
Executive Summary

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The fundamental objective of the *Global Competitiveness Report* (GCR) is to evaluate the economic competitiveness of a large sample of countries. Traditionally, the GCR has focused on two complementary approaches to analyzing competitiveness. The first, called the *Growth Competitiveness Index* (GCI), was developed by Jeffrey D. Sachs of Columbia University and John W. McArthur of The Earth Institute and was presented in *The Global Competitiveness Report 2001–2002*. The second index, now labeled the *Business Competitiveness Index* (BCI), was developed by Michael Porter of Harvard University and was first introduced in *The Global Competitiveness Report 2000*.

The two indexes combine available hard data and data from the Executive Opinion Survey (Survey) conducted annually by the World Economic Forum (see Chapter 3.1 for additional analysis of Survey results and methodology). The Survey is conducted in the first half of every year. Input is contributed exclusively by leading business executives and entrepreneurs whose current perceptions of the business environment in which they work are captured in their responses to a comprehensive and scientifically constructed questionnaire. By participating, respondents are also provided with the opportunity to identify key obstacles to economic growth in their own countries and thus contribute to assessing the quality of the business environment in the countries where their companies operate. This, in turn, may help precipitate an internal debate within the country between government officials, business leaders, organizations of civil society and the academic community on key problem areas and how best to address them.

The Survey was carried out this year in collaboration with 104 Partner Institutes of the World Economic Forum's Global Competitiveness Programme. Partner Institutes are typically leading national research or academic institutes committed to contributing to the growth potential of their respective economies. Under the direction of the World Economic Forum, their collaboration involves conducting the Survey according to common guidelines in order to ensure that the sample of respondents is representative of the economies in question and that the Survey method used remains consistent across all countries.

The number of countries surveyed this year increased significantly, from 80 to 102. The countries added are mainly from the developing world, especially Africa. The coverage in that region of the world has increased from 8 to 25, and now also includes Algeria, Angola, Cameroon, Chad, Egypt, Ethiopia, Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mozambique, Senegal, Tanzania, Uganda, and Zambia. Newly added countries also embrace non-African nations, including Luxembourg, Macedonia, Malta, Pakistan, and Serbia. The countries included in this year's *Report* account for 97.8 percent of

world's GDP. *The Global Competitiveness Report 2003–2004*, therefore, provides comprehensive coverage of the global economy.

The Growth Competitiveness Index

The GCI's main goal is to analyze the potential for the world's economies to attain sustained economic growth over the medium and long term. The index is based on economists' current understanding of the determinants of the complex process of economic growth and development. It summarizes the set of institutions, policies, and structures driving the growth process of 102 heterogeneous countries.

The GCI is founded on three central ideas. The first one is that the process of economic growth can be analyzed within three important broad categories: the macroeconomic environment, the quality of public institutions, and technology.

Although it is certainly not true that macroeconomic stability alone can increase the growth rate of a nation, it is no less true that macroeconomic disarray kills its growth prospects. Informed decisions cannot be made in environments where the inflation rate is in the hundreds. The banking system cannot function if the government runs gigantic deficits. The government cannot provide services efficiently if it has to pay enormous interest rates on its past debts. And wasted taxation hurts the business sector unnecessarily. In sum, sustained growth is hard to achieve in nonfavorable macro environments.

The second pillar underlying the GCI relates to public institutions. In a market economy, wealth is ultimately created by private businesses. However, these businesses have to operate within a country and have to deal with its institutions. It is important, for example, that property rights are guaranteed by a legal and judicial system. It is hard for private companies to operate efficiently in countries where the rule of law is nonexistent or where contracts cannot be enforced. Firms may find it too expensive to do business where corruption is rampant. Thus, the GCI measures the soundness of the public institutions and it introduces this soundness as the second of the three pillars of economic growth and development.

The third channel is technological progress. Perhaps the main lesson of neoclassical growth theory is that the ultimate source of long-run economic growth is technological progress. The reason for this is that the other potential determinants of growth must run into diminishing returns. For example, institutions and the macroeconomic policy can have important effects on growth in countries with terrible environments. But once institutions are more or less right, and once the macroeconomy is more or less stable, additional improvements along these lines will probably have little or no effect on economic

growth. This is not true for technological progress: there do not seem to be good reasons that would suggest that there are diminishing returns to ideas. In fact, the contrary might be true, given that humanity seems to generate new ideas at accelerating rates.

The GCI uses both hard (publicly available) data and data from the World Economic Forum's Survey to estimate three "component indexes" that capture the three pillars of growth mentioned above. The three components are called the "technology index," the "public institutions index," and the "macroeconomic environment index." The three components are then combined to calculate the overall GCI.

The second idea underlying the GCI is that, although technological advance is the ultimate source of growth, its origin may be different across countries. In particular, for economies that are already close to the technological frontier, innovation is the main source of technological improvements. For those that are far away from the frontier, technological improvements can be achieved partly through innovation and partly by copying or adopting the knowledge previously developed in one of the leading economies.

To capture this second idea, the GCI separates the sample of countries into two groups: the "core" and the "non-core" innovators. Core innovators are those economies whose growth is largely driven by their capacity to innovate because they are close to the technological frontier. "Non-core" innovators are those that depend more on technological adoption from abroad. The threshold of 15 patents per million population was chosen to separate the countries into these two groups. Countries above this threshold are defined as the core group, and all others as non-core.

To reflect the fact that innovation is more important than adoption for core innovators, the technology index of the GCI puts a larger weight on innovation for the core innovators than for the non-core innovators. Technological adoption, on the other hand, receives a positive weight for non-core countries and zero weight for core innovators. Technological adoption is captured by the technology transfer subindex.

The third central idea underlying the GCI is that the importance of the determinants of economic competitiveness varies for core and non-core innovators. Getting the fundamentals right in terms of the macroeconomic environment and institutions is still extremely critical for the non-core innovators, whereas core innovators will have these fundamentals largely in place, and for them technological innovation has become the deciding factor for growth. Along these lines, the GCI assigns a larger weight to the technology index for core innovators than it does to the public institutions index and the macroeconomic

environment index. On the other hand, equal weights are assigned to these three indexes for non-core innovators.

Although we have maintained the basic structure and overall logic of the GCI as developed by Sachs and McArthur, this year we have made one significant change to the methodology. In the macroeconomic environment index, we have replaced a previously used variable, the “government expenditure as a percentage of GDP,” with a composite subindex aimed at capturing government spending waste. We decided to reconsider the role of government expenditure as a percentage of GDP because, implicitly, its inclusion assumed that economic growth would be maximized at zero government expenditures. We do not think that this is a good assumption, since many public expenditures are productive and contribute positively to the competitiveness of a nation. The index should capture public waste rather than public spending. After testing a number of candidate variables, three were selected:

- Extent of distortive government subsidies
- Diversion of public funds
- Public trust in the financial honesty of politicians

We think that this “composite waste subindex” captures waste through government favoritism and corruption. This should account for a large part of overall government wasteful spending. Statistical analysis of these variables indeed showed that they have strong explanatory power with regard to medium- to long-term growth. This solution was thus retained. The second change, less important in its implications, affects the innovation component of the technology index—the details are presented in Chapter 1.1.

