Executive Summary

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The World Economic Forum's definition of competitiveness goes beyond notions of exchange rate competitiveness, and links the concept to productivity. Thus, competitiveness is defined as that collection of factors, policies and institutions which determine the level of productivity of a country and that, therefore, determine the level of prosperity that can be attained by an economy. However, productivity is also the key driver of the rates of return on investment, which, in turn, determine the aggregate growth rates of the economy. Thus, a more competitive economy is one that is likely to grow faster over the medium to long term.

Much of the work at the World Economic Forum in the area of competitiveness is aimed at highlighting the factors, policies, and institutions that determine the sharply different growth experiences of over 100 economies. What explains the differences in the evolution of per capita income in, say, Argentina, Ghana, and Taiwan over the last five decades?

Perhaps few questions are more pertinent in the area of comparative development. There are at least three key insights that emerge from the Forum's work in this field: first, that the significant factors are many, and wide-ranging. The quality of the macroeconomic environment is certainly crucial: how many countries can we point to which have shown sustained growth while *mismanaging* the public finances or pursuing misguided or inconsistent exchange rate policies?

But cautious management of the macroeconomy is not the only concern of the public sector. One must also ask: Does the government maintain an arm's-length relationship with respect to the private sector, or does it play favorites? Does the judicial system allow for the reasonable, expeditious, transparent, and low-cost settlement of disputes, or is justice for sale? Is tax revenue channeled back into the economy through productivity-enhancing investments in human capital and infrastructure, or is the money wasted on inefficient projects, or, what is worse, mostly stolen? Is the regulatory environment hampered by unnecessary layers of bureaucracy and red tape, reducing competitiveness and raising the costs of transactions and operations? How efficiently are new technological innovations absorbed, and is attention being paid to constantly upgrading the country's educational system? Does the country engage with the outside world with openness and self confidence, or with fear and ambivalence? What is the role of property rights and institutions?

The answers to the above questions will vary greatly across countries and, not surprisingly, will have an important bearing on whether the economy grows in a predictable and sustained way (e.g., Taiwan), fails to fulfill its potential (e.g., Argentina), or whether it stagnates, and actually suffers a reduction in per capita income (e.g., Ghana).

Second, these factors matter differently for different countries, depending on their stage of development. Management of the public finances in Finland is less of a concern than in India or Turkey, both of which have a long history of fiscal indiscipline. On the one hand, putting many large European countries to shame, Finland is facing the aging of its population by running surpluses now to pay for future pension liabilities. India and Turkey, on the other hand, are running budget deficits, although the latter, it must be said, has made remarkable progress recently in abandoning irresponsible fiscal policies, which resulted in the accumulation of large levels of public debt. In Finland, the pace of technological innovation is absolutely central to the country's future growth prospects. Whether Nokia is able to maintain its technological edge over its Asian rivals is a far more important determinant of the future evolution of per capita income in Finland, than whether there is a slight rise in inflation.

Third, the importance of these factors changes over time, a trend enhanced by the forces of globalization. Inflation—on a downward trend worldwide, and fallen to some of the lowest levels in the post-war period—is not as much of a worry as it used to be in the 1970s and 1980s, when even the United States suffered from double-digit inflation. But, with increasing capital mobility and skittish financial markets, countries that do not manage their public finances well do so at increasing risk, as Argentina found out in late 2001. Education, the acquisition of relevant skills, and the level of training of the labor force have acquired growing importance in recent years, as swift reductions in the costs of transport and communications have made it easier for global corporations to shift production to places in the world which are capable of bringing together the right combination of skills and low labor costs with political and social stability. This has become evident during the past decade in Central and Eastern Europe, whose economies have been growing at twice the average of the rest of Europe.

The Growth Competitiveness Index

The World Economic Forum has been measuring national competitiveness and producing Competitiveness *Reports* for well over two decades. Over the years, the specific methodology used to measure competitiveness has necessarily evolved, as we have taken into account the latest thinking about what drives the underlying productivity, critical to a country's ability to ensure sufficient and rising prosperity for its citizens. Since 2001, our methodology has been based on a model developed for the World Economic Forum by Jeffrey Sachs and John McArthur, called the Growth Competitiveness Index (GCI).

The GCI brings together a number of complementary concepts aimed at providing a quantified framework for measuring competitiveness. In formulating the range of factors that go into explaining the evolution of growth in a country, it identifies "three pillars": the *quality of the macroeconomic environment,* the *state of the country's public institutions,* and, given the importance of technology and innovation, the *level of its technological readiness.* The GCI uses a combination of hard data—e.g., university enrollment rates, inflation performance, the state of the public finances, the level of penetration of new technologies, such as mobile telephones and the Internet—and data drawn from the World Economic Forum's Executive Opinion Survey (Survey). The latter helps to capture concepts for which hard data are typically unavailable, but which are, nevertheless, central to an appropriate understanding of the factors fuelling economic growth. Examples of the latter might include such concepts as judicial independence, the prevalence of institutionalized corruption, or the extent of inefficient government intervention in an economy.

These various pieces are brought together under different subindexes, each capturing a different aspect of the growth process (e.g., the importance of contracts and law, the stability of the macroeconomic environment) and are aggregated to give an overall competitiveness "score." A second concept introduced by Sachs and McArthur is the notion that, while technology matters a great deal, it matters in different ways for different countries, depending on their stage of development. Innovation will be key in Switzerland, but the adoption of foreign technologies and technology transfer may be relatively more important in Chile, a distinction that led them to separate countries into two sets, called *core innovators* and *non-core innovators,* based on the number of US utility patents (patents for invention) per capita registered in the most recent year. Table 1 lists the core innovators, all with at least 15 patents per million population in 2004. A third concept was the idea that the factors which explain a nation's competitiveness will vary in importance across these two sets of countries. So, macroeconomic stability is likely to be a more important factor in Turkey than in Sweden. The exact methodology underlying the construction of this index is described in Chapter 1.1.

The Competitiveness Rankings for 2005

The rankings from this year's GCI are presented in Table 1. Finland maintains its position at the top of the ranking. The country owes its strong showing to one of the most innovative business environments in the world, particularly critical to driving productivity in the country, given its advanced stage of development. This is coupled with a very healthy macroeconomic environment, at a time when many other industrial countries are struggling in this area. The willingness of Finnish governments to run budget

surpluses, so as to be able to meet future social commitments linked to the aging of the population is particularly impressive. This approach to macroeconomic policy highlights a degree of political maturity in Finnish society worthy of emulation. Furthermore, Finland has an institutional environment that is among the world's finest: the business community operates in a climate of respect for the law, unusually low levels of corruption, and an openness and transparency which other countries would do well to study.

The United States is ranked second, its strong performance attributable to its continuing technological supremacy, and a pipeline of innovation second to none in the world. The US has companies that are aggressive in adopting new technologies, and spend heavily on research and development. However, the country's technological prowess is offset by its significantly weaker performance in other areas measured by the index, in particular aspects of the macroeconomic environment. This is not surprising in the context of intensifying international concern regarding macroeconomic imbalances in the country, especially in the area of the public finances.

As has been the case in recent years, the other Nordic countries continue to do very well in the competitiveness rankings. After Finland and the United States, Sweden and Denmark take the next two places in the ranking at 3rd and 4th places, respectively. Iceland and Norway follow closely behind, still among the top ten, at 7th and 9th places, respectively. These countries share a number of characteristics that make them extremely competitive, including very healthy macroeconomic environments and public institutions that are highly transparent and efficient. There is no evidence that relatively high tax rates are preventing these countries from competing effectively in world markets, or from delivering to their respective populations some of the highest standards of living in the world.

The United Kingdom (13th) and Germany (15th) continue to occupy relatively privileged positions in the overall rankings. Both countries have world-class public institutions, although the German business community views the property rights environment in their country and the functioning of their judicial system as being second to none in the world. Both countries have particularly strong scores on such variables as spending on R&D, collaboration between academia and the business community, and a broad range of variables which capture the use of various new technologies. Germany's overall GCI rank would be higher, were it not for the pessimism of its business community about the short-term economic growth outlook, and the presence of a large public sector deficit. Italy's performance (47th) is analyzed in detail in a special box in Chapter 1.1.

