CHAPTER 1.1

The Global Competitiveness Index: Prioritizing the Economic Policy Agenda

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After several years of rapid and almost unhampered growth, the global economic landscape is changing. Rising food and energy prices, a major international financial crisis, and the related slowdown in the world's leading economies are confronting policymakers with new economic management challenges. Today's volatility underscores the importance of a competitiveness-supporting economic environment that can help national economies to weather these types of shocks in order to ensure solid economic performance going into the future.

A nation's level of competitiveness reflects the extent to which it is able to provide rising prosperity to its citizens. Since 1979, the World Economic Forum's annual *Global Competitiveness Report*s have examined the many factors enabling national economies to achieve sustained economic growth and long-term prosperity. Our goal over the years has been to provide benchmarking tools for business leaders and policymakers to identify obstacles to improved competitiveness, stimulating discussion on strategies to overcome them. For the past several years, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a highly comprehensive index for measuring national competitiveness, which captures the microeconomic and macroeconomic foundations of national competitiveness.

We define *competitiveness* as *the set of institutions, policies, and factors that determine the level of productivity of a country.* The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy. Because the rates of return are the fundamental drivers of the growth rates of the economy, a more competitive economy is one that is likely to grow faster over the medium to long run.

The concept of competitiveness thus involves static and dynamic components: although the productivity of a country clearly determines its ability to sustain a high *level* of income, it is also one of the central determinants of the returns to investment, which is one of the key factors explaining an economy's *growth potential*.

The 12 pillars of competitiveness

The determinants of competitiveness are many and complex. For hundreds of years, economists have tried to understand what determines the wealth of nations. This attempt has ranged from Adam Smith's focus on specialization and the division of labor to neoclassical economists' emphasis on investment in physical capital and infrastructure, and, more recently, to interest in other mechanisms such as education and training, technological progress (whether created within the country or adopted from abroad),[1] macroeconomic stability, good governance, the rule of law, transparent and well-functioning

institutions, firm sophistication, demand conditions, market size, and many others. Each of these conjectures rests on solid theoretical foundations and makes common sense. The central point, however, is that they are not mutually exclusive—so that two or more of them could be true at the same time. Hundreds of econometric studies show that many of these conjectures are, in fact, simultaneously true.[2] This also can partly explain why, despite the present global financial crisis, we do not necessarily see large swings in competitiveness ratings, for example in the United States. Financial markets are only one of several important components of national competitiveness.

The GCI captures this open-ended dimension by providing a weighted average of many different components, each of which reflects one aspect of the complex reality that we call competitiveness. We group all these components into *12 pillars of economic competitiveness:*

First pillar: Institutions

The institutional environment forms the framework within which individuals, firms, and governments interact to generate income and wealth in the economy. The institutional framework has a strong bearing on competitiveness and growth.[3] It plays a central role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies, and it influences investment decisions and the organization of production. Owners of land, corporate shares, and even intellectual property are unwilling to invest in the improvement and upkeep of their property if their rights as owners are insecure.[4] Of equal importance, if property cannot be bought and sold with the confidence that the authorities will endorse the transaction, the market itself will fail to generate dynamic growth.

The importance of institutions is not restricted to the legal framework. Government attitudes toward markets and freedoms and the efficiency of its operations are also very important: excessive bureaucracy and red tape,[5] overregulation, corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, or the political dependence of the judicial system impose significant economic costs to businesses and slow down the process of economic development.

Although the economic literature has mainly focused on public institutions, private institutions are also an important element in the process of creation of wealth. The significant corporate scandals that have occurred over the past few years, and the present global financial crisis, have highlighted the relevance of accounting and reporting standards and transparency for preventing fraud and mismanagement, ensuring good governance, and maintaining investor and consumer confidence. An economy is well served by businesses that are run honestly, where managers abide by strong ethical practices in their dealings with the government, other firms, and the public.[6] Private-sector transparency is indispensable to business, and can be brought about through the use of standards as well as auditing and accounting practices that ensure access to information in a timely manner.[7]

Second pillar: Infrastructure

Extensive and efficient infrastructure is an essential driver of competitiveness. It is critical for ensuring the effective functioning of the economy, as it is an important factor determining the location of economic activity and the kinds of activities or sectors that can develop in a particular economy. Well-developed infrastructure reduces the effect of distance between regions, with the result of truly integrating the national market and connecting it to markets in other countries and regions. In addition, the quality and extensiveness of infrastructure networks significantly impact economic growth and reduce income inequalities and poverty in a variety of ways.[8] In this regard, a well-developed transport and communications infrastructure network is a prerequisite for the ability of less-developed communities to connect to core economic activities and schools.

Effective modes of transport for goods, people, and services—such as quality roads, railroads, ports, and air transport—enable entrepreneurs to get their goods to market in a secure and timely manner, and facilitate the movement of workers to the most suitable jobs. Economies also depend on electricity supplies that are free of interruptions and shortages so that businesses and factories can work unimpeded. Finally, a solid and extensive telecommunications network allows for a rapid and free flow of information, which increases overall economic efficiency by helping to ensure that decisions made by economic actors take into account all available relevant information.

Third pillar: Macroeconomic stability

The stability of the macroeconomic environment is important for business and, therefore, is important for the overall competitiveness of a country.[9] Although it is certainly true that macroeconomic stability alone cannot increase the productivity of a nation, it is also recognized that macroeconomic disarray harms the economy. Firms cannot make informed decisions when inflation is raging out of control. The government cannot provide services efficiently if it has to make high-interest payments on its past debts. In sum, the economy cannot grow unless the macro environment is stable.

Fourth pillar: Health and primary education

A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential, and will be less productive. Poor health leads to significant costs to business, as sick workers are often absent or operate at lower levels of efficiency.

Investment in the provision of health services is thus critical for clear economic, as well as moral, considerations.[10]

In addition to health, this pillar takes into account the quantity and quality of basic education received by the population, which is increasingly important in today's economy. Basic education increases the efficiency of each individual worker. Moreover, a workforce that has received little formal education can carry out only basic manual work and finds it much more difficult to adapt to more advanced production processes and techniques. Lack of basic education can therefore become a constraint on business development, with firms finding it difficult to move up the value chain by producing more sophisticated or value-intensive products.

Fifth pillar: Higher education and training

Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products.[11] In particular, today's globalizing economy requires economies to nurture pools of well-educated workers who are able to adapt rapidly to their changing environment. This pillar measures secondary and tertiary enrollment rates as well as the quality of education as assessed by the business community. The extent of staff training is also taken into consideration because of the importance of vocational and continuous on-the-job training—which is neglected in many economies—for ensuring a constant upgrading of workers' skills to the changing needs of the evolving economy.

Sixth pillar: Goods market efficiency

Countries with efficient goods markets are well positioned to produce the right mix of products and services given supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy. Healthy market competition, both domestic and foreign, is important in driving market efficiency and thus business productivity, by ensuring that the most efficient firms, producing goods demanded by the market, are those that thrive. The best possible environment for the exchange of goods requires a minimum of impediments to business activity through government intervention to be in place. For example, competitiveness is hindered by distortionary or burdensome taxes, and by restrictive and discriminatory rules on foreign ownership or foreign direct investment (FDI). Market efficiency also depends on demand conditions such as customer orientation and buyer sophistication. For cultural reasons, customers in some countries may be more demanding than in others. This can create an important competitive advantage, as it forces companies to be more innovative and customer-oriented and thus imposes the discipline necessary for efficiency to be achieved in the market.

Seventh pillar: Labor market efficiency

The efficiency and flexibility of the labor market are critical for ensuring that workers are allocated to their most efficient use in the economy, and provided with incentives to give their best effort in their jobs. Labor markets must therefore have the flexibility to shift workers from one economic activity to another rapidly and at low cost, and to allow for wage fluctuations without much social disruption. Efficient labor markets must also ensure a clear relationship between worker incentives and their efforts, as well as the best use of available talent —which includes equity in the business environment between women and men.