Last year’s rankings

Of course, altering the model as described in the section above necessarily has an impact on the rankings of the index. Table 1 compares last year’s published rankings (Column 4) with those that would have been obtained using the current formula (Column 3). We see that there would have been a number of differences in last year’s rankings if we had made the two substitutions described in the section above. A first notable point is that Finland, rather than the United States, would have topped the rankings. This can be traced to the fact that the US government spends a relatively low percentage of GDP compared to Finland. And although US spending is not seen as particularly wasteful, Finland’s is seen as even less so. The combined effect of these two forces is that Finland is ranked ahead of the US once government expenditure is replaced by government waste.

Finland’s relative improvement is indicative of a more general trend we see in the data: many western European countries would have been higher in the rankings last year using the new formula. These countries have governments that spend a high proportion of GDP (which was “penalized” by last year’s formula), but that, as captured by the waste composite, are not seen as spending wastefully. In fact, all western European countries have either the same or higher rankings following the introduction of government waste to the index: not one of them is lower following this change.

The other side of the same coin is that many countries in Asia and Latin America would have had lower ranks last year if we had been using the waste variable rather than government expenditure. These are countries that have relatively low overall government spending, which pushed them higher in the rankings last year. However, once the wastefulness of the spending they do have is taken into account, many of these countries do less well, therefore coming in lower in the rankings.

Competitiveness Rankings 2003–2004

Column 1 of Table 1 reports the results of this year’s 2003 Growth Competitiveness Index rankings using the full sample of 102 countries. In order to establish comparability between last year’s rankings (Column 3) and this year’s, we also report this year’s rankings when only the countries that participated in last year’s study are included. This is done in Column 2.

A quick comparison of Columns 2 and 3 reveals striking similarities with last year’s top ten rankings. The first four ranks are identical, with Finland in the first place, followed by the United States, Sweden, and Denmark, respectively. Taiwan and Singapore maintain their rankings relative to each other, but both moved higher by one position, to 5th and 6th respectively, sliding Switzerland from the 5th to the 7th position. Norway declined by one rank to 9th place, making way for Iceland at the 8th place. Canada, previously at 9th place, falls off the top 10 list while Australia remains in 10th position.

The top two newcomers are Malta (19th) and Luxembourg (21st). The new countries from the developing world all lie at the bottom half of the table. Gambia (55th) is the highest rank newcomer, whereas Chad (101st) is the lowest. Egypt (58th) comes back to the rankings after being eliminated last year because of problems in the data collection process. Tanzania (69th), Ghana (71st), Pakistan (73rd) and Algeria (74th) are the next highest rank newcomers, followed by Malawi (76th), Serbia (77th), Senegal (79th), Uganda (80th), Macedonia (81st), Kenya (83rd), Zambia (88th), Cameroon (91st), Ethiopia (92nd), Mozambique (93rd), Madagascar (96th), Mali (99th), and Angola (100th).

Table 1: Growth Competitiveness Index rankings and 2002 comparisons

Country	GCI 2003 Rank		GCI 2002 Rank	
	(among 2003 countries)	(among 2002 countries)	(revised*)	(original)
Finland	1	1	1	2
United States	2	2	2	1
Sweden	3	3	3	5
Denmark	4	4	4	10
Taiwan	5	5	6	3
Singapore	6	6	7	4
Switzerland	7	7	5	6
Iceland	8	8	12	12
Norway	9	9	8	9
Australia	10	10	10	7
Japan	11	11	16	13
Netherlands	12	12	13	15
Germany	13	13	14	14
New Zealand	14	14	15	16
United Kingdom	15	15	11	11
Canada	16	16	9	8
Austria	17	17	18	18
Korea	18	18	25	21
Malta	19	—	—	—
Israel	20	19	17	19
Luxembourg	21	—	—	—
Estonia	22	20	27	26
Spain	23	21	20	22
Hong Kong	24	22	22	17
Portugal	25	23	19	23
France	26	24	28	30
Belgium	27	25	21	25
Chile	28	26	24	20
Malaysia	29	27	30	27
Ireland	30	28	23	24
Slovenia	31	29	26	28
Thailand	32	30	37	31
Hungary	33	31	29	29
Jordan	34	32	44	47
Greece	35	33	31	38
Botswana	36	34	35	41
Latvia	37	35	43	44
Tunisia	38	36	32	34
Czech Republic	39	37	36	40
Lithuania	40	38	39	36
Italy	41	39	33	39
South Africa	42	40	34	32
Slovak Republic	43	41	46	49
China	44	42	38	33
Poland	45	43	50	51
Mauritius	46	44	41	35
Mexico	47	45	53	45
El Salvador	48	46	60	57
Trinidad and Tobago	49	47	42	37
Uruguay	50	48	40	42
Costa Rica	51	49	49	43
Namibia	52	50	47	53
Croatia	53	51	48	58
Brazil	54	52	45	46
Gambia	55	—	—	—
India	56	53	54	48
Peru	57	54	55	54
Egypt	58	—	—	—
Panama	59	55	51	50
Vietnam	60	56	62	65
Morocco	61	57	52	55
Dominican Republic	62	58	56	52
Colombia	63	59	61	56
Bulgaria	64	60	58	62
Turkey	65	61	65	69
Philippines	66	62	63	61
Jamaica	67	63	57	60
Sri Lanka	68	64	59	59

(cont'd.)