Among the ten countries recently acceding to the EU, Estonia leads the pack, at 20th place, ahead of several of the wealthier original EU15 members. Estonia's ranking is impressive, having bridged the gap between the inefficiencies of central planning and competent economic performance in less than 15 years. The worst performer among the accession countries continues to be Poland. However, on a positive note, some progress in Poland's performance is visible, with the country moving up 9 places to 51st since 2004. This is in line with a trend we see among many of the new accession countries, where there is a measured improvement in levels of competitiveness over recent years, likely due in large part to the general benefits of EU membership, and the incentives it provides for a proactive stance on the part of the government in the area of economic reform.

Unlike some other regions, where countries often cluster behind one or two top performers, Asian economies are spread throughout the full range of the index, pointing to their very different levels of development and growth potential. Leading within the region are Asian tigers, notably Taiwan and Singapore, ranked 5th and 6th respectively, several places ahead of the next Asian country covered by the GCI, Japan, ranked 12th. Japan's rank has been adversely affected by the deterioration of its public finances. However, what Japan lacks in fiscal discipline is more than compensated for by the country's impressive technology performance, with extremely high rankings in R&D, firm-level technology absorption, and patent registration, where the scores are second only to the United States, by a small margin.

China and India, 49th and 50th, respectively, ranked much more closely than in previous years. While China dropped three ranks, India moved up five places. The Chinese authorities have been trying to rein in the growth of credit, and the strength of demand has resulted in an acceleration of inflation in 2004. India's improved rank mirrors the country's somewhat higher position in the technology index. The increasing inflows of FDI to skill and technology-intensive sectors observed over the past few years have certainly succeeded in boosting the mood of the business community. Remaining worries in India, however, stem from the slight progress made in fiscal adjustment, the low penetration rates of new technologies and low enrollment rates for higher education. The latter two are also a problem in China. Both countries continue to suffer from institutional weaknesses, which, unless addressed, are likely to slow down their ascension to the top tier of the most competitive economies in the world. Chapter 1.1 features a box providing a detailed analysis of India's situation.

As in previous years, Chile, ranked 23rd, leads the way in Latin America by a wide margin. Indeed, the gap with respect to the next best performer in the region has

widened from 26 places in 2004 to 31 places in 2005, a characteristic not seen in any other region of the world. The country continues to benefit from a combination of remarkably competent macroeconomic management, and public institutions which have achieved EU levels of transparency and efficiency. Indeed, only eight of the 25 EU members have higher ranks on the public institutions subindex.

Mexico has fallen seven places since last year to 55th, ceding its second spot in the regional ranking to Uruguay, while Brazil fell by eight places to 65th place. Both Mexico and Brazil suffered drops in those indicators which capture the quality of their public institutions. In Mexico, the political uncertainties in the run-up to the 2006 presidential election, and the resulting paralysis in policymaking, considerably soured the mood of the business community. In Brazil business confidence may have been adversely affected by a weakening of the ruling party's coalition in the wake of bribery scandals and other events, which have cast the underlying strength of the country's public institutions in an unfavorable light.

Venezuela, which had a ranking of 62 in 2001, continues its precipitous decline to the bottom of the rankings, falling another four places to 89th position overall this year. Venezuela's performance is quite extraordinary from a number of perspectives: notwithstanding huge terms of trade gains from high oil prices, the government has managed to run budget deficits for a number of years, suggesting massive waste. It has one of the worst inflation performances in the world (115th) and has the distinction of having *the* worst property rights climate in the world (117th).

Within the Middle East and North Africa region, the small Gulf States perform quite well in the overall GCI rankings, including two new entrants to the index from the region this year: Qatar and Kuwait. The United Arab Emirates (UAE) and Qatar are ranked 18th and 19th, respectively. These countries are going through a particularly good phase. Terms-of-trade gains have boosted growth rates and reinforced already high levels of confidence in the business community, resulting from ongoing institutional modernization and improvements in macroeconomic management. The authorities have proven reasonably adept at not squandering the gains from higher oil prices, but, rather, are using these resources to reduce debt, to invest, and to save.

While most of the countries of the sub-Saharan African region are not very competitive, the region does have a number of relative success stories, including South Africa (42nd), Botswana (48th), and Mauritius (52nd). Zimbabwe, however, is a particularly sad case, whose quick descent to the bottom of the world's competitiveness rankings reflects the continued deterioration of the institutional climate, including the disappearance of property rights, the corruption of the rule of law, and the implications these and other factors have had for macroeconomic management. The country has the world's worst ranking (117th) for the quality of its macroeconomic environment. Table 2 contains the rankings for the three component indexes of the GCI for the 117 countries covered in this year's *Report*.

The Business Competitiveness Index

The Business Competitiveness Index (BCI) focuses on the underlying *microeconomic* factors which determine economies' current sustainable levels of productivity and competitiveness, thus providing a complementary approach to the forward-looking macroeconomic approach of the GCI described in the section above. The BCI rests on the idea that microeconomic factors are critical for national competitiveness, since wealth is actually created at the level of firms operating in an economy. The BCI specifically measures two areas that are critical to the microeconomic business environment in an economy: the sophistication of company operations and strategy, as well as the quality of the overarching national business environment in which they are operating.

This year's BCI rankings are shown in Table 3. The first column shows the overall rankings, while the second two columns show the rankings in each of the two subindexes: company operations and strategy and the quality of the national business environment.

The United States remains the leader in fundamental competitiveness ahead of Finland, the two countries occupying the number one and two spots since 1998. The United States benefited in 2005 from improvements relative to its peers in telecommunication infrastructure, the quality of electricity supply, and, notably, the quality of the education system.

High-income nations improving their rankings the most include Cyprus (up 8 ranks, with all rank changes referring to a constant sample of countries), based especially on improvements in foreign ownership related to EU accession, the Czech Republic (up 7 ranks), owing to more effective corporate boards, less corruption and bureaucratic red tape, and better availability of scientists and engineers, Austria (up 6 ranks), for improvements in the extent of bureaucratic red tape and several indicators of financial market strengths, and Singapore (up 5 ranks), for improvements in the intensity of local competition and the availability of scientists and engineers.

Advanced countries falling in the rankings include Hong Kong, Sweden, and Italy. Hong Kong (down 9 ranks) lost the ground it gained last year, due to increasing concerns over favoritism by government officials and growing bureaucracy. Sweden (down 8 ranks) dropped, due to concerns over judicial independence, and erosion