Eighth pillar: Financial market sophistication

The present global financial crisis has highlighted the critical importance of financial markets for the functioning of national economies. An efficient financial sector is necessary to allocate the resources saved by a nation's citizens as well as those entering the economy from abroad to their most productive uses. It channels resources to the entrepreneurial or investment projects with the highest expected rates of return, rather than to the politically connected. A thorough assessment of risk is therefore a key ingredient.

Business investment is critical to productivity. Therefore economies require sophisticated financial markets that can make capital available for private-sector investment from such sources as loans from a sound banking sector, well-regulated securities exchanges, venture capital, and other financial products. An efficient financial sector also ensures that innovators with good ideas have the financial resources to turn those ideas into commercially viable products and services. In order to fulfill all those functions, the banking sector needs to be trustworthy and transparent.[12]

Ninth pillar: Technological readiness

This pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries.[13] In today's globalized world, technology has increasingly become an important element for firms to compete and prosper. In particular, information and communication technologies (ICT) have evolved into the "general purpose technology" of our time,[14] given the critical spillovers to the other economic sectors and their role as efficient infrastructure for commercial transactions. Therefore ICT access (including the presence of an ICT-friendly regulatory framework) and usage are included in the pillar as essential components of economies' overall level of technological readiness.

Whether the technology used has or has not been developed within national borders is irrelevant for its effect on competitiveness. The central point is that the firms operating in the country have access to advanced products and blueprints and the ability to use them. That is, it does not matter whether the personal

computer or the Internet was invented in a particular country. What is important is that these inventions are available to the business community. This does not mean that the process of innovation is irrelevant. However, the level of technology available to firms in a country needs to be distinguished from the country's ability to innovate and expand the frontiers of knowledge. That is why we separate technological readiness from innovation, which is captured in the 12th pillar below.

Tenth pillar: Market size

The size of the market affects productivity because large markets allow firms to exploit economies of scale. Traditionally, the markets available to firms have been constrained by national borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries. There is vast empirical evidence that shows that trade openness is positively associated with growth. Even if some recent research casts doubts on the robustness of this relationship, the general sense is that trade has a positive effect on growth, especially for countries with small domestic markets.[15]

Thus, exports can be thought of as a substitute for domestic demand in determining the size of the market for the firms of a country.[16] By including both domestic and foreign markets in our measure of market size, we give credit to export-driven economies and geographic areas (such as the European Union) that are broken into many countries but have one common market.

Eleventh pillar: Business sophistication

Business sophistication is conducive to higher efficiency in the production of goods and services. This leads, in turn, to increased productivity, thus enhancing a nation's competitiveness. Business sophistication concerns the quality of a country's overall business networks as well as the quality of individual firms' operations and strategies. It is particularly important for countries at an advanced stage of development, when the more basic sources of productivity improvements have been exhausted to a large extent.

The quality of a country's business networks and supporting industries, which we capture by using variables on the quantity and quality of local suppliers and the extent of their interaction, is important for a variety of reasons. When companies and suppliers from a particular sector are interconnected in geographically proximate groups ("clusters"), efficiency is heightened, greater opportunities for innovation are created, and barriers to entry for new firms are reduced. Individual firms' operations and strategies (branding, marketing, the presence of a value chain, and the production of unique and sophisticated products) all lead to sophisticated and modern business processes.

Twelfth pillar: Innovation

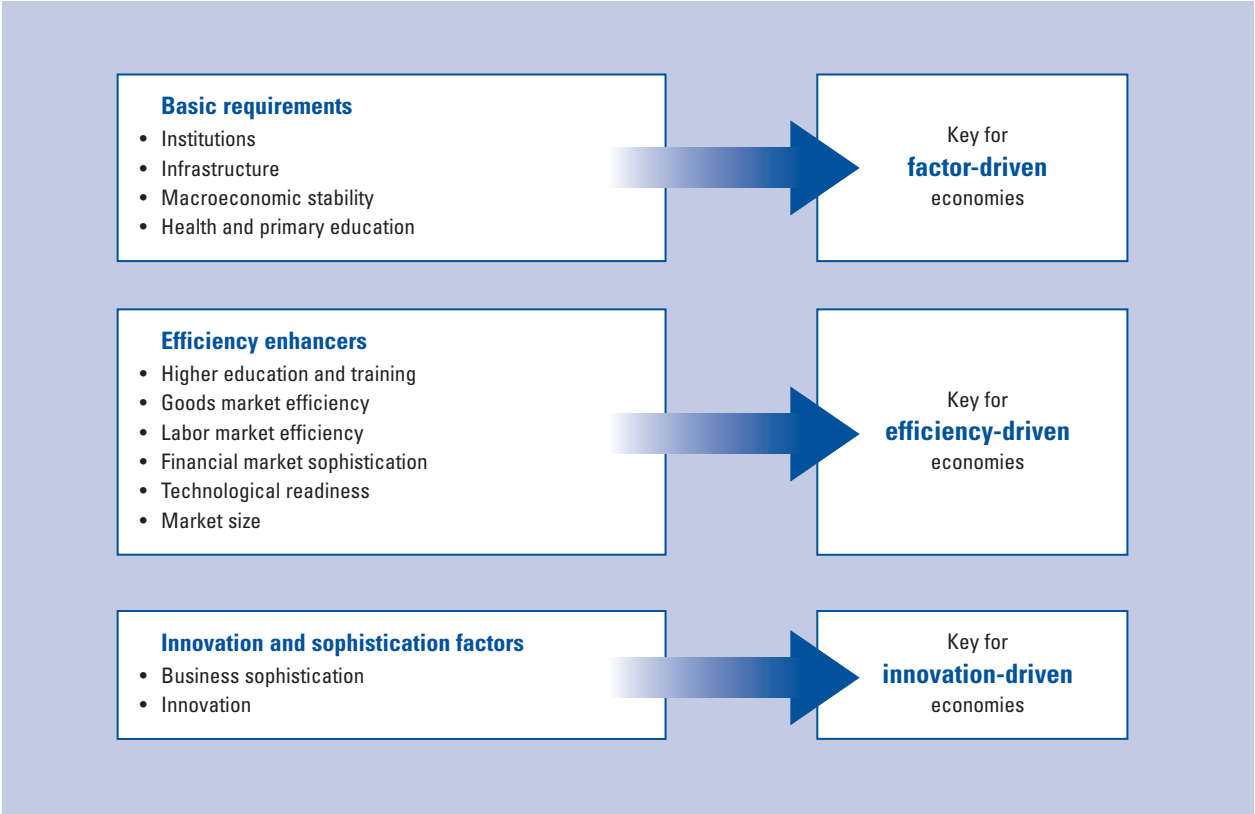
The last pillar of competitiveness is technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructures, reducing macroeconomic instability, or improving the human capital of the population, all these factors eventually seem to run into diminishing returns. The same is true for the efficiency of the labor, financial, and goods markets. In the long run, standards of living can be expanded only with technological innovation. Innovation is particularly important for economies as they approach the frontiers of knowledge and the possibility of integrating and adapting exogenous technologies tends to disappear.[17]

Although less-advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas, for countries that have reached the innovation stage of development, this is no longer sufficient to increase productivity. Firms in these countries must design and develop cutting-edge products and processes to maintain a competitive edge. This requires an environment that is conducive to innovative activity, supported by both the public and the private sectors. In particular, this means sufficient investment in research and development (R&D) especially by the private sector, the presence of high-quality scientific research institutions, extensive collaboration in research between universities and industry, and the protection of intellectual property.