Country	GCI 2003 Rank		GCI 2002 Rank	
	(among 2003 countries)	(among 2002 countries)	(revised*)	(original)
Tanzania	69	—	—	—
Russian Federation	70	65	66	64
Ghana	71	—	—	—
Indonesia	72	66	69	67
Pakistan	73	—	—	—
Algeria	74	—	—	—
Romania	75	67	67	66
Malawi	76	—	—	—
Serbia	77	—	—	—
Argentina	78	68	64	63
Senegal	79	—	—	—
Uganda	80	—	—	—
Macedonia	81	—	—	—
Venezuela	82	69	68	68
Kenya	83	—	—	—
Ukraine	84	70	74	77
Bolivia	85	71	71	78
Ecuador	86	72	73	73
Nigeria	87	73	72	71
Zambia	88	—	—	—
Guatemala	89	74	75	70
Nicaragua	90	75	70	75
Cameroon	91	—	—	—
Ethiopia	92	—	—	—
Mozambique	93	—	—	—
Honduras	94	76	78	76
Paraguay	95	77	76	72
Madagascar	96	—	—	—
Zimbabwe	97	78	79	79
Bangladesh	98	79	77	74
Mali	99	—	—	—
Angola	100	—	—	—
Chad	101	—	—	—
Haiti	102	80	80	80

Table 2 breaks down the GCI into its three main subcomponents: the macroeconomic environment index, the public institutions index, and the technology index. In Table 2 we see, for instance, that Finland is ranked first overall because it scored well in all areas. Unlike Finland, the United States maintained its position in the second place of the GCI amid varying levels of achievement in the different components. For instance, the country's overall performance is weakened by the quality of its public institutions. And although the United States still leads in the technology index, its overall score dropped, reflecting a reduction in the tertiary enrolment rate and a decline in the number of patents granted.

In Europe, France, at 26th place, received a boost in its rankings due to higher scores in public institutions and technology, which offset a decline in the macroeconomic environment. Unlike France, Ireland fell to the 30th position due to widespread declines in the different components of the index. Similarly, Italy, at the 41st position, also lost ground in the rankings, reflecting across-the-board declines in the major components of the index, particularly its macroeconomic environment.

Among central and eastern European countries, Estonia maintains its leadership at 22nd place in the overall rankings, enjoying the highest technology, public institutions, and macroeconomic environment scores in the region. Latvia is most notable for posting one of the most improved performances across the various components. Although Ukraine, at 84th place, has the lowest rank in Europe, the country has posted improvements in certain areas.

In Asia, Korea posted one of the most notable ascents in the GCI rankings, moving from the 25th to the 18th position. Korea's rise in the rankings was driven by improvements in its macroeconomic environment, increased public trust in politicians, a better score in the area of diversion of public funds, and a remarkable improvement in its technology performance with one of the highest increases in patent activity. Like Korea, Thailand and Vietnam registered notable improvements in overall rankings. Although Indonesia declines in the overall rankings, the country posts one of the most significant increases in its actual score. Its macroeconomic environment score is the 5th most improved, marked by significantly better scores in the area of government waste. Malaysia and India both derived gains from improvements in the area of technology. Among the most notable downward shifts in the rankings was experienced by China. The country's drop in the rankings was marked by a deterioration in the perceived quality of public institutions.

In Latin America, Chile continues to have the highest rank in the region, followed, at a considerable distance, by Mexico. Although Chile has the highest scores in the region in all three index components, the country has experienced notable deterioration in the area of government waste, exhibiting the worst decline in the indicator measuring public trust of politicians. The lowest ranking in the region is held by Haiti, which also occupies the 102nd position in the GCI. Brazil and Argentina both posted significant declines in the macroeconomic environment. Technology offers a bright spot for both countries: tertiary enrollment increased significantly and diffusion of ICT continues at a very fast pace in Brazil, while government prioritization of ICT and success of government ICT promotion both received higher ratings in Argentina. Among the countries in the region, the biggest declines in the rankings were experienced by Uruguay and Jamaica. Uruguay fell due to drastic deterioration of its macroeconomic environment as evident in the region's largest decline in credit rating. Lower scores in the macroeconomic environment also pushed Jamaica lower in the rankings. At the opposite extreme, Mexico and El Salvador experienced the most notable improvements in performance.

In the Middle East, Jordan and Turkey both post dramatic improvements in the quality of public institutions. Jordan, in particular, showed the largest score and rank increase in this area, driven by gains in control of corruption and greater independence of the judiciary. The country also posted better ratings relating to public trust in politicians, diversion of public funds, and the extent of distortive subsidies. Likewise, but to a lesser extent, Turkey exhibited significant improvements in the control of corruption and the independence of the judiciary.

In Africa, Botswana enjoys the highest ranking in the GCI. It has the highest public institutions and macroeconomic environment rankings in the region. Botswana's ranking in technology is lower than its ranking in other components; despite increases in ICT diffusion, significant drawbacks in technology remain. South Africa leads the region in the area of technology. However, South Africa's overall growth competitiveness ranking is lower than last year's because of a deterioration in some of the components that assess the quality of public institutions, particularly the prevalence of payments irregularities and the incidence of crime.

Table 2: Growth Competitiveness Index components

Growth Competitiveness Index (GCI)			
Country	Rank	Country	Rank
Finland	1	Bulgaria	64
United States	2	Turkey	65
Sweden	3	Philippines	66
Denmark	4	Jamaica	67
Taiwan	5	Sri Lanka	68
Singapore	6	Tanzania	69
Switzerland	7	Russian Federation	70
Iceland	8	Ghana	71
Norway	9	Indonesia	72
Australia	10	Pakistan	73
Japan	11	Algeria	74
Netherlands	12	Romania	75
Germany	13	Malawi	76
New Zealand	14	Serbia	77
United Kingdom	15	Argentina	78
Canada	16	Senegal	79
Austria	17	Uganda	80
Korea	18	Macedonia	81
Malta	19	Venezuela	82
Israel	20	Kenya	83
Luxembourg	21	Ukraine	84
Estonia	22	Bolivia	85
Spain	23	Ecuador	86
Hong Kong	24	Nigeria	87
Portugal	25	Zambia	88
France	26	Guatemala	89
Belgium	27	Nicaragua	90
Chile	28	Cameroon	91
Malaysia	29	Ethiopia	92
Ireland	30	Mozambique	93
Slovenia	31	Honduras	94
Thailand	32	Paraguay	95
Hungary	33	Madagascar	96
Jordan	34	Zimbabwe	97
Greece	35	Bangladesh	98
Botswana	36	Mali	99
Latvia	37	Angola	100
Tunisia	38	Chad	101
Czech Republic	39	Haiti	102
Lithuania	40		
Italy	41		
South Africa	42		
Slovak Republic	43		
China	44		
Poland	45		
Mauritius	46		
Mexico	47		
El Salvador	48		
Trinidad and Tobago	49		
Uruguay	50		
Costa Rica	51		
Namibia	52		
Croatia	53		
Brazil	54		
Gambia	55		
India	56		
Peru	57		
Egypt	58		
Panama	59		
Vietnam	60		
Morocco	61		
Dominican Republic	62		
Colombia	63		

(cont'd.)

