceived to have improved relative to other countries, whereas the country slips slightly in the macroeconomic dimension of national competitiveness (a more detailed discussion of Switzerland's competitiveness can be found in Chapter 2.3). Japan's companies are even more competitive in terms of innovation, putting the country in the 5th position on that subindex as well as the technology index. Not surprisingly, however, Japan's position on the macroeconomic environment index and, to a somewhat lesser extent, the public institutions index drops markedly, reflecting the massive problems the country continues to face in these areas. These problems pose a formidable challenge to policymakers. The good news is, however, that the country's innovative power has remained very strong, and once the macroeconomic situation improves and the governance problems are addressed efficiently, Japan should be able to recover and resume economic growth.

It is more difficult to trace France's decline in the overall GCI back to an individual subset of factors. France slips on all counts: in the area of technology by 11 positions to number 28, with regard to the quality of its public institutions to 29, and concerning the macroeconomic environment to 28. Tables 6, 7, and 8 allow a more detailed assessment of France's relative ranking in all these dimensions.

As far as emerging-market countries are concerned, India represents a particularly interesting case. As noted earlier, India's overall position on the GCI improves this year by 8 positions to 48. In terms of technology, India ranks 2nd among the non-core innovators for the technology transfer index, a position that mirrors the country's overall strong performance in terms of the prevalence of foreign technology licensing and a relatively high score in terms of foreign direct investment and technology. However, India's overall improvement also mirrors a relatively stronger macroeconomic environment, driven for example by its jump from the 33rd to the 9th position on government expenditure.

Countries that have been experiencing financial turmoil show considerably lower readings on the overall GCI, primarily reflecting a much more difficult macroeconomic environment. Argentina's relative credit rating falls from the 43rd to the 72nd position. Access to credit is reported to have become much more difficult, putting Argentina at the 76th rank of the entire sample of 80 countries. A substantial deterioration also concerns the country's public institutions, with a rock-bottom score for property rights protection. Relative to its previous year's position, Turkey slips even more, by 16 positions to 69 on the overall GCI. Turkey faces a similarly complex mix of serious challenges, especially pertaining to its macroeconomic environment and its public institutions.

Conclusions

In closing, we stress again that the GCI rankings are empirically based rankings, whose quality is as good as the available evidence from recent worldwide experience with growth. Because we cannot observe future growth, we must look backward in testing and developing the rankings. Of course, if the future is not like the recent past, the rankings will not be good indicators of future growth. We are not suggesting that a country can *necessarily* grow rapidly if it reorients its policy to score high on the criteria listed in the *Global Competitiveness Report*. Still less are we suggesting that countries can guarantee rapid growth by concentrating exclusively on the small subset of variables that make up the GCI. Nevertheless, in the public discussion about economic policy, it is helpful to know which variables have been most strongly correlated with recent growth rates. The various subindexes aggregate these variables and, put together in the overall GCI, can help identify specific impediments to growth. Together with other chapters of this *Report*, it is hoped that our analysis help design policies to remove such impediments.

Notes

- 1 We would like to thank Frederic Davier of the Laboratory of Applied Economics, Department of Economic and Social Sciences, University of Geneva, for assisting us in analyzing the hard and Survey data used to calculate the Growth Competitiveness Index. We also wish to thank Andrew M. Warner, J. E. Austin Associates, Arlington, VA, and the Center for International Development at Harvard University, Cambridge, MA, for his assistance in examining the performance of the Growth Competitiveness Index over time. Some parts of this paper follow an earlier draft provided by Andrew M. Warner.
- 2 Note that the inflation rankings are based on a normalization of the data that is based on the ranks rather than the actual inflation rates.
- 3 Employing the European Union's own criteria to measure the region's progress toward becoming "the most competitive and dynamic knowledge-based economy in the world by 2010, capable of sustainable economic growth, with more and better jobs and greater social cohesion," one comes to slightly different results. However, even using the European Union's own benchmarks puts France into the bottom half of the competitiveness rankings among the individual member states (World Economic Forum 2002).

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