The interrelation of the 12 pillars

Although the 12 pillars of competitiveness are described separately, this should not obscure the fact that they are not independent: not only they are related to each other, but they tend to reinforce each other. For example, innovation (12th pillar) is not possible in a world without institutions (1st pillar) that guarantee intellectual property rights, cannot be performed in countries with poorly educated and poorly trained labor force (5th pillar), and will never take place in economies with inefficient markets (6th, 7th, and 8th pillars) or without extensive and efficient infrastructure (2nd pillar). Although the actual construction of the Index will involve the aggregation of the 12 pillars into a single index, measures are reported for the 12 pillars separately because offering a more disaggregated analysis can be more useful to countries and practitioners: such an analysis gets closer to the actual areas in which a particular country needs to improve.

Figure 1: The 12 pillars of competitiveness



Stages of development and the weighted Index

It is clear that different pillars affect different countries differently: the best way for Chad to improve its competitiveness is not the same as the best way for the United States. This is because Chad and the United States are in different stages of development: as countries move along the development path, wages tend to increase and, in order to sustain this higher income, labor productivity must improve.[18]

According to the GCI, in the first stage, the economy is *factor-driven* and countries compete based on their factor endowments, primarily unskilled labor and natural resources. Companies compete on the basis of price and sell basic products or commodities, with their low productivity reflected in low wages. Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions (pillar 1), well-developed infrastructure (pillar 2), a stable macroeconomic framework (pillar 3), and a healthy and literate workforce (pillar 4).

As wages rise with advancing development, countries move into the *efficiency-driven* stage of development, when they must begin to develop more efficient production processes and increase product quality. At this point, competitiveness is increasingly driven by higher education and training (pillar 5), efficient goods markets (pillar 6), well-functioning labor markets (pillar 7), sophisticated financial markets (pillar 8), a large domestic or foreign market (pillar 10), and the ability to harness the benefits of existing technologies (pillar 9).

Finally, as countries move into the *innovation-driven* stage, they are able to sustain higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this stage, companies must compete through innovation (pillar 12), producing new and different goods using the most sophisticated production processes (pillar 11).

The concept of stages of development is integrated into the Index by attributing higher relative weights to those pillars that are relatively more relevant for a country given its particular stage of development. That is, although all 12 pillars matter to a certain extent for all countries, the importance of each one depends on a country's particular stage of development. To take this into account, the pillars are organized into three subindexes, each critical to a particular stage of development. The *basic requirements subindex* groups those pillars most critical for countries in the factor-driven stage. The *efficiency enhancers subindex* includes those pillars critical for countries in the efficiency-driven stage. And the *innovation and sophistication factors subindex* includes the pillars critical to countries in the innovation-driven stage. The three subindexes are shown in Figure 1.

The specific weights we attribute to each subindex in every stage of development are shown in Table 1. To obtain the precise weights, a maximum likelihood regression of GDP per capita was run against each subindex for past years, allowing for different coefficients for each stage of development.[19] The rounding of these econometric estimates led to the choice of weights displayed in Table 1.

Table 1: Weights of the three main groups of pillars at each stage of development

Pillar group	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

Implementation of stages of development: Smooth transitions

Countries are allocated to stages of development based on two criteria. The first criterion is the level of GDP per capita at market exchange rates. This widely available measure is used as a proxy for wages, as internationally comparable data for the latter are not available for all countries covered. The precise thresholds are shown in Table 2. A second criterion measures the extent to which countries are factor driven. We proxy this by the share of exports of primary goods in total exports (goods and services) and assume that countries that export more than 70 percent of primary products are to a large extent factor driven.[20]

Table 2: Income thresholds for establishing stages of development

Stage of Development	GDP per capita (in US$)
Stage 1: Factor driven	< 2,000
Transition from stage 1 to stage 2	*2,000–3,000*
Stage 2: Efficiency driven	3,000–9,000
Transition from stage 2 to stage 3	*9,000–17,000*
Stage 3: Innovation driven	> 17,000

Countries falling in between two of the three stages are considered to be "in transition." For these countries, the weights change smoothly as a country develops, reflecting the smooth transition from one stage of development to another. By introducing this type of transition between stages into the model—that is, by placing increasingly more weight on those areas that are becoming more important for the country's competitiveness as the country develops—the index can gradually "penalize" those countries that are not preparing for the next stage. The classification of countries into stages of development is shown in Table 3.

Country coverage

Four new economies have been included in the analysis: Brunei Darussalam, Côte d'Ivoire, Ghana, and Malawi (reintroduced after a one-year absence). On the other hand, one country covered last year, Uzbekistan, is not covered this year because of a lack of Survey data. This has led to a net increase in country coverage, for a total of 134 economies this year.

Appendix A describes the exact composition of the GCI and technical details of its construction.

The Global Competitiveness Index 2008–2009 rankings

The detailed rankings from this year's GCI are shown in Tables 4 through 8. As Table 4 shows, almost all of the countries in the top 10 remain the same as last year, with some small shifts in rank. The following sections reference the findings of the GCI 2008–2009 for the top performers globally, as well as for a number of selected economies in each of the five following regions: Europe, Latin America and the Caribbean, Asia and the Pacific, Middle East and North Africa, and sub-Saharan Africa.

Top 10

Notwithstanding the present financial crisis, the **United States** continues to be the most competitive economy in the world, a position it has held for several years. This is because the country is endowed with many structural features that make its economy extremely productive and that place it on a strong footing to ride out business cycle shifts and economic shocks. Thus, despite rising concerns about the soundness of the banking sector and macroeconomic weaknesses, the country's many other strengths continue to make it a very productive environment. The United States is followed by Switzerland, Denmark, and Sweden, composing the same top four countries as last year.

The United States is home to highly sophisticated and innovative companies operating in very efficient factor markets. The country is also endowed with an excellent university system that collaborates strongly with the business sector in R&D. Combined with the scale opportunities afforded by the sheer size of its domestic economy, the largest in the world by far, these qualities make the United States the most competitive economy in the world.

The United States is ranked 1st on the innovation pillar, with the world's top-rated scientific research institutions, high company spending on R&D (ranked 3rd), and significant collaboration between the business and university sectors in research (ranked 1st). The country's markets support this innovative activity through their

Table 3: List of countries/economies at each stage of development

Stage 1	Transition from 1 to 2	Stage 2	Transition from 2 to 3	Stage 3
Bangladesh	Armenia	Albania	Bahrain	Australia
Benin	Azerbaijan	Algeria	Barbados	Austria
Bolivia	Botswana	Argentina	Chile	Belgium
Burkina Faso	Brunei Darussalam	Bosnia and Herzegovina	Croatia	Canada
Burundi	China	Brazil	Estonia	Cyprus
Cambodia	El Salvador	Bulgaria	Hungary	Czech Republic
Cameroon	Georgia	Colombia	Latvia	Denmark
Chad	Guatemala	Costa Rica	Lithuania	Finland
Côte d'Ivoire	Iran	Dominican Republic	Poland	France
Egypt	Jordan	Ecuador	Qatar	Germany
Ethiopia	Kazakhstan	Jamaica	Russian Federation	Greece
Gambia, The	Kuwait	Macedonia, FYR	Slovak Republic	Hong Kong SAR
Ghana	Libya	Malaysia	Taiwan, China	Iceland
Guyana	Morocco	Mauritius	Trinidad and Tobago	Ireland
Honduras	Oman	Mexico	Turkey	Israel
India	Saudi Arabia	Montenegro		Italy
Indonesia	Venezuela	Namibia		Japan
Kenya		Panama		Korea, Rep.
Kyrgyz Republic		Peru		Luxembourg
Lesotho		Romania		Malta
Madagascar		Serbia		Netherlands
Malawi		South Africa		New Zealand
Mali		Suriname		Norway
Mauritania		Thailand		Portugal
Moldova		Tunisia		Puerto Rico
Mongolia		Ukraine		Singapore
Mozambique		Uruguay		Slovenia
Nepal				Spain
Nicaragua				Sweden
Nigeria				Switzerland
Pakistan				United Arab Emirates
Paraguay				United Kingdom
Philippines				United States
Senegal				
Sri Lanka				
Syria				
Tajikistan				
Tanzania				
Timor-Leste				
Uganda				
Vietnam				
Zambia				
Zimbabwe				

efficient allocation of human and financial resources to their most effective use. In particular, labor markets are ranked 1st out of all countries, characterized by the ease and affordability of hiring workers and significant wage flexibility. The country's goods markets are also characterized by low levels of distortion within the context of a very competitive environment, providing consumers with a large selection of quality goods and services at reasonable prices, supplied in a timely manner. Financial markets are also rated as highly efficient, although in the context of the present financial crisis there has been a weakening of confidence in the financial sector, particularly the soundness of banks (40th this year, as opposed to 26th in 2007).