Macroeconomic Environment Index			
Country	Rank	Country	Rank
Singapore	1	Indonesia	64
Finland	2	Sri Lanka	65
Luxembourg	3	Colombia	66
Norway	4	Senegal	67
Denmark	5	Ghana	68
Switzerland	6	Dominican Republic	69
Australia	7	Ukraine	70
Sweden	8	Uganda	71
Netherlands	9	Bangladesh	72
Austria	10	Bulgaria	73
Canada	11	Nigeria	74
United Kingdom	12	Brazil	75
New Zealand	13	Tanzania	76
United States	14	Kenya	77
Hong Kong	15	Cameroon	78
Iceland	16	Madagascar	79
Spain	17	Macedonia	80
Taiwan	18	Romania	81
Belgium	19	Turkey	82
France	20	Bolivia	83
Germany	21	Ethiopia	84
Ireland	22	Guatemala	85
Korea	23	Jamaica	86
Japan	24	Serbia	87
China	25	Honduras	88
Thailand	26	Uruguay	89
Malaysia	27	Ecuador	90
Italy	28	Mali	91
Malta	29	Paraguay	92
Botswana	30	Argentina	93
Portugal	31	Venezuela	94
Tunisia	32	Mozambique	95
Greece	33	Chad	96
Estonia	34	Zambia	97
Chile	35	Malawi	98
Latvia	36	Haiti	99
Slovenia	37	Nicaragua	100
Hungary	38	Angola	101
Czech Republic	39	Zimbabwe	102
South Africa	40		
Lithuania	41		
Jordan	42		
Morocco	43		
Israel	44		
Vietnam	45		
Gambia	46		
Trinidad and Tobago	47		
El Salvador	48		
Poland	49		
Slovak Republic	50		
Algeria	51		
India	52		
Namibia	53		
Mexico	54		
Croatia	55		
Egypt	56		
Mauritius	57		
Peru	58		
Panama	59		
Philippines	60		
Russian Federation	61		
Pakistan	62		
Costa Rica	63		

(cont'd.)

Table 2: Growth Competitiveness Index components (cont'd.)

Public Institutions Index		Technology Index	
Country	Rank	Country	Rank
Denmark	1	Dominican Republic	64
Finland	2	Ghana	65
Iceland	3	Algeria	66
Australia	4	Croatia	67
New Zealand	5	Morocco	68
Singapore	6	Zambia	69
Sweden	7	Jamaica	70
Switzerland	8	Panama	71
Germany	9	Sri Lanka	72
Hong Kong	10	Ethiopia	73
Netherlands	11	Pakistan	74
United Kingdom	12	Senegal	75
Luxembourg	13	Indonesia	76
Austria	14	Serbia	77
Israel	15	Nicaragua	78
Norway	16	Bolivia	79
United States	17	Ecuador	80
Malta	18	Russian Federation	81
Chile	19	Mozambique	82
Jordan	20	Mali	83
Taiwan	21	Uganda	84
Portugal	22	Philippines	85
France	23	Romania	86
Canada	24	Guatemala	87
Ireland	25	Argentina	88
Botswana	26	Venezuela	89
Belgium	27	Zimbabwe	90
Estonia	28	Angola	91
Uruguay	29	Kenya	92
Japan	30	Macedonia	93
Spain	31	Ukraine	94
Tunisia	32	Cameroon	95
Hungary	33	Madagascar	96
Malaysia	34	Paraguay	97
Slovenia	35	Nigeria	98
Korea	36	Honduras	99
Thailand	37	Bangladesh	100
Malawi	38	Chad	101
Gambia	39	Haiti	102
El Salvador	40		
Lithuania	41		
Greece	42		
South Africa	43		
Mauritius	44		
Latvia	45		
Italy	46		
Czech Republic	47		
Namibia	48		
Costa Rica	49		
Mexico	50		
Slovak Republic	51		
China	52		
Brazil	53		
Peru	54		
India	55		
Trinidad and Tobago	56		
Egypt	57		
Poland	58		
Tanzania	59		
Colombia	60		
Vietnam	61		
Bulgaria	62		
Turkey	63		

(cont'd.)

Country	Rank	Country	Rank
United States	1	India	64
Finland	2	China	65
Taiwan	3	Serbia	66
Sweden	4	El Salvador	67
Japan	5	Egypt	68
Korea	6	Russian Federation	69
Switzerland	7	Macedonia	70
Denmark	8	Morocco	71
Israel	9	Sri Lanka	72
Estonia	10	Vietnam	73
Canada	11	Kenya	74
Singapore	12	Zimbabwe	75
Norway	13	Ecuador	76
Germany	14	Uganda	77
Iceland	15	Indonesia	78
United Kingdom	16	Guatemala	79
Malta	17	Gambia	80
Netherlands	18	Tanzania	81
Australia	19	Nigeria	82
Malaysia	20	Pakistan	83
Czech Republic	21	Ukraine	84
Portugal	22	Nicaragua	85
New Zealand	23	Ghana	86
Slovenia	24	Honduras	87
Spain	25	Bolivia	88
Latvia	26	Senegal	89
Austria	27	Zambia	90
France	28	Paraguay	91
Belgium	29	Mozambique	92
Greece	30	Cameroon	93
Chile	31	Malawi	94
Hungary	32	Bangladesh	95
Slovak Republic	33	Algeria	96
Poland	34	Madagascar	97
Brazil	35	Angola	98
Lithuania	36	Mali	99
Hong Kong	37	Ethiopia	100
Ireland	38	Haiti	101
Thailand	39	Chad	102
South Africa	40		
Croatia	41		
Luxembourg	42		
Mexico	43		
Italy	44		
Argentina	45		
Costa Rica	46		
Trinidad and Tobago	47		
Jordan	48		
Mauritius	49		
Panama	50		
Uruguay	51		
Dominican Republic	52		
Jamaica	53		
Turkey	54		
Romania	55		
Philippines	56		
Tunisia	57		
Venezuela	58		
Botswana	59		
Colombia	60		
Peru	61		
Namibia	62		
Bulgaria	63		

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The Business Competitiveness Index

Stable political, legal, and social institutions and sound macroeconomic policies create the potential for improving national prosperity. But wealth is actually created at the microeconomic level—in the ability of firms to create valuable goods and services using efficient methods. Only in this way can a nation support high wages and the attractive returns to capital necessary to support sustained investment. The *Business Competitiveness Index (BCI)* presented in this volume is based on a conceptual framework and statistical approach which follows that of the previous reports and the findings are fully comparable with previous Microeconomic Competitiveness Index results.

The microeconomic foundations of productivity rest on two interrelated areas: (1) the sophistication with which domestic companies or foreign subsidiaries operating in the country compete, and (2) the quality of the microeconomic business environment in which they operate. The productivity of a country is ultimately set by the productivity of its companies. An economy cannot be competitive unless companies operating there are competitive, whether they are domestic firms or subsidiaries of foreign companies. However, the sophistication and productivity of companies is inextricably intertwined with the quality of the national business environment. More productive company strategies require more highly skilled people, better information, more efficient government processes, improved infrastructure, better suppliers, more advanced research institutions, and more intense competitive pressure, among other things. This is what the BCI tries to capture.