Table 1: Growth Competitiveness Index rankings and 2004 comparisons

Country	GCI 2005 Rank	GCI 2005 Score	GCI 2004 Rank
Finland	1	5.94	1
United States	2	5.81	2
Sweden	3	5.65	3
Denmark	4	5.65	5
Taiwan	5	5.58	4
Singapore	6	5.48	7
Iceland	7	5.48	10
Switzerland	8	5.46	8
Norway	9	5.40	6
Australia	10	5.21	14
Netherlands	11	5.21	12
Japan	12	5.18	9
United Kingdom	13	5.11	11
Canada	14	5.10	15
Germany	15	5.10	13
New Zealand	16	5.09	18
Korea, Rep.	17	5.07	29
United Arab Emirates	18	4.99	16
Qatar	19	4.97	—
Estonia	20	4.95	20
Austria	21	4.95	17
Portugal	22	4.91	24
Chile	23	4.91	22
Malaysia	24	4.90	31
Luxembourg	25	4.90	26
Ireland	26	4.86	30
Israel	27	4.84	19
Hong Kong SAR	28	4.83	21
Spain	29	4.80	23
France	30	4.78	27
Belgium	31	4.63	25
Slovenia	32	4.59	33
Kuwait	33	4.58	—
Cyprus	34	4.54	38
Malta	35	4.54	32
Thailand	36	4.50	34
Bahrain	37	4.48	28
Czech Republic	38	4.42	40
Hungary	39	4.38	39
Tunisia	40	4.32	42
Slovak Republic	41	4.31	43
South Africa	42	4.31	41
Lithuania	43	4.30	36
Latvia	44	4.29	44
Jordan	45	4.28	35
Greece	46	4.26	37
Italy	47	4.21	47
Botswana	48	4.21	45
China	49	4.07	46
India	50	4.04	55
Poland	51	4.00	60
Mauritius	52	4.00	49
Egypt	53	3.96	62
Uruguay	54	3.93	54
Mexico	55	3.92	48
El Salvador	56	3.86	53
Colombia	57	3.84	64
Bulgaria	58	3.83	59
Ghana	59	3.82	68
Trinidad and Tobago	60	3.81	51
Kazakhstan	61	3.77	—
Croatia	62	3.74	61
Namibia	63	3.72	52
Costa Rica	64	3.72	50
Brazil	65	3.69	57
Turkey	66	3.68	66
Romania	67	3.67	63
Peru	68	3.66	67
Azerbaijan	69	3.64	—
Jamaica	70	3.64	65
Tanzania	71	3.57	82
Argentina	72	3.56	74
Panama	73	3.55	58
Indonesia	74	3.53	69
Russian Federation	75	3.53	70
Morocco	76	3.49	56
Philippines	77	3.47	76
Algeria	78	3.46	71
Armenia	79	3.44	—
Serbia and Montenegro	80	3.38	89
Vietnam	81	3.37	77
Moldova	82	3.37	—
Pakistan	83	3.33	91
Ukraine	84	3.30	86
Macedonia, FYR	85	3.26	84
Georgia	86	3.25	94
Uganda	87	3.24	79
Nigeria	88	3.23	93
Venezuela	89	3.22	85
Mali	90	3.22	88
Mozambique	91	3.19	92
Kenya	92	3.19	78
Honduras	93	3.18	97
Gambia	94	3.18	75
Bosnia and Herzegovina	95	3.17	81
Mongolia	96	3.16	—
Guatemala	97	3.12	80
Sri Lanka	98	3.10	73
Nicaragua	99	3.08	95
Albania	100	3.07	—
Bolivia	101	3.06	98
Dominican Republic	102	3.05	72
Ecuador	103	3.01	90
Tajikistan	104	3.01	—
Malawi	105	3.00	87
Ethiopia	106	3.00	101
Madagascar	107	2.95	96
East Timor	108	2.93	—
Zimbabwe	109	2.89	99
Bangladesh	110	2.86	102
Cameroon	111	2.84	—
Cambodia	112	2.82	—
Paraguay	113	2.80	100
Benin	114	2.74	—
Guyana	115	2.73	—
Kyrgyz Republic	116	2.62	—
Chad	117	2.37	104

(cont'd.)

Table 2: Growth Competitiveness Index components

Growth Competitiveness Index (GCI)

Country	GCI 2005 Rank	GCI 2005 Score
Finland	1	5.94
United States	2	5.81
Sweden	3	5.65
Denmark	4	5.65
Taiwan	5	5.58
Singapore	6	5.48
Iceland	7	5.48
Switzerland	8	5.46
Norway	9	5.40
Australia	10	5.21
Netherlands	11	5.21
Japan	12	5.18
United Kingdom	13	5.11
Canada	14	5.10
Germany	15	5.10
New Zealand	16	5.09
Korea, Rep.	17	5.07
United Arab Emirates	18	4.99
Qatar	19	4.97
Estonia	20	4.95
Austria	21	4.95
Portugal	22	4.91
Chile	23	4.91
Malaysia	24	4.90
Luxembourg	25	4.90
Ireland	26	4.86
Israel	27	4.84
Hong Kong SAR	28	4.83
Spain	29	4.80
France	30	4.78
Belgium	31	4.63
Slovenia	32	4.59
Kuwait	33	4.58
Cyprus	34	4.54
Malta	35	4.54
Thailand	36	4.50
Bahrain	37	4.48
Czech Republic	38	4.42
Hungary	39	4.38
Tunisia	40	4.32
Slovak Republic	41	4.31
South Africa	42	4.31
Lithuania	43	4.30
Latvia	44	4.29
Jordan	45	4.28
Greece	46	4.26
Italy	47	4.21
Botswana	48	4.21
China	49	4.07
India	50	4.04
Poland	51	4.00
Mauritius	52	4.00
Egypt	53	3.96
Uruguay	54	3.93
Mexico	55	3.92
El Salvador	56	3.86
Colombia	57	3.84
Bulgaria	58	3.83
Ghana	59	3.82
Trinidad and Tobago	60	3.81
Kazakhstan	61	3.77
Croatia	62	3.74
Namibia	63	3.72
Costa Rica	64	3.72
Brazil	65	3.69
Turkey	66	3.68
Romania	67	3.67
Peru	68	3.66
Azerbaijan	69	3.64
Jamaica	70	3.64
Tanzania	71	3.57
Argentina	72	3.56
Panama	73	3.55
Indonesia	74	3.53
Russian Federation	75	3.53
Morocco	76	3.49
Philippines	77	3.47
Algeria	78	3.46
Armenia	79	3.44
Serbia and Montenegro	80	3.38
Vietnam	81	3.37
Moldova	82	3.37
Pakistan	83	3.33
Ukraine	84	3.30
Macedonia, FYR	85	3.26
Georgia	86	3.25
Uganda	87	3.24
Nigeria	88	3.23
Venezuela	89	3.22
Mali	90	3.22
Mozambique	91	3.19
Kenya	92	3.19
Honduras	93	3.18
Gambia	94	3.18
Bosnia and Herzegovina	95	3.17
Mongolia	96	3.16
Guatemala	97	3.12
Sri Lanka	98	3.10
Nicaragua	99	3.08
Albania	100	3.07
Bolivia	101	3.06
Dominican Republic	102	3.05
Ecuador	103	3.01
Tajikistan	104	3.01
Malawi	105	3.00
Ethiopia	106	3.00
Madagascar	107	2.95
East Timor	108	2.93
Zimbabwe	109	2.89
Bangladesh	110	2.86
Cameroon	111	2.84
Cambodia	112	2.82
Paraguay	113	2.80
Benin	114	2.74
Guyana	115	2.73
Kyrgyz Republic	116	2.62
Chad	117	2.37

(cont'd.)

Technology Index

Country	Rank	Score
United States	1	6.19
Finland	2	6.02
Taiwan	3	5.85
Sweden	4	5.78
Denmark	5	5.30
Switzerland	6	5.29
Korea, Rep.	7	5.26
Japan	8	5.24
Iceland	9	5.16
Singapore	10	4.93
Netherlands	11	4.88
Israel	12	4.87
Norway	13	4.87
Australia	14	4.82
Canada	15	4.79
Germany	16	4.78
United Kingdom	17	4.66
Estonia	18	4.62
New Zealand	19	4.47
Portugal	20	4.39
Austria	21	4.35
Czech Republic	22	4.31
Malta	23	4.29
France	24	4.26
Malaysia	25	4.22
Hong Kong SAR	26	4.21
Spain	27	4.21
Belgium	28	4.18
Luxembourg	29	4.11
Hungary	30	4.08
Ireland	31	4.07
Slovenia	32	4.07
United Arab Emirates	33	4.04
Slovak Republic	34	3.99
Chile	35	3.93
Cyprus	36	3.87
Greece	37	3.85
Latvia	38	3.83
Poland	39	3.77
Qatar	40	3.76
Bahrain	41	3.73
Lithuania	42	3.70
Thailand	43	3.69
Italy	44	3.68
Jamaica	45	3.64
South Africa	46	3.62
Mauritius	47	3.57
Kuwait	48	3.56
Romania	49	3.53
Brazil	50	3.51
Croatia	51	3.48
Jordan	52	3.46
Turkey	53	3.45
Philippines	54	3.43
India	55	3.42
Costa Rica	56	3.39
Mexico	57	3.39
Egypt	58	3.36
Argentina	59	3.35
Tunisia	60	3.35
Bulgaria	61	3.31
Trinidad and Tobago	62	3.25
Uruguay	63	3.19
China	64	3.18
Panama	65	3.17
Indonesia	66	3.13
Dominican Republic	67	3.13
Serbia and Montenegro	68	3.12
Ghana	69	3.11
El Salvador	70	3.09
Kenya	71	3.04
Venezuela	72	3.03
Russian Federation	73	3.01
Colombia	74	3.01
Peru	75	3.01
Botswana	76	2.99
Kazakhstan	77	2.99
Morocco	78	2.96
Namibia	79	2.95
Pakistan	80	2.94
Mongolia	81	2.93
Uganda	82	2.93
Mozambique	83	2.91
Georgia	84	2.84
Ukraine	85	2.82
Tanzania	86	2.81
Azerbaijan	87	2.79
Sri Lanka	88	2.79
Moldova	89	2.76
Nigeria	90	2.74
Macedonia, FYR	91	2.73
Vietnam	92	2.72
Albania	93	2.69
Armenia	94	2.69
Honduras	95	2.68
Guatemala	96	2.67
Gambia	97	2.65
Zimbabwe	98	2.62
Bosnia and Herzegovina	99	2.61
Ecuador	100	2.61
Bangladesh	101	2.60
Nicaragua	102	2.52
Mali	103	2.52
Tajikistan	104	2.52
Cambodia	105	2.51
Madagascar	106	2.48
Malawi	107	2.46
Bolivia	108	2.42
East Timor	109	2.42
Cameroon	110	2.36
Paraguay	111	2.35
Guyana	112	2.34
Kyrgyz Republic	113	2.34
Algeria	114	2.29
Ethiopia	115	2.22
Benin	116	2.09
Chad	117	1.80