Although the country is thus very competitive overall, there are some weaknesses in more basic areas. Some aspects of its public institutions could be strengthened, with particular concerns on the part of the business community about the government's ability to maintain arms-length relationships with the private sector (40th), and in the perception that the government spends its resources wastefully (66th). The business costs of terrorism and of crime and violence more generally are also points of concern. But the country's greatest weakness is related to its macroeconomic stability, where it ranks a low 67th overall. The United States has built up large macroeconomic imbalances over recent years, with repeated fiscal deficits leading to rising and burgeoning levels of public indebtedness (reaching more than 60 percent of GDP by 2007, placing the country 102nd on this indicator). This indicates that the country is not preparing financially for its future liabilities and interest payments will increasingly restrict its fiscal policy freedom going into the future.

Table 4: Global Competitiveness Index rankings and 2007–2008 comparisons

Country/Economy	GCI 2008–2009 Rank	GCI 2008–2009 Score	GCI 2008–2009 rank (among 2007 countries)*	GCI 2007–2008 rank
United States	1	5.74	1	1
Switzerland	2	5.61	2	2
Denmark	3	5.58	3	3
Sweden	4	5.53	4	4
Singapore	5	5.53	5	7
Finland	6	5.50	6	6
Germany	7	5.46	7	5
Netherlands	8	5.41	8	10
Japan	9	5.38	9	8
Canada	10	5.37	10	13
Hong Kong SAR	11	5.33	11	12
United Kingdom	12	5.30	12	9
Korea, Rep.	13	5.28	13	11
Austria	14	5.23	14	15
Norway	15	5.22	15	16
France	16	5.22	16	18
Taiwan, China	17	5.22	17	14
Australia	18	5.20	18	19
Belgium	19	5.14	19	20
Iceland	20	5.05	20	23
Malaysia	21	5.04	21	21
Ireland	22	4.99	22	22
Israel	23	4.97	23	17
New Zealand	24	4.93	24	24
Luxembourg	25	4.85	25	25
Qatar	26	4.83	26	31
Saudi Arabia	27	4.72	27	35
Chile	28	4.72	28	26
Spain	29	4.72	29	29
China	30	4.70	30	34
United Arab Emirates	31	4.68	31	37
Estonia	32	4.67	32	27
Czech Republic	33	4.62	33	33
Thailand	34	4.60	34	28
Kuwait	35	4.58	35	30
Tunisia	36	4.58	36	32
Bahrain	37	4.57	37	43
Oman	38	4.55	38	42
Brunei Darussalam	39	4.54	n/a	n/a
Cyprus	40	4.53	39	55
Puerto Rico	41	4.51	40	36
Slovenia	42	4.50	41	39
Portugal	43	4.47	42	40
Lithuania	44	4.45	43	38
South Africa	45	4.41	44	44
Slovak Republic	46	4.40	45	41
Barbados	47	4.40	46	50
Jordan	48	4.37	47	49
Italy	49	4.35	48	46
India	50	4.33	49	48
Russian Federation	51	4.31	50	58
Malta	52	4.31	51	56
Poland	53	4.28	52	51
Latvia	54	4.26	53	45
Indonesia	55	4.25	54	54
Botswana	56	4.25	55	76
Mauritius	57	4.25	56	60
Panama	58	4.24	57	59
Costa Rica	59	4.23	58	63
Mexico	60	4.23	59	52
Croatia	61	4.22	60	57
Hungary	62	4.22	61	47
Turkey	63	4.15	62	53
Brazil	64	4.13	63	72
Montenegro	65	4.11	64	82
Kazakhstan	66	4.11	65	61
Greece	67	4.11	66	65
Romania	68	4.10	67	74
Azerbaijan	69	4.10	68	66
Vietnam	70	4.10	69	68
Philippines	71	4.09	70	71
Ukraine	72	4.09	71	73
Morocco	73	4.08	72	64
Colombia	74	4.05	73	69
Uruguay	75	4.04	74	75
Bulgaria	76	4.03	75	79
Sri Lanka	77	4.02	76	70
Syria	78	3.99	77	80
El Salvador	79	3.99	78	67
Namibia	80	3.99	79	89
Egypt	81	3.98	80	77
Honduras	82	3.98	81	83
Peru	83	3.95	82	86
Guatemala	84	3.94	83	87
Serbia	85	3.90	84	91
Jamaica	86	3.89	85	78
Gambia, The	87	3.88	86	102
Argentina	88	3.87	87	85
Macedonia, FYR	89	3.87	88	94
Georgia	90	3.86	89	90
Libya	91	3.85	90	88
Trinidad and Tobago	92	3.85	91	84
Kenya	93	3.84	92	99
Nigeria	94	3.81	93	95
Moldova	95	3.75	94	97
Senegal	96	3.73	95	100
Armenia	97	3.73	96	93
Dominican Republic	98	3.72	97	96
Algeria	99	3.71	98	81
Mongolia	100	3.65	99	101
Pakistan	101	3.65	100	92
Ghana	102	3.62	n/a	n/a
Suriname	103	3.58	101	113
Ecuador	104	3.58	102	103
Venezuela	105	3.56	103	98
Benin	106	3.56	104	108
Bosnia and Herzegovina	107	3.56	105	106
Albania	108	3.55	106	109
Cambodia	109	3.53	107	110
Côte d'Ivoire	110	3.51	n/a	n/a
Bangladesh	111	3.51	108	107
Zambia	112	3.49	109	122
Tanzania	113	3.49	110	104
Cameroon	114	3.48	111	116
Guyana	115	3.47	112	126
Tajikistan	116	3.46	113	117
Mali	117	3.43	114	115
Bolivia	118	3.42	115	105
Malawi	119	3.42	n/a	n/a
Nicaragua	120	3.41	116	111
Ethiopia	121	3.41	117	123
Kyrgyz Republic	122	3.40	118	119
Lesotho	123	3.40	119	124
Paraguay	124	3.40	120	121
Madagascar	125	3.38	121	118
Nepal	126	3.37	122	114
Burkina Faso	127	3.36	123	112
Uganda	128	3.35	124	120
Timor-Leste	129	3.15	125	127
Mozambique	130	3.15	126	128
Mauritania	131	3.14	127	125
Burundi	132	2.98	128	130
Zimbabwe	133	2.88	129	129
Chad	134	2.85	130	131

* One country that was included last year is not shown because of the lack of Survey data (Uzbekistan). This explains why the lowest rank in this column is 130 rather than 131.

Switzerland retains the same ranking as last year, second only to the United States. Similar to the United States, Switzerland's economy is characterized by an excellent capacity for innovation and a very sophisticated business culture, ranked 2nd for its business sophistication and 3rd for its innovation capacity. The country is characterized by high spending on R&D. Switzerland's scientific research institutions are among the world's best, and the strong collaboration between the academic and business sectors ensures that much of this research is translated into marketable products and processes, buttressed by strong intellectual property protection. This strong innovative capacity is captured by the high rate of patenting in the country, for which Switzerland ranks 6th worldwide on a per capita basis.