The BCI is constructed from measures drawn primarily from the Executive Opinion Survey. Quantitative measures are utilized for patenting rates and Internet and cellular telephone penetration. For all of the other dimensions, quantitative data for many countries are unavailable. Thus, the Survey offers many unique measures and captures the informed judgments of thousands of business leaders and decision makers in the economies examined.

To derive the overall BCI, two subindexes are computed. The subindexes measure (1) the *sophistication of company operations and strategy* and (2) the *quality of the national business environment*, respectively. Many of the dimensions of company sophistication and the quality of the business environment tend to move together. Moreover, the sample of countries is relatively small and the number of relevant variables is high. Thus, the impact of individual variables is difficult to distinguish statistically. Hence common factor analysis is used to compute the subindexes. The two subindexes are then averaged to estimate the overall BCI. The weights are determined from the coefficients of a multiple regression of the subindexes on GDP per capita.

The BCI rankings for 2003 are shown in Table 3. Column 1 shows the overall rankings. Columns 2 and 3

display the two subindexes: the company operations and strategy subindex and the quality of the national business environment subindex, respectively.

In the overall BCI, Finland retakes the leading position, after dropping to second place behind the United States last year. Finland remains one of the world's most remarkable success cases over the last decade. The United States was pulled down by concerns about rising trade protection, tightening capital availability, and weakening cluster vitality. Other advanced nations improving their rankings include France, Denmark, Sweden, Australia, and New Zealand. France gained five positions, mainly due to an improving business environment, regaining its pre-2000 ranking. Heartening for France are improvements in local competition, governance, and reductions in government distortions. Denmark and New Zealand gained four ranks, mainly based on improvements in the business environment. Australia continued its upward trend, while Sweden reached the third position based on company and business environment improvements.

Advanced countries slipping in the rankings include Austria, based on a deteriorating business environment. The United Kingdom also slipped several places after strong gains last year. Other advanced nations that are slipping are Switzerland, Canada, and Japan. Japan, while still sliding, registered strong improvements in corporate governance and cluster collaboration. Germany's rank falls only one place, but the quality of its business environment dropped precipitously. Labor-management relations are a growing concern in Germany, along with creeping subsidies and a hollowing of clusters.

Middle-income nations improving their competitiveness rankings this year include Latvia, Jordan, Vietnam, Mexico, Colombia, Indonesia, Mauritius, Greece, and Thailand. One new country, Malta, entered the middle-income group, ranked at 42. Egypt reentered the rankings at 58, showing a significant decline compared with its ranking in the 1998–2001 period. Latvia jumped by a remarkable 16 ranks, driven by strong perceived across-the-board improvements in the business environment and company sophistication. Whether this large jump is a temporary event reflecting positive near-term sentiment or a sustainable trend will become more evident in subsequent years.

Middle-income countries losing rank in competitiveness include the Dominican Republic, Hungary, Sri Lanka, Trinidad and Tobago, Croatia, and China. The Dominican Republic (down 18 places) and Sri Lanka (down 9 places) fall back after strong jumps last year, signaling that last year's rankings might have been anomalies. The Dominican Republic's ranking was led down by concerns about the state of local companies. Hungary (down 10) and Croatia (down 8) appear to be suffering from increasing competition from other transition countries.

Table 3: The Business Competitiveness Index

Country	BCI ranking	Company operations and strategy ranking	Quality of the national business environment ranking	Country	BCI ranking	Company operations and strategy ranking	Quality of the national business environment ranking
Finland	1	4	1	Tanzania	68	68	67
United States	2	2	2	Argentina	69	63	73
Sweden	3	3	5	Gambia*	70	80	66
Denmark	4	7	3	Uruguay	71	77	68
Germany	5	1	9	Malawi	72	71	76
United Kingdom	6	8	6	Ukraine	73	72	77
Switzerland	7	5	8	Uganda*	74	78	69
Singapore	8	12	4	Pakistan	75	81	70
Netherlands	9	10	11	Romania	76	84	71
France	10	9	14	Bulgaria	77	85	75
Australia	11	18	7	Zimbabwe	78	70	81
Canada	12	14	10	Serbia	79	75	79
Japan	13	6	20	Nigeria	80	73	80
Iceland	14	15	12	Peru	81	83	78
Belgium	15	11	17	Macedonia*	82	79	83
Taiwan	16	16	16	Cameroon*	83	86	82
Austria	17	13	18	Zambia	84	82	85
New Zealand	18	23	13	Venezuela	85	74	87
Hong Kong SAR	19	22	15	Guatemala	86	76	88
Israel	20	20	19	Senegal	87	94	84
Ireland	21	17	22	Algeria	88	93	86
Norway	22	21	21	Ecuador	89	87	92
Korea	23	19	25	Madagascar	90	88	90
Italy	24	24	23	Bangladesh	91	91	91
Spain	25	25	26	Mali*	92	98	89
Malaysia	26	26	24	Mozambique	93	90	95
South Africa	27	28	28	Nicaragua	94	92	93
Estonia	28	36	27	Honduras	95	89	96
Latvia	29	29	31	Ethiopia	96	96	94
Slovenia	30	27	34	Paraguay	97	95	98
Thailand	31	31	32	Bolivia	98	97	97
Chile	32	34	30	Chad	99	99	99
Tunisia	33	38	29	Haiti	100	101	100
Brazil	34	30	39	Angola	101	100	101
Czech Republic	35	33	38				
Portugal	36	46	33				
India	37	40	36				
Hungary	38	45	37				
Greece	39	39	40				
Lithuania	40	41	41				
Jordan	41	59	35				
Malta	42	47	42				
Slovak Republic	43	44	43				
Mauritius	44	35	46				
Costa Rica	45	32	47				
China	46	42	44				
Poland	47	43	45				
Mexico	48	37	51				
Morocco	49	49	49				
Vietnam	50	53	48				
Colombia	51	50	54				
Turkey	52	51	55				
Trinidad and Tobago	53	54	53				
Botswana	54	67	50				
Namibia	55	64	52				
Jamaica	56	56	56				
Sri Lanka	57	52	59				
Egypt	58	55	62				
Panama	59	60	60				
Indonesia	60	62	61				
Dominican Republic	61	57	63				
Croatia	62	65	58				
Ghana*	63	66	57				
El Salvador	64	58	65				
Philippines	65	48	74				
Russian Federation	66	69	64				
Kenya	67	61	72				

(cont'd.)

*Survey data for these countries have high within-country variance. Until the reliability of survey responses improves with future educational efforts and improved sampling in these countries, their rankings should be interpreted with caution.