(cont'd.)

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

Public Institutions Index

Country	Rank	Score	Country	Rank	Score
New Zealand	1	6.35	Turkey	61	4.25
Denmark	2	6.35	Bulgaria	62	4.23
Iceland	3	6.33	Moldova	63	4.20
Singapore	4	6.25	Poland	64	4.14
Finland	5	6.19	Jamaica	65	4.14
Norway	6	6.13	Armenia	66	4.11
Luxembourg	7	6.08	Azerbaijan	67	4.09
Germany	8	6.04	Malawi	68	4.08
Switzerland	9	6.02	Serbia and Montenegro	69	4.07
Australia	10	6.01	Brazil	70	4.06
Austria	11	6.00	Mexico	71	4.03
United Kingdom	12	5.98	Mali	72	4.00
Ireland	13	5.93	Croatia	73	3.99
Japan	14	5.84	Argentina	74	3.96
Portugal	15	5.83	Panama	75	3.90
Netherlands	16	5.83	Kazakhstan	76	3.89
Sweden	17	5.82	Gambia	77	3.88
United States	18	5.77	Romania	78	3.84
Qatar	19	5.75	Ethiopia	79	3.79
France	20	5.72	Zimbabwe	80	3.79
Canada	21	5.67	Algeria	81	3.77
Chile	22	5.58	Nicaragua	82	3.74
Hong Kong SAR	23	5.58	Trinidad and Tobago	83	3.73
United Arab Emirates	24	5.52	Bolivia	84	3.71
Estonia	25	5.51	Morocco	85	3.69
Taiwan	26	5.47	Bosnia and Herzegovina	86	3.67
Cyprus	27	5.44	Georgia	87	3.65
Belgium	28	5.38	Honduras	88	3.61
Malaysia	29	5.36	Indonesia	89	3.58
Israel	30	5.35	Ukraine	90	3.56
Jordan	31	5.28	Russian Federation	91	3.55
Malta	32	5.23	Mozambique	92	3.54
Uruguay	33	5.19	Mongolia	93	3.53
Hungary	34	5.15	Kenya	94	3.50
Slovenia	35	5.14	Uganda	95	3.49
Spain	36	5.13	Macedonia, FYR	96	3.47
Kuwait	37	5.11	Vietnam	97	3.43
Bahrain	38	5.10	Nigeria	98	3.43
Botswana	39	5.08	Madagascar	99	3.39
Tunisia	40	5.02	Sri Lanka	100	3.34
Thailand	41	4.88	Tajikistan	101	3.33
Korea, Rep.	42	4.78	Albania	102	3.32
Greece	43	4.77	Pakistan	103	3.31
Lithuania	44	4.73	Philippines	104	3.30
Slovak Republic	45	4.73	Dominican Republic	105	3.24
Italy	46	4.70	Venezuela	106	3.23
South Africa	47	4.63	Guatemala	107	3.22
Czech Republic	48	4.63	East Timor	108	3.20
Colombia	49	4.55	Guyana	109	3.10
Latvia	50	4.55	Benin	110	3.06
Ghana	51	4.54	Cameroon	111	3.05
India	52	4.52	Paraguay	112	2.97
Egypt	53	4.46	Ecuador	113	2.93
El Salvador	54	4.45	Cambodia	114	2.90
Mauritius	55	4.41	Kyrgyz Republic	115	2.89
China	56	4.41	Chad	116	2.64
Namibia	57	4.38	Bangladesh	117	2.55
Costa Rica	58	4.32			
Peru	59	4.27			
Tanzania	60	4.25			

(cont'd.)

Macroeconomic Environment Index

Country	Rank	Score	Country	Rank	Score
Singapore	1	5.82	Colombia	61	3.95
Norway	2	5.76	Bulgaria	62	3.95
Denmark	3	5.64	Hungary	63	3.91
Finland	4	5.52	Indonesia	64	3.89
United Arab Emirates	5	5.43	Namibia	65	3.84
Qatar	6	5.40	Ghana	66	3.82
Ireland	7	5.38	Morocco	67	3.82
Hong Kong SAR	8	5.34	Croatia	68	3.76
Luxembourg	9	5.30	Pakistan	69	3.74
Netherlands	10	5.26	Peru	70	3.71
Iceland	11	5.24	Philippines	71	3.69
Sweden	12	5.24	Tanzania	72	3.65
Switzerland	13	5.23	Romania	73	3.65
Australia	14	5.21	Panama	74	3.60
Chile	15	5.20	Macedonia, FYR	75	3.58
Canada	16	5.16	Nigeria	76	3.54
Taiwan	17	5.15	Armenia	77	3.53
United Kingdom	18	5.13	Ukraine	78	3.52
Malaysia	19	5.12	Brazil	79	3.50
New Zealand	20	5.10	Ecuador	80	3.50
Kuwait	21	5.09	Guatemala	81	3.47
Austria	22	5.07	Costa Rica	82	3.44
United States	23	5.07	Bangladesh	83	3.43
Spain	24	5.07	Uruguay	84	3.40
Korea, Rep.	25	4.98	Venezuela	85	3.39
Thailand	26	4.94	Argentina	86	3.37
France	27	4.90	Turkey	87	3.34
Germany	28	4.81	Uganda	88	3.30
Belgium	29	4.76	Honduras	89	3.25
Estonia	30	4.73	Georgia	90	3.25
South Africa	31	4.68	Bosnia and Herzegovina	91	3.23
Bahrain	32	4.62	Albania	92	3.20
China	33	4.61	East Timor	93	3.18
Tunisia	34	4.59	Sri Lanka	94	3.17
Slovenia	35	4.57	Tajikistan	95	3.17
Botswana	36	4.55	Moldova	96	3.14
Portugal	37	4.51	Mali	97	3.13
Latvia	38	4.48	Mozambique	98	3.13
Lithuania	39	4.47	Jamaica	99	3.13
Trinidad and Tobago	40	4.44	Cameroon	100	3.12
Kazakhstan	41	4.42	Benin	101	3.08
Japan	42	4.40	Paraguay	102	3.07
Mexico	43	4.35	Bolivia	103	3.05
Algeria	44	4.33	Cambodia	104	3.04
Cyprus	45	4.33	Mongolia	105	3.03
Czech Republic	46	4.31	Kenya	106	3.01
Italy	47	4.26	Gambia	107	3.01
Israel	48	4.25	Ethiopia	108	2.99
Slovak Republic	49	4.23	Madagascar	109	2.98
India	50	4.17	Nicaragua	110	2.96
Greece	51	4.16	Serbia and Montenegro	111	2.95
Jordan	52	4.10	Dominican Republic	112	2.78
Poland	53	4.09	Guyana	113	2.77
Malta	54	4.09	Chad	114	2.67
Egypt	55	4.07	Kyrgyz Republic	115	2.62
Azerbaijan	56	4.05	Malawi	116	2.47
El Salvador	57	4.03	Zimbabwe	117	2.25
Russian Federation	58	4.02			
Mauritius	59	4.01			
Vietnam	60	3.96			

(cont'd.)

along a number of different measures of educational quality. Italy fell despite improvements in its absolute BCI score, overtaken by the Czech Republic, Cyprus, Hungary, and Thailand, all of which recorded a faster rate of improvement.