Switzerland's public institutions are rated among the most effective and transparent in the world (4th), ensuring a level playing field and enhancing business confidence, including an independent judiciary, a strong rule of law, and strong accountability of the public sector. Competitiveness is also buttressed by excellent infrastructure and labor markets that are among the most flexible in the world, both ranked 3rd overall. And Switzerland's macroeconomic environment receives excellent marks (ranked 10th), attributable to a government budget surplus, high national savings, low interest rates, and low inflation at a time when inflation is rising around the world.

On the other hand, the relatively low university enrollment rate—just shy of 46 percent—places the country 45th on this indicator. Efforts should be made to boost higher education attainment to provide more home-grown talent with the necessary skills for innovative activities.

The Nordic members of the European Union continue to hold privileged positions in the rankings. **Denmark** is ranked 3rd, with **Sweden** and **Finland** following closely at 4th and 6th places, respectively, the same rankings as last year for all three countries. As in past years, the Nordic countries outperform the United States in a number of areas. For example, like Switzerland they receive among the best marks worldwide in terms of the macroeconomic environment, as they are also running healthy budget surpluses and have achieved very low levels of public indebtedness. The three countries have among the best functioning and most transparent institutions in the world, ranked only behind Singapore on this pillar.

Given the significant focus that the Nordic countries have placed on higher education and training over recent decades, it is not surprising that Finland, Denmark, and Sweden continue to occupy the top three positions in the higher education and training pillar. This has provided the workforce with the skills needed to adapt rapidly to a changing environment and has laid the ground for their high levels of technological adoption and innovation in recent years.

A marked difference among these three countries relates to labor market flexibility. While Denmark (ranked 4th) distinguishes itself as having one of the most flexible and efficient labor markets internationally, in Finland and Sweden, as is the case in a number of other European countries, companies have little flexibility in setting wages, nonwage labor costs remain very high, and firing and therefore hiring workers is deemed excessively expensive.

Singapore, at 5th place, is the top-ranked country from Asia on the strength of its institutional environment, moving up two places from last year as a result of a strengthening across all aspects of the institutional framework. Singapore also places among the top two countries for the efficiency of all of its markets—goods, labor, and financial—ensuring the proper allocation of these factors to their best use. Singapore also has world-class infrastructure, leading the world in the quality of its port and air transport facilities. But Singapore's overall ranking is constrained by its domestic market size and mixed performance in the macroeconomic stability pillar, where it ranks 59th and 121st for its interest rate spread and government debt, respectively.

Germany remains among the top-10 ranked countries, although it slips two positions to 7th place. The country is ranked 1st for the quality of infrastructure, with particularly good marks for its transport and telephony infrastructure. The efficiency of its goods and financial markets is another strength, buttressed by a very high level of business sophistication (ranked 1st on this pillar), although it should be noted that there has been a measurable decline in the business sector's assessment of the country's financial markets over the past year. These attributes allow Germany to benefit greatly from its significant market size (ranked 4th on this pillar). On the other hand, Germany's labor market continues to be very rigid (ranked 122nd on the labor market flexibility subpillar), where a lack of flexibility in wage determination, high nonwage labor costs, and the cost of firing provide a hindrance to job creation.

The Netherlands moves up two spots to 8th place and rounds out the list of the European countries in the top 10. The country's companies are highly sophisticated and are the most aggressive internationally in absorbing new technologies (ranked 1st for its technological readiness), buttressed by an excellent educational system and extremely efficient factor markets. The improvement in the rankings can be traced mainly to an even better assessment than last year of the functioning of its markets. The labor market in the Netherlands is notably efficient compared with the situation in many other European economies, and its goods market is ranked 3rd for its excellent functioning.

Japan, at 9th place, enjoys a major competitive edge in the areas of business sophistication and innovation, characterized by a high availability of scientists and engineers, high company spending on R&D, and an

Table 5: The Global Competitiveness Index 2008–2009

	OVERALL INDEX		SUBINDEXES					
			Basic requirements		Efficiency enhancers		Innovation factors	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score
United States	1	5.74	22	5.50	1	5.81	1	5.80
Switzerland	2	5.61	2	6.14	8	5.35	2	5.68
Denmark	3	5.58	4	6.14	3	5.49	7	5.37
Sweden	4	5.53	6	6.00	9	5.35	6	5.53
Singapore	5	5.53	3	6.14	2	5.52	11	5.16
Finland	6	5.50	1	6.18	13	5.21	5	5.53
Germany	7	5.46	7	5.96	11	5.22	4	5.54
Netherlands	8	5.41	10	5.81	7	5.38	9	5.20
Japan	9	5.38	26	5.36	12	5.22	3	5.65
Canada	10	5.37	8	5.84	5	5.44	16	4.96
Hong Kong SAR	11	5.33	5	6.05	6	5.43	21	4.69
United Kingdom	12	5.30	24	5.46	4	5.45	17	4.93
Korea, Rep.	13	5.28	16	5.71	15	5.15	10	5.20
Austria	14	5.23	9	5.81	20	5.03	12	5.16
Norway	15	5.22	14	5.76	14	5.19	18	4.91
France	16	5.22	13	5.76	16	5.09	14	5.08
Taiwan, China	17	5.22	20	5.53	18	5.06	8	5.26
Australia	18	5.20	15	5.75	10	5.31	22	4.66
Belgium	19	5.14	18	5.60	21	5.02	15	5.02
Iceland	20	5.05	11	5.80	22	4.89	19	4.82
Malaysia	21	5.04	25	5.42	24	4.82	23	4.63
Ireland	22	4.99	32	5.24	19	5.05	20	4.72
Israel	23	4.97	41	5.06	23	4.84	13	5.10
New Zealand	24	4.93	19	5.58	17	5.07	28	4.26
Luxembourg	25	4.85	12	5.78	27	4.69	24	4.51
Qatar	26	4.83	21	5.50	31	4.53	35	4.14
Saudi Arabia	27	4.72	34	5.21	45	4.35	37	4.09
Chile	28	4.72	36	5.15	30	4.58	44	4.00
Spain	29	4.72	27	5.34	25	4.75	29	4.25
China	30	4.70	42	5.01	40	4.41	32	4.18
United Arab Emirates	31	4.68	17	5.67	29	4.64	38	4.09
Estonia	32	4.67	30	5.27	26	4.73	40	4.06
Czech Republic	33	4.62	45	4.85	28	4.67	25	4.37
Thailand	34	4.60	43	4.97	36	4.45	46	3.91
Kuwait	35	4.58	39	5.12	52	4.19	52	3.82
Tunisia	36	4.58	35	5.17	53	4.19	30	4.21
Bahrain	37	4.57	28	5.31	46	4.32	54	3.76
Oman	38	4.55	31	5.25	61	4.09	48	3.87
Brunei Darussalam	39	4.54	29	5.30	77	3.84	87	3.35
Cyprus	40	4.53	23	5.48	39	4.43	41	4.05
Puerto Rico	41	4.51	44	4.96	38	4.44	26	4.32
Slovenia	42	4.50	38	5.13	37	4.45	33	4.15
Portugal	43	4.47	37	5.14	34	4.47	43	4.03
Lithuania	44	4.45	46	4.84	43	4.37	49	3.87
South Africa	45	4.41	69	4.41	35	4.46	36	4.13
Slovak Republic	46	4.40	52	4.66	32	4.52	53	3.80
Barbados	47	4.40	33	5.23	56	4.16	51	3.84
Jordan	48	4.37	47	4.80	63	4.07	47	3.90
Italy	49	4.35	58	4.53	42	4.38	31	4.19
India	50	4.33	80	4.23	33	4.49	27	4.29
Russian Federation	51	4.31	56	4.54	50	4.29	73	3.56
Malta	52	4.31	40	5.08	44	4.35	56	3.74
Poland	53	4.28	70	4.39	41	4.39	61	3.70
Latvia	54	4.26	55	4.63	47	4.31	84	3.39
Indonesia	55	4.25	76	4.25	49	4.29	45	3.98
Botswana	56	4.25	53	4.65	82	3.76	98	3.22
Mauritius	57	4.25	50	4.67	66	4.03	69	3.65
Panama	58	4.24	54	4.64	67	4.02	58	3.71
Costa Rica	59	4.23	63	4.45	60	4.09	39	4.07
Mexico	60	4.23	60	4.47	55	4.16	70	3.60
Croatia	61	4.22	49	4.69	62	4.08	62	3.70
Hungary	62	4.22	64	4.43	48	4.31	55	3.75
Turkey	63	4.15	72	4.34	59	4.10	63	3.70
Brazil	64	4.13	96	3.98	51	4.28	42	4.04
Montenegro	65	4.11	59	4.52	72	3.95	88	3.33
Kazakhstan	66	4.11	74	4.29	64	4.05	77	3.50
Greece	67	4.11	51	4.66	57	4.16	68	3.65

(Cont'd.)