Finally, Trinidad and Tobago has experienced declining competitiveness since its entry into the ranking in 2001. China, which showed a strong gain last year, has reverted back to its ranking of previous years. A surge in confidence about China's prospects proves not to have been sustainable. China was pulled down by concerns about red tape, corruption, judicial independence, and trade barriers, among other factors, though Chinese companies were judged to be making positive progress. Russia continues a slow downward trend, while Argentina's position seems to have stabilized.

Among low-income countries, rankings compared with last year's were quite stable. Peru slipped significantly (down 5 places), continuing a negative trend. Ecuador moved up 3 places. Of the low-income countries ranked for the first time, Ghana entered at 63, Kenya at 67, and Tanzania at 68. Pakistan entered at 75 and Serbia at 79. Angola became the lowest ranked country at 101.

The GCI and the BCI measure different dimensions of competitiveness. Figure 1 compares the two rankings for this year. Despite the different methodologies used in their construction, and although the two indexes are meant to capture different (although complementary) aspects of competitiveness, they are highly correlated. Finland ranks first on both indexes. The two indexes also coincide in the ranks of second, third, and fourth: the United States, Sweden, and Denmark, respectively. Moreover, the two indexes agree that the three lowest-ranked countries are Haiti, Chad, and Angola. Of course, the two rankings are not perfectly correlated, which means that some countries are ranked higher by one index than they are by the other. At the top, Taiwan is ranked 5th by the GCI and 16th by the BCI. Other countries that are ranked higher by the GCI than the BCI include Norway, Malta, Portugal, Botswana, El Salvador, Uruguay, Gambia, Perú, Bulgaria, Algeria, and Bolivia. Countries that are ranked lower by the GCI than the BCI include France, Germany, the United Kingdom, Italy, South Africa, India, Kenya, and Zimbabwe.

Structure of the Report

The first part of the *Report* includes two chapters. The first one, by Jennifer Blanke and Fiona Paua (of the World Economic Forum) and Xavier Sala-i-Martin (of Columbia University and Universitat Pompeu Fabra), describes the methodology and analyzes the various rankings behind the Growth Competitiveness Index. In the second chapter, Michael Porter (of Harvard University) presents the details of the construction and analyzes the results of the Business Competitiveness Index.

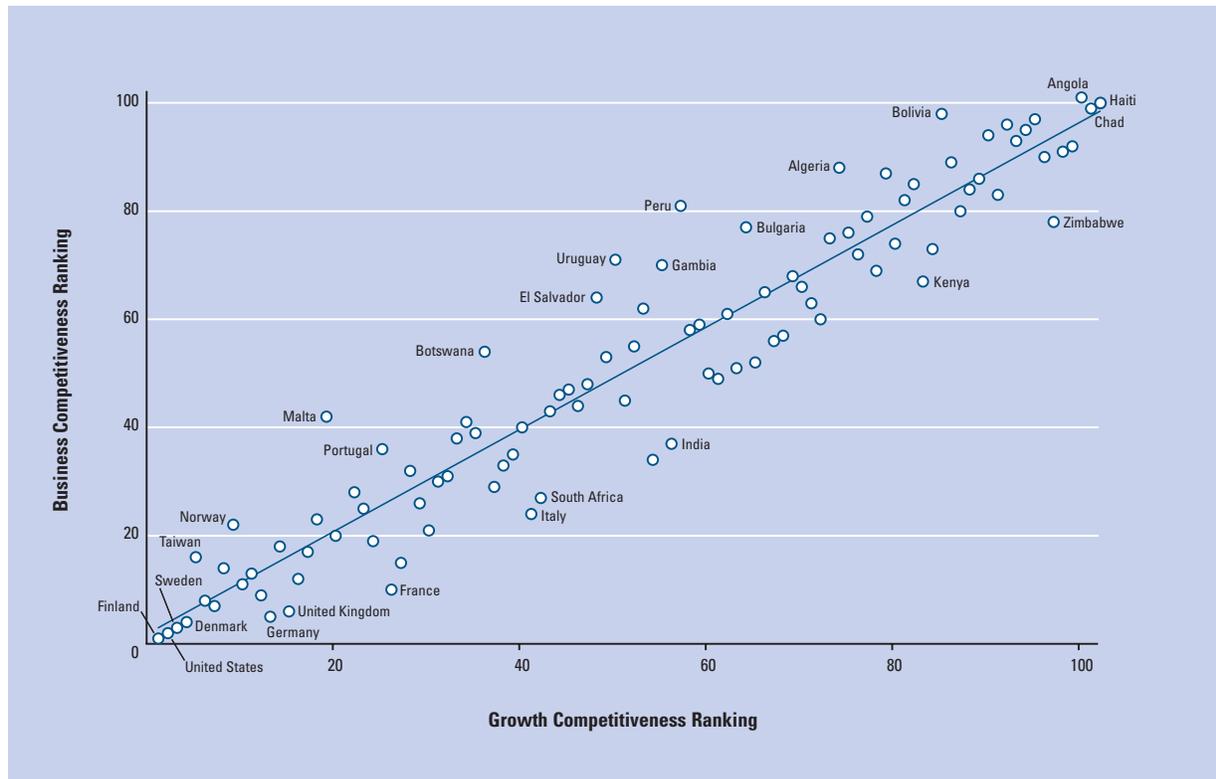
The second part of the *Report* includes five chapters describing various issues related to competitiveness and economic performance. In his chapter "The Year in Review," Martin Baily (of the Institute for International Economics in Washington, DC) looks at some of the important issues and challenges facing the world economy that have emerged or been at center stage this past year. First, there is a look at the impact of the war in Iraq and whether or not this will sour international relations. The war was the central political and military event of the past year, and it has indeed soured international relations. But, surprisingly, so far its economic consequences do not seem to have been all that large.

Next he turns to the issue of exchange rate adjustment and the rebalancing of global trade patterns. The United States has been running a massive trade deficit that continues to grow. Many policymakers have judged that at some point there would have to be a downward adjustment in the value of the dollar and in the current account deficit. This past year that adjustment seems to have started, with a substantial swing in the euro/dollar exchange rate. A particular concern now is to figure out how the world economy can return to sustainable growth while adjusting to a still lower dollar and lower US deficit, when these occur. The adjustment process must be seen in a global context, not just in a US context.

The review then looks at the steps being taken toward economic reform in Europe, where considerable momentum for a reform agenda has emerged this past year. The 2000 Lisbon EU council meeting was an important landmark. Implementation seems to be taking place, although with some resistance. The fourth topic is an examination of deflation, an issue that has been around for a while as part of Japan's economic difficulties, but has assumed increased importance over the past year, with concerns that deflation could spread to the United States, Germany, and possibly other countries.