Middle-income nations improving their competitiveness ranking include Poland, Argentina, Croatia, Botswana, El Salvador, Hungary, and Bosnia and Herzegovina. Poland jumped by 5 ranks, driven by strong improvements in many areas of business environment quality; most pronounced in the effectiveness of antitrust policy and improving financial market sophistication. The country is now back at its 2001 level when it suffered a decline. Argentina, benefiting especially from improving measures of innovative capacity, and its neighbor Uruguay, with reductions in bureaucracy and improvements in the reliability of police services, jump by 13 and 10 ranks respectively. Both are still below their 2001/02 levels, however. Finally, Croatia improved by 12 ranks, regaining the ground lost last year based on a stronger assessment of the business environment, especially in the areas of fewer foreign ownership restrictions, better reliability of police services, and improving overall infrastructure quality.

Middle-income countries falling in competitiveness rank include Morocco, Namibia, the Dominican Republic, Russia, Brazil, Romania, and China. Morocco registered a large drop (down 29 ranks), dragged down by lower assessments especially in bureaucracy, foreign ownership restrictions, and corruption. Namibia dropped by 19 ranks after having registered a stable ranking since entering the GCR in 2002, driven especially by lower assessments of bureaucracy, favoritism of government officials, and corruption. The Dominican Republic (down 11 places) continues its downward trend.

Among low-income countries, Ghana, Tanzania, and Pakistan made the largest improvements. Ghana benefited especially from improved public schools and less corruption, with Tanzania and Pakistan both reporting better labor-employer relations.

Gambia and Indonesia experienced the largest drops among low-income countries. Indonesia lost almost all the ground gained last year when a change in government had created high expectations about imminent improvements. A sharply lower assessment of physical infrastructure and financial markets were key reasons for the drop.

Since both macroeconomic and microeconomic factors are critical for driving productivity, the BCI and the GCI provide complementary perspectives on national competitiveness. Not surprisingly, the results of the two indexes are highly correlated, as shown in Figure 1.

The latest in competitiveness research: The Global Competitiveness Index

The GCI described in the foregoing was a major step forward in the Forum's efforts to present a quantified framework for the analysis of the key determinants of growth. When it was created, it represented an intelligent compromise between the need for complexity, reflecting the multiplicity of factors affecting the evolution of growth, and the need for a structure that was transparent and simple enough that it could be estimated for a large number of countries. Thus, the GCI has served its purpose well, providing important insights into a number of the key areas central to the growth process. In particular, it provides a useful linkage with the past, especially relevant for countries wanting to see the evolution of a key competitiveness indicator in an inter-temporal perspective.

However, it has become increasingly apparent to us that we need a more comprehensive vehicle, one that better reflects changes in the nature of the global economy and the relative importance of key factors in explaining the evolution of growth in a large number of countries, with a considerable degree of institutional and structural diversity.

A few examples will suffice. It is difficult to make a meaningful analysis of the sluggish growth performance of the EU15 without entering into a discussion of structural weaknesses and the slow pace of reform in a number of areas, be it the prevalence of labor market rigidities, or delays in the completion of key elements of the single market, which have prevented the European economies from benefiting from the economies of scale associated with a large, single, truly unified market. The GCI does not address the issue of labor market rigidities, nor does it look more broadly at the issue of efficiencies in the operation of various markets.

The poor growth performance seen in most of the African continent during the past quarter century cannot be divorced from public health considerations; as important as good management of the public finances is for assessing the macroeconomic environment in African countries, it is not appropriate to analyze competitiveness trends in the region, without taking into consideration the impact on business of HIV/AIDS, or of other major epidemics. The GCI is silent on these issues, not because its original authors did not see these as being central to an understanding of development in Africa or other parts of the world, but rather because coverage of Africa in the Forum's competitiveness work in 2001 was still limited, and there was no compelling reason to include factors that were not essential to explaining growth in places other than Africa.

Education and the extent to which countries are able to upgrade the skills and training of the labor force have acquired growing importance as indicators of a country's

Table 3: The Business Competitiveness Index

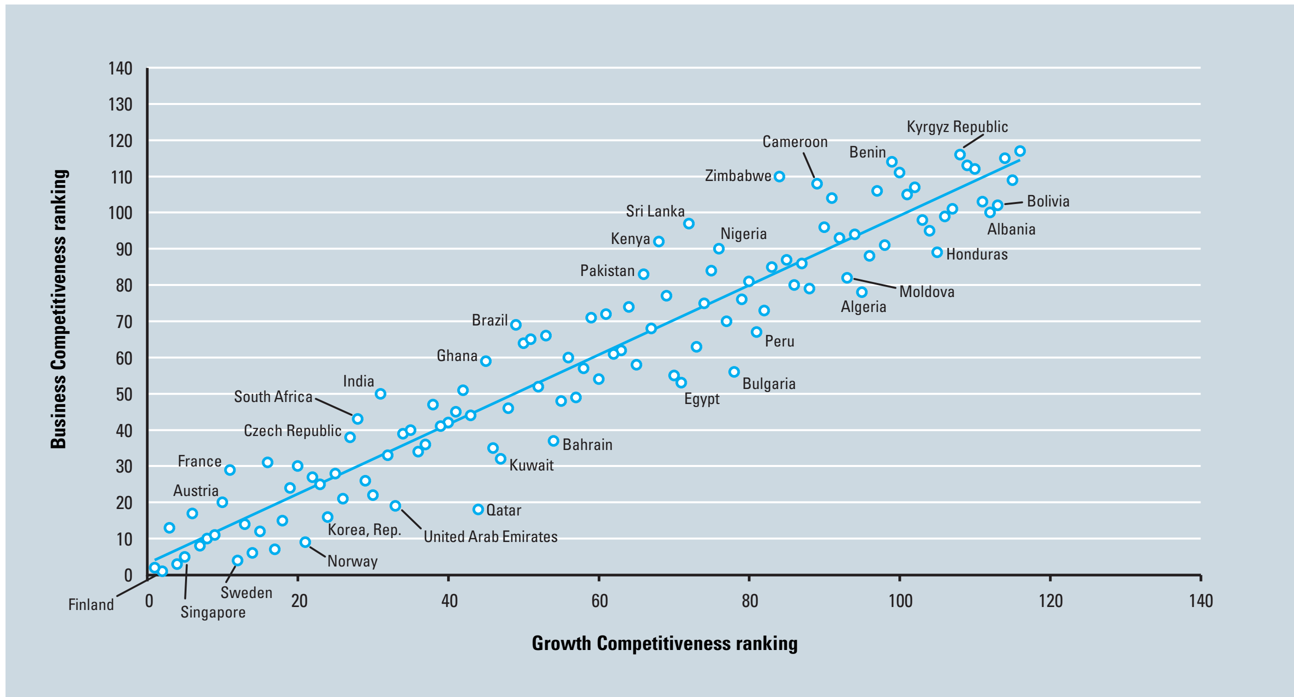
Country	BCI ranking	Company operations and strategy ranking	Quality of the national business environment ranking
United States	1	1	2
Finland	2	9	1
Germany	3	2	4
Denmark	4	4	3
Singapore	5	14	5
United Kingdom	6	6	6
Switzerland	7	5	7
Japan	8	3	10
Netherlands	9	8	8
Austria	10	11	9
France	11	10	11
Sweden	12	7	14
Canada	13	18	13
Taiwan	14	13	15
Australia	15	23	12
Belgium	16	12	17
Iceland	17	15	18
New Zealand	18	21	16
Ireland	19	16	20
Hong Kong SAR	20	20	19
Norway	21	22	21
Israel	22	19	22
Malaysia	23	24	23
Korea, Rep.	24	17	24
Spain	25	25	26
Estonia	26	33	25
Czech Republic	27	29	27
South Africa	28	26	30
Chile	29	31	29
Portugal	30	39	28
India	31	30	31
Slovenia	32	27	35
United Arab Emirates	33	36	33
Hungary	34	40	32
Tunisia	35	46	34
Cyprus	36	48	36
Thailand	37	35	37
Italy	38	28	39
Slovak Republic	39	47	38
Greece	40	42	40
Lithuania	41	41	41
Poland	42	43	46
Jordan	43	59	42
Qatar	44	64	43
Ghana	45	56	47
Malta	46	61	44
Kuwait	47	63	45
Latvia	48	51	48
Brazil	49	32	52
Costa Rica	50	34	53
Turkey	51	38	51
Mauritius	52	45	49
Jamaica	53	54	54
Bahrain	54	67	55
Botswana	55	76	50
Colombia	56	49	57
China	57	53	58
El Salvador	58	57	56
Indonesia	59	50	59
Mexico	60	55	62
Panama	61	37	68
Kazakhstan	62	72	60
Croatia	63	70	61
Argentina	64	52	64
Trinidad and Tobago	65	62	63
Pakistan	66	68	65
Romania	67	69	67
Kenya	68	60	69
Philippines	69	44	78
Uruguay	70	79	66