Table 5: The Global Competitiveness Index 2008–2009 *(cont'd.)*

	OVERALL INDEX		SUBINDEXES					
			Basic requirements		Efficiency enhancers		Innovation factors	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Romania	68	4.10	87	4.15	54	4.18	75	3.53
Azerbaijan	69	4.10	62	4.45	79	3.82	57	3.72
Vietnam	70	4.10	79	4.23	73	3.94	71	3.59
Philippines	71	4.09	85	4.17	68	4.02	67	3.65
Ukraine	72	4.09	86	4.15	58	4.12	66	3.66
Morocco	73	4.08	67	4.42	85	3.73	76	3.51
Colombia	74	4.05	77	4.24	70	3.96	60	3.71
Uruguay	75	4.04	57	4.53	83	3.76	82	3.42
Bulgaria	76	4.03	82	4.20	65	4.05	92	3.30
Sri Lanka	77	4.02	92	4.07	74	3.92	34	4.14
Syria	78	3.99	71	4.38	104	3.41	80	3.45
El Salvador	79	3.99	66	4.43	84	3.75	96	3.24
Namibia	80	3.99	48	4.71	93	3.57	104	3.16
Egypt	81	3.98	83	4.18	88	3.70	74	3.54
Honduras	82	3.98	78	4.24	91	3.62	89	3.32
Peru	83	3.95	94	4.02	69	4.01	83	3.40
Guatemala	84	3.94	84	4.17	86	3.72	65	3.69
Serbia	85	3.90	88	4.15	78	3.82	91	3.30
Jamaica	86	3.89	97	3.95	75	3.91	72	3.57
Gambia, The	87	3.88	81	4.22	107	3.36	78	3.48
Argentina	88	3.87	89	4.12	81	3.76	81	3.43
Macedonia, FYR	89	3.87	68	4.42	92	3.58	105	3.16
Georgia	90	3.86	91	4.07	87	3.72	109	3.07
Libya	91	3.85	75	4.27	114	3.29	102	3.16
Trinidad and Tobago	92	3.85	65	4.43	80	3.78	79	3.47
Kenya	93	3.84	104	3.80	76	3.90	50	3.87
Nigeria	94	3.81	105	3.74	71	3.96	64	3.69
Moldova	95	3.75	95	3.99	98	3.48	128	2.83
Senegal	96	3.73	101	3.88	96	3.48	59	3.71
Armenia	97	3.73	93	4.04	103	3.41	113	3.03
Dominican Republic	98	3.72	99	3.90	90	3.64	86	3.38
Algeria	99	3.71	61	4.46	113	3.29	126	2.85
Mongolia	100	3.65	102	3.87	105	3.39	119	2.94
Pakistan	101	3.65	110	3.67	89	3.67	85	3.39
Ghana	102	3.62	106	3.74	95	3.49	107	3.09
Suriname	103	3.58	73	4.31	127	3.11	117	2.97
Ecuador	104	3.58	90	4.12	117	3.27	118	2.95
Venezuela	105	3.56	111	3.65	94	3.55	116	2.98
Benin	106	3.56	103	3.81	123	3.20	100	3.21
Bosnia and Herzegovina	107	3.56	98	3.93	102	3.42	129	2.80
Albania	108	3.55	100	3.89	99	3.44	130	2.74
Cambodia	109	3.53	107	3.72	115	3.28	112	3.04
Côte d'Ivoire	110	3.51	113	3.64	109	3.33	94	3.27
Bangladesh	111	3.51	117	3.57	97	3.48	115	2.98
Zambia	112	3.49	121	3.54	100	3.43	93	3.29
Tanzania	113	3.49	114	3.61	108	3.34	106	3.12
Cameroon	114	3.48	109	3.67	120	3.22	108	3.08
Guyana	115	3.47	115	3.60	112	3.31	111	3.04
Tajikistan	116	3.46	112	3.65	124	3.19	103	3.16
Mali	117	3.43	116	3.58	122	3.20	99	3.21
Bolivia	118	3.42	108	3.68	128	3.10	134	2.59
Malawi	119	3.42	127	3.43	101	3.42	101	3.20
Nicaragua	120	3.41	122	3.54	116	3.27	124	2.86
Ethiopia	121	3.41	119	3.56	121	3.21	114	2.98
Kyrgyz Republic	122	3.40	124	3.49	110	3.33	123	2.90
Lesotho	123	3.40	118	3.57	125	3.16	110	3.06
Paraguay	124	3.40	123	3.51	111	3.31	132	2.69
Madagascar	125	3.38	125	3.49	119	3.23	97	3.22
Nepal	126	3.37	120	3.55	126	3.12	121	2.91
Burkina Faso	127	3.36	126	3.43	118	3.25	95	3.27
Uganda	128	3.35	129	3.34	106	3.37	90	3.32
Timor-Leste	129	3.15	128	3.42	132	2.77	133	2.62
Mozambique	130	3.15	131	3.21	129	3.09	127	2.84
Mauritania	131	3.14	130	3.28	130	2.91	120	2.93
Burundi	132	2.98	132	3.14	133	2.73	125	2.85
Zimbabwe	133	2.88	134	2.88	131	2.87	122	2.90
Chad	134	2.85	133	2.96	134	2.69	131	2.70