The implications of rapid growth in China have been a hot topic for a while, but have become a much hotter topic in the past year. As the rest of the world economy turned sluggish, the Chinese surged ahead, increasing their exports at a very rapid pace. From Tokyo to Milan, from Mexico City to Chicago, everyone is wondering whether China can continue to grow so fast and how their own jobs and businesses will be affected if it does. The discussion of China is followed by a short review of the economic effects of SARS outbreak of the past year. Finally Baily turns to Africa where there have been important developments, both in the evaluation of the dangers of AIDS to the economy of the region and in the local and international response to the disease.

Figure 1: Growth and Business Competitiveness rankings



In “Varieties of Economic Experience in the Developing World,” Augusto Lopez-Claros (of the World Economic Forum) outlines some of the key challenges facing policymakers in the developing world. He focuses his attention on two sets of countries, a small but representative sample of those ranked by the *Global Competitiveness Report*. The first set is made up of Argentina, Russia, and Turkey—countries that have had serious financial crises in the recent past and offer a treasure trove of insights in terms of the causes of such crises, their consequences, and the policy responses to them, to say nothing of the effectiveness of existing international institutional mechanisms to cope with them. Lopez-Claros explains that, although the causes behind the crises in these three countries have been many, there is a thread common to all three countries: the lack of fiscal discipline combined with poor public debt management. In Russia, the problem was essentially on the revenue side. A persistent output drop during much of the 1990s contributed to the erosion of the tax base and this process was made worse by tax exemptions granted by the authorities to influential lobby groups. In Turkey, the problems were largely on the expenditure side: a combination of enormous claims on the budget associated with an overly generous pension system, an extensive network of agricultural

subsidy schemes and other quasi-fiscal operations, and the fiscal burden of a public debt overhang. Argentina’s crisis reflected the authorities’ ultimate failure to maintain adequate control over the public finances. By end-2000 the debt-to-GDP ratio had risen to 50 percent of GDP, not unusually high by international standards, but extremely high for an economy with a very low revenue ratio, an external debt to exports ratio in excess of 400 percent, and a contracting economy.

Another common aspect of these three economies is that the currencies had been pegged in some fashion. Lopez-Claros argues that the authorities in all three countries failed to recognize that successful pegs are usually underpinned by suitably tight fiscal policies. Moreover, lack of fiscal discipline over a number of consecutive years makes the country a captive to its creditors, including bondholders. The pattern is well known: persistent fiscal deficits result in their financing at increasingly higher interest rates, which inevitably worsen the deficit. The fiscal problem then leads to an external crisis when non-resident debt holders refuse to rollover the outstanding debt. Russia and Argentina defaulted on their external obligations; Turkey did not, but only due to massive IMF financial assistance. Lopez-Claros then analyzes the role of the IMF in its various principal roles of financier, advisor,

and overall crisis manager. He argues that although the Fund played—with varying degrees of success—each one of these roles in all three countries, the crisis in Argentina has forced the organization to recognize that there has to be a better way of dealing with unsustainable debt burdens than the present ad-hoc arrangements, involving a broad range of economic, social, and political dislocations. He then looks at several aspects of the ongoing debate on the need to develop formal mechanisms for sovereign debt restructuring.

The second set of countries analyzed in this paper consists of the transition economies of central and eastern Europe, eight of whose members are scheduled to join the European Union (EU) in May of 2004: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. These countries have had a good growth performance during the past decade and some of its members have the potential to join in the medium-term the upper ranks of the most competitive economies in the world. Quite aside from having benefited from reasonably competent macroeconomic management, as a group they have moved farther along than virtually any other set of economies in the world in implementing broad ranging structural reforms. Lopez-Claros argues that, the impressive achievements notwithstanding, policy-makers in these countries will continue to face a number of challenges. Countries expected to grow more rapidly and to experience real appreciation of their currencies may continue to attract substantial capital inflows which could put further upward pressures on currencies, generate higher current account deficits and foreign debt accumulation by the private sectors. The question which policy-makers will want to ask is whether the above set of factors imply any particular risks as the countries join the EU and, subsequently, cope with the challenges of a much more competitive environment. One possible scenario to this policy environment sees the authorities managing the pressures identified above through a combination of cautious fiscal policies and structural reforms.

The chapter on “Ranking National Innovative Capacity: Findings from the National Innovative Capacity Index” by Michael Porter and Scott Stern (of Northwestern University) analyzes the conditions that allow countries to innovate. In this chapter, the authors use the 2003 Executive Opinion Survey to assess the innovative capacity of 78 countries for which the required data are available. They examine a wide range of national characteristics suggested by the national innovative capacity framework and available from the Survey data to construct a National Innovative Capacity Index (NICI). They then rank countries on the NICI as well as five subindexes measuring important components of innovative vitality. The statistical findings reveal the striking degree to which measures of the national environment for innovation affect

innovative output. They also find that the bar for innovation is rising; even countries with an *absolute* increase in innovative capacity over 2001 sometimes register a *relative* decline because of their inability to improve local conditions as fast as other nations. They find that some countries have aggressively invested in innovative capacity ahead of that expected given current income in an effort to enhance competitiveness and prosperity. Conversely, in other nations, innovative capacity lags overall productivity and income rankings, raising concerns about the sustainability of their competitiveness.

In “Five Puzzles in the Behavior of Productivity, Investment, and Innovation,” Robert Gordon (of Northwestern University) analyzes the recent behavior of productivity growth. The behavior of productivity growth in the United States has surprised experts: instead of fading after the economy’s peak in mid-2000, US nonfarm business productivity growth has actually accelerated from a 2.45 percent annual rate during 1995–2000 to a stunning 3.34 percent annual growth rate in the three years between 2000:Q2 and 2003:Q2. As US productivity performance has become even stronger over the past three years, some puzzles have emerged regarding the revival, its causes, and the performance of the United States relative to the rest of the world. Gordon’s paper analyzes five of these puzzles.

The first puzzle is: *Whatever happened to the cyclical effect?* Using data through mid-2003, it is clear that there was only a negligible cyclical effect for 1995–99 but a temporary “bubble” in 2002. The author argues that this pattern of similar temporary blips was repeated in three previous business cycles.

The second puzzle is: *Why did productivity growth accelerate after 2000 when the ICT investment boom was collapsing?* Gordon analyzes a number of arguments proposed in the academic literature. He then concludes that the most persuasive argument points to “hidden” intangible investments in the late 1990s that required labor input but were not counted in measured output; after 2000, the delayed benefits of intangible investments boosted output, while much of the labor input that created them was laid off. In short, productivity growth was understated in the late 1990s but has been overstated since then.