(cont'd.)

Country	BCI ranking	Company operations and strategy ranking	Quality of the national business environment ranking
Egypt	71	58	74
Sri Lanka	72	73	73
Namibia	73	75	72
Russian Federation	74	77	70
Ukraine	75	71	76
Nigeria	76	65	79
Azerbaijan	77	74	80
Bulgaria	78	82	71
Morocco	79	80	75
Vietnam	80	81	77
Peru	81	66	82
Tanzania	82	93	81
Macedonia, FYR	83	89	83
Zimbabwe	84	78	84
Uganda*	85	91	87
Serbia and Montenegro	86	108	86
Mali*	87	109	85
Armenia	88	87	90
Cameroon*	89	84	92
Gambia	90	100	89
Malawi	91	86	93
Venezuela	92	85	97
Moldova	93	90	94
Bosnia and Herzegovina	94	101	91
Algeria	95	111	88
Georgia	96	94	95
Madagascar	97	102	96
Mozambique	98	97	99
Benin*	99	106	98
Bangladesh	100	99	101
Dominican Republic	101	88	103
Tajikistan	102	107	100
Guatemala	103	83	104
Mongolia	104	98	102
Honduras	105	95	105
Nicaragua	106	110	106
Ecuador	107	96	108
Kyrgyz Republic	108	92	111
Cambodia	109	103	107
Guyana	110	105	109
Ethiopia	111	113	110
Albania	112	104	113
Bolivia	113	115	112
Paraguay	114	112	114
East Timor*	115	114	115
Chad*	116	116	116

* 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.

Figure 1: Growth and Business Competitiveness rankings



future growth potential. A country's ability to absorb new technologies, to produce goods and services that can reach standards of quality and performance acceptable in international markets, to engage with the rest of the world in ways that are value-creating, is intimately linked to the quality of its schools, to the priority given to training in mathematics and science, and to the existence and accessibility of specialized research and training centres. The GCI brought in some concepts in this area, but we feel there is an obvious need to do more.

In the interest of taking the Forum's competitiveness work further, and in order to capture a broader set of factors crucial to a clear understanding of the determinants of economic growth, we have worked closely for the past two years with Professor Xavier Sala-i-Martin, a leading expert on the process of economic growth at Columbia University. In last year's *Report,* we provided a preliminary version of a new and more comprehensive competitiveness index, which we called the *Global Competitiveness Index*. This new index allows us to measure and benchmark many critical factors, absent from the Growth Competitiveness Index described in the previous section.

The new Global Competitiveness Index is built around nine different pillars, each of which is critical to driving productivity and competitiveness in national economies. The pillars include all of the elements that were previously included in the GCI, as well as many other factors discussed earlier.

Beyond these pillars, which capture a more comprehensive set of growth factors, the Global Competitiveness Index has a number of other important distinguishing features. One is the formal incorporation, from its conception, of the notion that countries around the world are functioning at different stages of economic development. The relative importance of particular factors for improving the competitiveness of a country will be a function of its particular stage of development. What presently drives productivity in the United States is necessarily different from what drives it in Brazil. Thus, the Global Competitiveness Index separates countries into three specific stages, adding degrees of complexity at each stage, called *factor driven, efficiency-driven,* and *innovation-driven*. A fuller description of the index is provided in Chapter 1.1

The Global Competitiveness Index is a logical extension of the Forum's competitiveness work. It builds on the strengths of the GCI, by widening the scope of analysis through the introduction of concepts not previously considered. Our strategy—already announced last year upon publication of *The Global Competitiveness Report 2004–2005*—is to make the Global Competitiveness Index the centerpiece of our analytical work. The conceptual framework upon which this index has been built and its methodological underpinnings are strong, and its

Table 4: Top performers in the nine pillars of the Global Index

Country	Institutions	Infrastructure	Macroeconomy	Health and primary education	Higher education and training	Market efficiency	Technological readiness	Business sophistication	Innovation
Singapore	1	5	9	69	8	4	1	20	9
Denmark	2	1	16	23	3	5	2	4	10
Chile	27	34	1	25	42	24	36	31	41
Japan	26	9	93	1	16	16	17	1	2
Finland	3	10	10	10	1	12	12	12	4
United States	16	8	62	47	2	1	5	3	1

broader coverage of factors central to a proper study of the growth process is yet another attractive feature. Both the Growth and the Global indexes will co-exist for a while longer. The former, because it provides a useful link to the past; the latter, because it represents a deepening of the Forum's competitiveness work. However, the Global Competitiveness Index is expected to become the main analytical tool in our competitiveness work, and in 2006, it will be the results of this index that will be featured. Table 4 presents the top performers among the 117 countries covered in each of the nine pillars of the Global Competitiveness Index.

The *Report* also includes specific country profiles for all 117 countries covered, outlining the index scores for each country, as well as their relative competitive advantages and disadvantages. In addition to the country profiles, detailed data tables give an account of countries' rankings on the variables utilized to compute the indexes, as well as others. Guidelines on how to read the country profiles and data tables are included in an Appendix at the end of the *Report,* together with technical notes on data sources, and the full definition of certain variables.

Selected issues of competitiveness and special topics

As in previous *Reports,* this year's edition features several outstanding contributions from eminent scholars and experts, dealing with specific competitiveness issues or broader development themes. While some of them build on the findings of the Survey for their analysis, and others explore the facets of competitiveness highlighted by the Forum indexes, all are concerned with the conditions for sustained growth and development and represent a very insightful reading for policymakers, business, and the general public. Each addresses a different aspect of competitiveness, and provides in-depth analysis of one or another of the central questions at the heart of the work we do at the World Economic Forum. These special studies are highly business relevant, and complement the competitiveness indexes, country profiles and data tables elsewhere in the *Report*.

On governance and corruption

Daniel Kaufmann's challenging chapter "Myths and Realities of Governance and Corruption," counters some of the prevailing misconceptions about concepts which scholars, aid agencies, the NGO community, and governments themselves have begun to take more and more seriously in recent years. Many questions remain unresolved, and the author helps us sift through the issues, by highlighting eight "myths" about governance and corruption, and offering insightful explanations of why each is mistaken.

For example, answering myth #1, that *governance and anti-corruption are synonymous,* he points out the broader scope of governance, and the fact that corruption is not limited to those who govern, but implicates the private sector as well. To those who say that *governance and corruption cannot be measured,* myth #2, he describes the variety and scale of impressive and comprehensive measures, which have become available, and are in wide use for monitoring performance. Kaufmann answers those who *dismiss the importance of governance and anti-corruption as "overrated,"* by sharing the results of exhaustive research on the impact of governance on development, and explaining the "development dividend" that results from better governance. He points out the crucial importance of governance practices on the success or failure of aid projects, and debunks the notion that donors can somehow "ringfence" development projects, insulating them from a surrounding corrupt environment.