Table 6: The Global Competitiveness Index: Basic requirements

			PILLARS							
	BASIC REQUIREMENTS		1. Institutions		2. Infrastructure		3. Macroeconomic stability		4. Health and primary education	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Albania	100	3.89	109	3.32	121	2.22	96	4.56	69	5.47
Algeria	61	4.46	102	3.45	84	2.96	5	6.08	76	5.34
Argentina	89	4.12	128	2.94	87	2.92	64	5.05	61	5.58
Armenia	93	4.04	96	3.50	90	2.87	83	4.73	97	5.06
Australia	15	5.75	12	5.72	21	5.33	28	5.66	15	6.27
Austria	9	5.81	11	5.72	10	5.86	44	5.36	13	6.28
Azerbaijan	62	4.45	62	4.05	61	3.70	45	5.35	102	4.72
Bahrain	28	5.31	31	4.89	28	4.77	20	5.78	45	5.82
Bangladesh	117	3.57	127	2.98	122	2.21	101	4.46	105	4.63
Barbados	33	5.23	20	5.19	24	5.21	114	4.21	10	6.32
Belgium	18	5.60	21	5.15	16	5.62	60	5.14	3	6.50
Benin	103	3.81	85	3.67	106	2.56	95	4.60	110	4.40
Bolivia	108	3.68	131	2.66	126	2.10	77	4.83	93	5.13
Bosnia and Herzegovina	98	3.93	123	3.06	123	2.20	57	5.15	82	5.30
Botswana	53	4.65	36	4.73	52	3.96	22	5.73	112	4.17
Brazil	96	3.98	91	3.56	78	3.15	122	3.89	79	5.31
Brunei Darussalam	29	5.30	41	4.65	39	4.45	2	6.33	47	5.79
Bulgaria	82	4.20	111	3.28	95	2.79	54	5.21	68	5.53
Burkina Faso	126	3.43	75	3.82	104	2.57	120	3.93	131	3.42
Burundi	132	3.14	124	3.03	129	2.05	124	3.76	124	3.70
Cambodia	107	3.72	103	3.44	97	2.77	105	4.39	111	4.27
Cameroon	109	3.67	116	3.24	117	2.32	34	5.47	125	3.66
Canada	8	5.84	15	5.50	6	6.12	43	5.36	6	6.39
Chad	133	2.96	133	2.54	134	1.65	97	4.54	134	3.09
Chile	36	5.15	37	4.73	30	4.59	14	5.90	73	5.37
China	42	5.01	56	4.18	47	4.22	11	5.95	50	5.71
Colombia	77	4.24	87	3.66	80	3.07	88	4.71	67	5.53
Costa Rica	63	4.45	50	4.35	94	2.80	85	4.73	37	5.92
Côte d'Ivoire	113	3.64	130	2.82	73	3.33	69	4.93	127	3.49
Croatia	49	4.69	74	3.82	51	3.98	61	5.10	41	5.85
Cyprus	23	5.48	24	5.03	25	5.17	46	5.33	7	6.39
Czech Republic	45	4.85	72	3.87	50	4.11	42	5.37	29	6.07
Denmark	4	6.14	3	6.18	8	6.01	12	5.92	4	6.44
Dominican Republic	99	3.90	119	3.14	81	3.05	78	4.80	106	4.58
Ecuador	90	4.12	129	2.92	108	2.54	16	5.88	92	5.13
Egypt	83	4.18	52	4.25	60	3.74	125	3.56	88	5.19
El Salvador	66	4.43	100	3.46	56	3.90	62	5.10	86	5.26
Estonia	30	5.27	33	4.85	40	4.44	23	5.72	28	6.08
Ethiopia	119	3.56	77	3.80	103	2.66	119	4.00	123	3.79
Finland	1	6.18	2	6.18	9	5.94	8	6.01	1	6.57
France	13	5.76	23	5.10	2	6.54	65	5.04	9	6.35
Gambia, The	81	4.22	38	4.73	62	3.68	99	4.51	119	3.96
Georgia	91	4.07	69	3.89	77	3.23	118	4.02	91	5.14
Germany	7	5.96	14	5.65	1	6.65	40	5.42	24	6.10
Ghana	106	3.74	63	4.02	82	2.98	121	3.91	115	4.04
Greece	51	4.66	58	4.10	45	4.28	106	4.37	40	5.89
Guatemala	84	4.17	98	3.48	71	3.47	87	4.72	99	5.02
Guyana	115	3.60	117	3.23	98	2.76	133	2.84	62	5.57
Honduras	78	4.24	82	3.69	75	3.29	89	4.67	83	5.30
Hong Kong SAR	5	6.05	9	5.78	5	6.32	3	6.26	43	5.82
Hungary	64	4.43	64	3.94	57	3.85	115	4.20	49	5.74
Iceland	11	5.80	6	5.93	17	5.60	56	5.17	2	6.50
India	80	4.23	53	4.23	72	3.38	109	4.32	100	4.99
Indonesia	76	4.25	68	3.89	86	2.95	72	4.91	87	5.26
Ireland	32	5.24	17	5.39	53	3.95	47	5.33	14	6.28
Israel	41	5.06	47	4.53	37	4.48	59	5.15	25	6.10
Italy	58	4.53	84	3.68	54	3.94	100	4.46	30	6.04
Jamaica	97	3.95	86	3.66	67	3.54	130	3.25	77	5.33
Japan	26	5.36	26	4.99	11	5.80	98	4.53	22	6.11
Jordan	47	4.80	27	4.98	44	4.30	111	4.24	56	5.67
Kazakhstan	74	4.29	81	3.71	76	3.26	74	4.87	81	5.30
Kenya	104	3.80	93	3.54	91	2.86	107	4.37	108	4.43
Korea, Rep.	16	5.71	28	4.95	15	5.63	4	6.15	26	6.10
Kuwait	39	5.12	48	4.46	49	4.16	1	6.51	75	5.35
Kyrgyz Republic	124	3.49	122	3.06	111	2.51	128	3.31	96	5.06
Latvia	55	4.63	60	4.05	58	3.81	71	4.91	48	5.76
Lesotho	118	3.57	114	3.26	125	2.14	39	5.42	129	3.44

(Cont'd.)

Table 6: The Global Competitiveness Index: Basic requirements *(cont'd.)*

	BASIC REQUIREMENTS		PILLARS							
			1. Institutions		2. Infrastructure		3. Macroeconomic stability		4. Health and primary education	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Libya	75	4.27	65	3.93	112	2.47	6	6.03	103	4.65
Lithuania	46	4.84	55	4.19	46	4.24	52	5.23	52	5.69
Luxembourg	12	5.78	13	5.68	20	5.38	7	6.03	31	6.03
Macedonia, FYR	68	4.42	90	3.58	89	2.90	31	5.51	55	5.67
Madagascar	125	3.49	94	3.52	114	2.41	127	3.38	104	4.63
Malawi	127	3.43	51	4.33	119	2.27	129	3.26	120	3.87
Malaysia	25	5.42	30	4.91	23	5.25	38	5.43	23	6.11
Mali	116	3.58	79	3.73	107	2.55	94	4.60	130	3.43
Malta	40	5.08	32	4.88	38	4.46	68	4.97	32	6.02
Mauritania	130	3.28	107	3.42	127	2.10	126	3.49	114	4.13
Mauritius	50	4.67	39	4.68	43	4.32	117	4.03	57	5.66
Mexico	60	4.47	97	3.49	68	3.51	48	5.32	65	5.55
Moldova	95	3.99	92	3.55	113	2.43	80	4.79	89	5.19
Mongolia	102	3.87	121	3.08	133	1.85	37	5.44	94	5.11
Montenegro	59	4.52	59	4.07	100	2.72	35	5.46	42	5.83
Morocco	67	4.42	61	4.05	70	3.50	84	4.73	71	5.39
Mozambique	131	3.21	112	3.27	124	2.18	112	4.23	132	3.15
Namibia	48	4.71	42	4.59	33	4.56	27	5.69	118	3.99
Nepal	120	3.55	120	3.13	132	1.90	90	4.62	107	4.54
Netherlands	10	5.81	10	5.76	12	5.71	36	5.45	11	6.30
New Zealand	19	5.58	8	5.81	42	4.37	25	5.72	5	6.42
Nicaragua	122	3.54	118	3.20	128	2.07	123	3.86	98	5.03
Nigeria	105	3.74	106	3.42	120	2.24	26	5.70	126	3.59
Norway	14	5.76	7	5.93	27	4.99	17	5.83	12	6.28
Oman	31	5.25	19	5.21	32	4.56	13	5.92	80	5.31
Pakistan	110	3.67	95	3.51	85	2.96	116	4.17	116	4.03
Panama	54	4.64	70	3.88	55	3.94	55	5.19	64	5.56
Paraguay	123	3.51	132	2.64	130	1.91	113	4.22	85	5.27
Peru	94	4.02	101	3.45	110	2.53	67	4.98	95	5.10
Philippines	85	4.17	105	3.44	92	2.86	53	5.21	90	5.17
Poland	70	4.39	88	3.63	96	2.77	50	5.25	39	5.90
Portugal	37	5.14	35	4.75	26	5.07	82	4.74	33	6.00
Puerto Rico	44	4.96	44	4.56	31	4.59	81	4.77	38	5.92
Qatar	21	5.50	16	5.47	35	4.54	19	5.80	18	6.18
Romania	87	4.15	89	3.63	105	2.56	76	4.85	66	5.55
Russian Federation	56	4.54	110	3.29	59	3.75	29	5.55	59	5.59
Saudi Arabia	34	5.21	34	4.75	41	4.39	9	6.01	51	5.70
Senegal	101	3.88	83	3.69	83	2.97	103	4.44	109	4.43
Serbia	88	4.15	108	3.40	102	2.68	86	4.72	46	5.79
Singapore	3	6.14	1	6.19	4	6.39	21	5.74	16	6.24
Slovak Republic	52	4.66	73	3.85	64	3.64	49	5.31	44	5.82
Slovenia	38	5.13	49	4.40	36	4.49	33	5.48	21	6.15
South Africa	69	4.41	46	4.55	48	4.21	63	5.06	122	3.84
Spain	27	5.34	43	4.59	22	5.30	30	5.53	35	5.96
Sri Lanka	92	4.07	66	3.92	65	3.60	132	3.07	53	5.69
Suriname	73	4.31	99	3.47	99	2.72	32	5.51	63	5.56
Sweden	6	5.9975	4	6.05	13	5.71	15	5.88	8	6.35
Switzerland	2	6.14	5	5.97	3	6.40	10	5.97	17	6.22
Syria	71	4.38	54	4.20	74	3.30	93	4.61	70	5.42
Taiwan, China	20	5.53	40	4.67	19	5.46	18	5.82	20	6.16
Tajikistan	112	3.65	78	3.74	101	2.68	131	3.18	101	4.99
Tanzania	114	3.61	76	3.81	118	2.28	108	4.34	117	4.03
Thailand	43	4.97	57	4.17	29	4.67	41	5.41	58	5.61
Timor-Leste	128	3.42	125	3.03	131	1.90	73	4.88	121	3.87
Trinidad and Tobago	65	4.43	104	3.44	63	3.65	51	5.25	72	5.39
Tunisia	35	5.17	22	5.15	34	4.56	75	4.87	27	6.09
Turkey	72	4.34	80	3.72	66	3.54	79	4.79	78	5.33
Uganda	129	3.34	113	3.27	115	2.36	92	4.61	133	3.12
Ukraine	86	4.15	115	3.26	79	3.13	91	4.62	60	5.59
United Arab Emirates	17	5.67	18	5.37	14	5.66	24	5.72	36	5.93
United Kingdom	24	5.46	25	4.99	18	5.52	58	5.15	19	6.17
United States	22	5.50	29	4.93	7	6.10	66	4.99	34	5.97
Uruguay	57	4.53	45	4.55	69	3.50	104	4.41	54	5.68
Venezuela	111	3.65	134	2.41	109	2.54	110	4.29	74	5.36
Vietnam	79	4.23	71	3.87	93	2.86	70	4.91	84	5.29
Zambia	121	3.54	67	3.91	116	2.35	102	4.45	128	3.46
Zimbabwe	134	2.88	126	3.00	88	2.90	134	1.48	113	4.16