The third puzzle reads: *What aspects of innovation caused productivity growth to take off?* To deal with this puzzle, Gordon draws an analogy between computers and electricity. In the case of electricity, miniaturization was the key step in making small electric motors practical, and complementary investments, especially roads, were necessary to reap benefits. For computers the key steps were miniaturization in the form of the PC, followed in the 1990s by the “marriage” of computer hardware with software and communication technology.

The fourth puzzle is: *How can ICT investment revive if innovations are second-rate?* First-rate inventions in the 1990s, notably the web and user-friendly business productivity software, are being followed by second-rate inventions in the current decade, such as web-enabled mobile phones, wi-fi enabled laptops, and a host of innovations providing incremental improvements in consumer entertainment but not fundamental changes in business productivity. Gordon argues that innovation is the fundamental driver of the demand for investment (rather than the other way around). Given that, the question is: what does the rise and fall of ICT investment since 1995 tell us about the pace of innovation for the near future? The author speculates about the future path of innovation in the entertainment and medical industries.

The last puzzle is: *Why has Europe failed to experience a productivity growth revival?* Gordon argues that US institutions foster creative destruction and financial markets that welcome innovation, while Europe remains under the control of corporatist institutions that dampen competition and inhibit new entry. He also argues that Europe lacks a youth culture like that of the United States, which fosters independence: US teenagers work after school and US college students must work to pay for much of their educational expense. There is a chasm of values across the Atlantic, as Americans facilitate the development of high-productivity “big-box” retail formats while Europeans are disdainful of overly dispersed American metropolitan areas with their traffic congestion, waste of energy, and starvation of public transit.

In his chapter “Governance Redux: The Empirical Challenge,” Daniel Kaufmann of the World Bank Institute argues that governance is still at a crossroads, its underperformance evident in most regions and across a vast number of countries within such regions. This contrasts with the significant strides that have been made in many countries in improving the content of macroeconomic policies for well over a decade. In this sense, Kaufmann argues, there is a growing “governance gap,” since improvements in governance are far from keeping pace with the progress attained in economic policy and some other areas. Such a gap implies that public governance is nowadays a central binding constraint to growth and development.

Indeed, the enterprises from developing and transition economies included in this year’s Survey single out corruption and excessive bureaucracy among the top constraints to their business operations, while the respondent firms from the OECD single out excessive bureaucracy and the tax regime. Relative to these and other institutional weaknesses, high inflation and distortions in the exchange rate regime are not ranked as important constraints by the firms.

More generally, with a recently constructed world-wide governance indicators dataset, the author shows the

extent to which national governance matters: a country that significantly improves key governance dimensions such as the rule of law, corruption, the regulatory regime, and voice and democratic accountability can expect in the long run a dramatic increase on its per capita incomes and in other social dimensions. Specifically, if for instance the quality of rule of law were to improve by one standard deviation, from, say the current relatively low level of Ukraine to the “middling” level of South Africa, a fourfold increase in per capita incomes can be expected in the long run. A larger increase in the quality of rule of law (by two standard deviations) in Ukraine (or in other countries in the former Soviet Union), to the much higher level in Slovenia or Spain, would further multiply such income per capita increase. Similar results emerge from other governance dimensions: a mere one standard deviation improvement in voice and accountability from the low level of Venezuela to that of South Korea, or in control of corruption from the low level of Indonesia to the middling level of Mexico, or from the level of Mexico to that of Costa Rica, would also be associated with an estimated fourfold increase in per capita incomes, as well as similar improvements in literacy and in reducing child mortality.

In contrast to the major impact that improved governance can have on incomes and development, the findings show no reverse causality or feedback mechanism: higher incomes in themselves do not get automatically translated into improved governance. The fact that there is no automatic virtuous circle means that continuous political resolve and interventions are required to attain good governance. It also implies that a country exhibiting higher incomes than would be predicted by its current levels of governance can expect downward pressure on the sustainability of such incomes—given their governance level. Such shortfall in the country’s actual quality of governance, as compared with the governance level required to support the country’s income level, is described as the “governance deficit.” The extent of the governance deficit may constitute a warning regarding the income and growth prospects of a country. For instance, the evidence suggests that by the late 1990s most countries in Latin America had a substantial governance deficit in that their actual per capita incomes were higher than would have been predicted by the prevailing levels of governance.

The author also reviews briefly recent work anchored in the new comparative economics, which compares different capitalist systems. In particular, he discusses some of the deeper historical determinants of current governance performance, and finds that the origins of a country’s legal system—particularly whether it adopted common or civil law systems—may not be a central determinant of governance outcomes nowadays, especially for lower-income countries. Further inquiry into the deeper determinants of governance, including understanding the relevance of

historical patterns of settlement and of geography, seems to hold promise, however.

The empirical evidence also points to the fact that politics matter substantially in understanding good governance, and, within it, the corporate sector plays an active role in shaping such political (and thus policy) outcomes. Powerful firms are not mere passive “takers” of the overall investment climate (imposed by the public sector); instead such enterprises play a key role in shaping it. The database provided by the Survey also permits the empirical evaluation of political dimensions of governance traditionally regarded as non-measurable, such as the extent of “capture” and of undue influence by some politically connected powerful firms in shaping the regulations, laws, and policies of a country. Unequal distribution of influence on policy and regulatory outcomes (or “crony bias”) are found to be closely associated with poor public and financial governance performance.

Finally, the empirical richness of the Survey data set provides a key input for the construction of an initial governance database at the city level. This database and research-in-progress is to be expanded over the coming year, yet the early results support the observation that governance performance at the city level is aided by the extent of the country’s globalization and urbanization path (controlling for income levels). Further, the city’s relative size and its status as a capital or a port do not appear to have a deleterious effect on the quality of city-level governance.

The findings emphasize the need to revisit conventional advice on strategies to improve public governance. Such advice has focused excessively on attempts to reform the internal functioning of public institutions, often drawing from standard templates from industrialized countries. Instead, further focus is needed on aspects that do contain a political dimension. In particular, addressing the nexus between corporate strategies and public governance (mediated by the “institution of influence”) is of particular interest. And specifically, the findings on undue influence and state capture point to the limits of traditional public-sector measures (such as incessant legal drafting and codes of ethics manuals, creating new Anti-Corruption agencies, or launching another anticorruption campaign). By contrast, this chapter’s findings underscore the need for far more focus on external accountability, on transparency mechanisms, and on prevention. It is emphasized that such enhanced focus on governance matters is also warranted at the subnational level.

The *Report* ends with a comprehensive section that contains country profiles for each of the individual economies covered. This part also includes data tables for the variables that are used as inputs into the calculations of the competitiveness indexes, as well as a primer on how best to glean the information contained in the country

profiles and the data tables, including some of the underlying assumptions. In addition, technical notes elucidate individual variables and the results of the World Economic Forum’s Executive Opinion Survey.