The chapter concludes with a call for a bolder approach to improving governance and reducing corruption. Basing his suggestions on the innovative work at the World Bank on transparency reforms, Kaufmann lists some highly practical and specific reforms which countries can implement to enhance freedom of the press and further gender equality.

Managing exchange rates

"Rethinking Exchange Rate Competitiveness" by Kenneth Rogoff is a welcome contribution to the debate on the role of exchange rate policy for a country's overall competitiveness. Rogoff argues that the importance of

maintaining competitive exchange rates is enshrined in the "Washington consensus," which firmly warns against maintaining grossly overvalued exchange rates. Nevertheless, the days are gone when one could simply look at black (or "parallel") market premia, and instantly have a sense of whether a country's exchange rate was grossly overvalued. Today, with fewer countries imposing heavy-handed currency conversion restrictions, exchange rates are increasingly driven by market forces. Monetary policy still reacts to exchange rates—at a minimum through their influence on inflation—but today intervention is more likely to involve market-based instruments. As a result, identifying cases of large exchange rate misalignments has become more subtle, and must typically involve assessing a country's overall macroeconomic stance. The mercantilist view that countries should maintain low (competitive) real exchange rates in order to run trade balance surpluses is as misguided as ever. Despite these caveats, Rogoff insists that it is still important to try to assess the real purchasing value of a country's currency, and discuss in detail the practical challenges involved in constructing real exchange rate indices to make international comparisons.

Safeguarding property rights in Africa

In her thoughtful, carefully-researched paper "Securing Land and Property Rights in Africa: Improving the Investment Climate," Camilla Toulmin makes the case for secure property rights as the key to promoting investment in Africa, and examines options for securing land rights, particularly for the more vulnerable poor. In many areas, land, which once seemed a virtually inexhaustible asset in Africa, has succumbed to market development and population growth, resulting in mounting competition, especially in urban and peri-urban areas. Toulmin highlights the obstacles and costs involved not only in acquiring and registering property itself, but for safeguarding land use rights, for both small and large investors, and especially for farmers, herders, and women, and the importance of preserving and protecting common resources, such as grazing, wetlands, and woodlands, which are best managed at the community level.

Governments across the continent, traditionally the sole "owners" of African land, are revising land law and administration, and experimenting with new ways to register land rights, with both positive and negative results, which Toulmin describes. Historical experience shows that in the transition from oral to written culture, those who stand to lose most are those with secondary rights, who rely on common resources, such as women, pastoral herders, urban squatters, and migrants. Past experience with titling in Africa shows that many hoped-for benefits were not achieved, with land registers becoming rapidly out of date, the most vulnerable dispossessed, and rights made less, rather than more, secure. On the basis of her exhaustive experience on the African continent, and her close familiarity with its many cultures, Toulmin concludes with a proposal for the phased design of institutions for managing rights, answerable and relevant to the needs and capacities of local populations, and giving priority to areas of greatest contest.

Can we protect the environment competitively?

In his intriguing paper "The Environment as a Source of Competitive Advantage," Allen Hammond offers interesting counter arguments to the prevailing idea that environmental regulations place a potential constraint on, or worse, pose risks for business. Increasingly, he explains, environmental and social development issues are also coming to be understood as a source of opportunity for new products and services, new technology, and new markets. It is only when both risk and opportunity are taken into account, that the full implications for business can be evaluated. Hammond reports on the broader perspective of the environment and sustainable development as sources of competitive advantage, and draws on a number of analyses, surveys, and reports, including the results of the Executive Opinion Survey for 2005. The Survey results show that, in the opinion of business leaders, economic development and performance in environmental and social responsibility are reasonably well correlated. Although the responses also show that major improvements are needed, there is significant consensus, even among low-income respondents, that complying with environmental standards improves long-term competitiveness, that lack of clean water hinders business expansion, and that clean production and waste reduction are important to company success. In addition to the Survey results, the paper looks at some of the business opportunities offered by global environmental problems—principally climate change and ecosystem degradation—and by critical global social and sustainable development challenges—principally poverty. The author examines in considerable detail the competitiveness implications of climate policies, and how they are playing out in the auto sector. He also considers the competitive implications of disturbing new data on the degradation of ecosystem services, and the impact on economic sectors dependent on fresh water, timber, fisheries, or other severely stressed natural resources. Finally, he offers some thought-provoking ideas about how the private sector can approach low-income markets in ways which will help to alleviate poverty.

The case for Europe

In a timely contribution entitled "Can Europe Compete? The International and Technological Competitiveness of Europe," Beatrice Weder di Mauro argues, contrary to much current perception, that Europe is actually outperforming its main competitors in terms of international competitiveness. However, although European exporters have by far the largest share in world trade and have been gaining market shares, she concedes that Europe is, indeed, underperforming in terms of "technological" competitiveness, as shown by most conventional indicators of technological performance, and also by the evidence from the 2005 Survey. However, Weder di Mauro argues that the technological gap may be overstated, since it can be explained, in part, by differences in industrial composition. For instance, she finds no significant differences between the EU and the United States, when restricting the sample to the manufacturing sector. Relative specialization patterns may explain why industrial composition matters more than country characteristics: Europe specializes in chemical products, machinery and cars. These are conventionally classified as medium-tech products, even if they are highly differentiated and research intensive. Moreover, world demand for these particular products has been robust, and in some cases stronger, than for so-called high-tech products. Finally, a role can also be found for country characteristics: high labor market rigidities, and, in particular, the ease of hiring and firing contribute to explaining why Europe lags behind US performance. The author recommends, by way of policy implication, that improving the flexibility of labor markets should be high on Europe's reform agenda.

What does Russia's future look like?

In "Russia: Competitiveness, Growth and the Next Stage of Development," Augusto Lopez-Claros examines the factors that are likely to play a key role in enhancing the productivity of the Russian economy, and improving its levels of competitiveness. He argues that there is no intrinsic reason why the Russian economy could not enter a period of high, sustained growth in coming years, and points to a number of structural features which create the conditions for rapid growth: gains in efficiency from the continued elimination of distortions, the country's impressive natural resource endowment (likely to spur the continued interest of foreign investors), and its human capital stock, which—weaknesses in the public sector notwithstanding—can be considered a competitive advantage. While the brain drain has dealt a severe blow to Russia's ability to return to the outer limits of the technology frontier, her impressive tradition of world-class research in the basic sciences, especially mathematics and physics, provide the foundation for a comeback.

Tight conditions in the global oil markets suggest that the external environment is likely to remain favorable to Russia, creating an ideal opportunity to push ahead with structural and institutional reforms. Particular attention will have to be paid to reforms to improve Russia's woefully inadequate public institutions, to improve the judicial and legal climate, to safeguard property rights, and reduce the prevalence of corruption and crime. He notes that Russian policymakers will have their hands full in the period ahead, dealing with large inflows from record high energy prices, which, indeed, create opportunities, but which also pose important challenges. Liquidity management has now moved to the centre of macroeconomic policy. A loosening of fiscal policy, particularly one aimed at boosting public sector wages and pensions, not investments in education, public health, and infrastructure, all of which would boost productivity, will need to be avoided. But beyond these issues, it is incumbent on the authorities to broaden their focus, and deal with a broad range of emerging stresses. Foremost among these are how to arrest the disturbing demographic trends, how to better utilize surplus public resources to enhance the economy's capacity for innovation, and how to put the country back on a path of world-class scientific and technological achievement, so that Russia may join the ranks of the most competitive economies in the world.

The Washington Consensus

In a thoughtful contribution John Williamson poses the question "Should There Be a Development Consensus?" He traces the history of the "Washington consensus," speculates about the possibility of a global development consensus, and outlines in detail—under the three main themes of macroeconomic discipline, microeconomic liberalization, and globalization—the ten policy pillars, which in 1989 were widely regarded as necessary to achieve economic modernization in most Latin American countries. The paper also identifies two alternative meanings given to the term, namely (a) the set of policies urged on developing countries by "official" Washington (especially the international financial institutions) and (b) "neoliberalism" or "market fundamentalism." When first applied, the first alternative meaning came close to Williamson's original meaning, but diverged in the 1990s as a result of the enthusiasm—questionable, he feels—of the IFIs for capital account liberalization, and the bipolar solution to the exchange rate issue, as well as their increasing focus—highly desirable, he argues—on institutional issues and financial sector stability.

While most of the policies summarized in the author's original version of the Washington consensus remain relevant, time has moved on, and several additional issues should be taken into consideration in any policy

agenda designed to address the needs of Latin America today. The author concludes that the current agenda should emphasize the importance of macroeconomic policies which will minimize the dangers of crises (and their costs), continue rather than reverse, the efforts to liberalize the economy, build and strengthen institutions and frame policies appropriately, and pay closer attention to improving income distribution, and accelerating the rate of economic growth.

Impending aging in the developing world

Readers may be shocked by the findings in Nicholas Eberstadt's exhaustively researched essay "Aging in Low-Income Countries: Looking to 2025," in which the author convincingly demonstrates that over the coming decades a dramatic graying of much of the "third world" lies in store. Although the phenomenon of population aging has become a topic of sustained policy analysis and concern in the already-affluent OECD societies, the subject has attracted relatively little attention in low-income regions of the world. This neglect is not only surprising, but dangerous, for, as the author shows, the burdens of pronounced population aging are unlikely to be borne as easily by poor countries as by rich ones, since they have vastly fewer, and much less attractive, options for dealing with the resulting problems.

In considerable, insightful detail, Eberstadt describes the economic and cultural situations of three countries, China, Russia and India, and compares their growth, income-per-capita, and fertility replacement patterns with those of Japan, the United States, and various European countries, and projects the likelihood that by 2025, a large proportion of their populations will have to cope with aged populations on income levels far lower than those yet witnessed in any society with comparable degrees of graying. Referring to the "slow motion humanitarian tragedy," Eberstadt describes what he calls China's "triple bind": sub-replacement fertility rates, the "son deficit," and ill health, Russia's unnaturally high mortality rates and disastrous health problems, and India's non-existent retirement/pension provisions and inadequate educational base. For such countries, although differing in the details, the social and economic consequences of aging could be harsh, and the options for mitigating the adverse effects of population aging limited. In all of them, aging may emerge as an important constraint on long-term growth and development. As Eberstadt's compelling analysis demonstrates, rapid and pronounced population aging represents a highly uneven, largely unappreciated, and, as yet, almost entirely undiscounted long-term risk for the world's emerging markets.

Lessons from market crises

In "Emerging Market Crises Resolution: A Decade of Experience," Nouriel Roubini and Brad Setser provide a thorough examination of the recurring severe crises in emerging market economies in the last ten years. Major emerging economies have proved vulnerable to sudden swings in capital flows, which have led to severe crises and steep falls in output. Sustained and stable growth in emerging market economies depends, above all, on the ability of emerging economies themselves to maintain sound macroeconomic policies and debt structures that protect them against sudden shifts in capital flows. Countries that get into trouble usually have important policy weaknesses, weaknesses that are exposed when market conditions change, and, as the authors remind us, the current, rather favorable, conditions for emerging markets are unlikely to be permanent. The IMF, the G7, and others who have a stake in the health of the global financial system should expect that emerging economies will continue to experience occasional crises, and must be ready to ensure that the right policies and institutions are in place to handle future ones. In the authors' judgment, although the basic tools needed to respond to a wide range of crises generally exist, the main challenge is to use those available tools better, and map them more adequately to different types of crises. Thus, what is needed is better "software," rather than new "hardware."

The authors argue that it is unrealistic to expect that sovereign governments or, for that matter, the banking system of a major emerging-market economy, can go under without drawing the IMF into either the country's decision to default or into the often messy restructuring process that follows. Thus, they argue, IMF financial support, combined with appropriate policy adjustment, remains an essential element of crisis resolution. Because the nature of financial crises differs from one country to another, simply giving all countries access to large amounts of emergency financing to avoid a debt restructuring, or, on the other hand, denying all countries access to it, is unwise. Although large IMF-led rescue packages can work in the right circumstances, the odds of success, they say, are far greater when the crisis country's problems stem primarily from having too few reserves relative to their short-term debts, not too much debt. For countries with higher levels of debt, the right approach may not be to use IMF funds to try to avoid any form of debt restructuring, but rather to use IMF borrowing to soften the blow.

Unemployment and happiness

In his thoughtful paper on "Full Employment for Europe," Richard Layard maintains that unemployment, not productivity or general economic weakness, is the problem in Europe. Many European countries have reduced their

unemployment rates to US levels or below, including some, such as Denmark, which have very high tax rates. It is precisely the variation of experience among the different countries, in terms of policy and the treatment of the unemployed, which helps us to understand what must be done by those large continental countries where unemployment remains so shockingly high. By the early 1990s there was clear evidence that the keys to reducing unemployment were welfare-to-work policies and more flexible wages. Countries such as Denmark, the Netherlands, and Britain, which acted on this evidence, have halved their unemployment since then. Those which did not, such as France and Germany, have continued to have high unemployment, even at the peak of the European boom in 2000. In that year, both had record levels of vacancies, despite massive unemployment, demonstrating that the main reason for unemployment was a failure to mobilize the unemployed.

On the basis of his intriguing research on happiness, Layard reminds us that almost any job is better than being unemployed, and that being out of work has as devastating an effect on a person's happiness as divorce, and is three times worse than losing a third of one's income. So he maintains that unemployed people, after a while, should be expected to fill most types of vacancy. They should also automatically receive offers of activity, which they are required to accept, rather than staying at home on benefits. This *activation* principle has been a major factor in lowering unemployment in many countries, but must be accompanied by an active and energetic service, which combines job search assistance and benefit monitoring. Wage flexibility is also vital in regions where productivity is low, and should be adequately reflected in lower wages. This applies to East Germany, southern Italy, and southern Spain. The lessons learned from elsewhere in Europe and the United States apply equally to the transition countries, where high unemployment will only be reduced through more flexible relative wages across regions, and better policies toward the unemployed themselves.

What's good about globalization?

In "Globalization as an Agent of Prosperity" Jagdish Bhagwati makes an engaging and insightful contribution to our understanding of how globalization makes nations more prosperous. Drawing on his recently-published book *In Defense of Globalization,* Bhagwati gives examples of how globalization has advanced gender equality, helped to alleviate poverty and child labor, promoted better governance, and enabled economies to reap the benefits of freer trade and growth. He introduces his subject by describing the nature of the anti-globalization arguments and their origin, and exposing the misconceptions underlying the anti-capitalist, anti-corporation mindset driving most anti-globalization protest. Focusing on economic—as differentiated from cultural—globalization, he carefully illustrates his conviction that, despite the contentions of its critics, globalization has a human face, that its effects are benign, not malign, and that social agendas creating such concern are, in fact, advanced by it.

He cites compelling evidence to support his views, such as a study showing how peasant Vietnamese parents responded to increased income from liberalized rice exports by sending their children to school. On the topic of gender equality, he cites the work of Harvard researchers, who found that increased competition through trade contributed to the improvement in female wages in traded industries. In discussing the economic benefits of freer trade, Bhagwati warns of the dangers of advising poor countries to seek protectionism for themselves, while demanding that rich countries lower *their* trade barriers, citing the disastrous history of non-reciprocity. Finally, on the topic of growth—which he defines as an active, *pull-up,* as opposed to a *trickle-down* strategy—he looks at the experience of India and China, both of which have moved from insular policies to outward-oriented trade regimes over the past two decades, and dramatically reduced poverty. Bhagwati speaks eloquently of the importance of coupling economic globalization with social policies, that will ensure the wise allocation of increased economic resources, and argues forcefully for the implementation of policy interventions which "preserve, celebrate and enhance the good effects" of globalization, while addressing its occasional downsides.