Table 7: The Global Competitiveness Index: Efficiency enhancers

	EFFICIENCY ENHANCERS		PILLARS											
			5. Higher education and training		6. Goods market efficiency		7. Labor market efficiency		8. Financial market sophistication		9. Technological readiness		10. Market size	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Albania	99	3.44	97	3.40	119	3.61	67	4.36	103	3.70	92	2.89	106	2.66
Algeria	113	3.29	102	3.28	124	3.52	132	3.30	132	2.94	114	2.52	51	4.17
Argentina	81	3.76	56	4.14	122	3.55	130	3.47	117	3.46	76	3.19	24	4.77
Armenia	103	3.41	94	3.43	110	3.75	45	4.57	107	3.68	112	2.56	111	2.48
Australia	10	5.31	14	5.44	10	5.29	9	5.12	6	5.76	19	5.21	19	5.02
Austria	20	5.03	17	5.28	5	5.38	39	4.65	33	5.01	16	5.34	32	4.56
Azerbaijan	79	3.82	80	3.76	89	3.96	34	4.70	92	3.89	72	3.23	73	3.37
Bahrain	46	4.32	54	4.22	32	4.77	64	4.37	14	5.50	39	4.29	100	2.78
Bangladesh	97	3.48	131	2.51	106	3.83	107	4.01	82	4.05	126	2.34	53	4.14
Barbados	56	4.16	29	4.76	72	4.16	46	4.53	38	4.80	26	4.81	127	1.88
Belgium	21	5.02	6	5.63	12	5.22	79	4.26	23	5.25	23	5.01	25	4.75
Benin	123	3.20	114	3.00	107	3.79	118	3.87	99	3.72	113	2.54	123	2.27
Bolivia	128	3.10	96	3.41	131	3.12	129	3.48	119	3.37	133	2.15	87	3.08
Bosnia and Herzegovina	102	3.42	109	3.13	123	3.55	85	4.20	86	4.00	109	2.61	92	3.00
Botswana	82	3.76	87	3.66	93	3.94	52	4.49	40	4.79	89	2.98	101	2.72
Brazil	51	4.28	58	4.12	101	3.90	91	4.15	64	4.36	56	3.59	10	5.54
Brunei Darussalam	77	3.84	69	3.93	91	3.95	16	4.94	75	4.15	54	3.64	116	2.41
Bulgaria	65	4.05	61	4.09	77	4.11	60	4.42	74	4.18	53	3.65	58	3.83
Burkina Faso	118	3.25	124	2.71	83	4.03	80	4.25	108	3.65	120	2.45	117	2.37
Burundi	133	2.73	130	2.55	128	3.39	95	4.12	134	2.76	131	2.19	131	1.40
Cambodia	115	3.28	127	2.66	88	4.00	33	4.71	130	2.96	123	2.42	95	2.96
Cameroon	120	3.22	121	2.78	108	3.77	114	3.91	124	3.21	110	2.60	89	3.06
Canada	5	5.44	9	5.52	16	5.18	7	5.29	10	5.58	9	5.61	14	5.43
Chad	134	2.69	134	2.06	134	2.91	119	3.85	133	2.80	134	2.06	113	2.43
Chile	30	4.58	50	4.34	26	4.91	17	4.90	29	5.05	42	3.99	47	4.26
China	40	4.41	64	4.05	51	4.48	51	4.49	109	3.64	77	3.19	2	6.58
Colombia	70	3.96	68	3.96	82	4.05	92	4.14	81	4.06	80	3.12	37	4.45
Costa Rica	60	4.09	49	4.35	49	4.50	35	4.68	70	4.24	60	3.49	78	3.28
Côte d'Ivoire	109	3.33	112	3.11	117	3.66	111	3.95	113	3.56	99	2.76	94	2.96
Croatia	62	4.08	48	4.35	76	4.11	68	4.35	63	4.37	47	3.72	66	3.57
Cyprus	39	4.43	32	4.68	28	4.88	56	4.44	27	5.11	35	4.35	82	3.12
Czech Republic	28	4.67	25	4.98	33	4.73	28	4.74	47	4.65	33	4.48	38	4.45
Denmark	3	5.49	2	5.98	4	5.39	5	5.60	4	5.82	3	5.87	46	4.27
Dominican Republic	90	3.64	99	3.36	86	4.02	86	4.20	101	3.71	73	3.20	72	3.38
Ecuador	117	3.27	115	2.96	129	3.29	122	3.76	125	3.21	104	2.69	61	3.73
Egypt	88	3.70	91	3.56	87	4.00	134	3.26	106	3.68	84	3.04	27	4.67
El Salvador	84	3.75	95	3.42	59	4.27	57	4.43	72	4.23	90	2.95	81	3.18
Estonia	26	4.73	19	5.23	24	4.98	29	4.74	28	5.08	17	5.30	90	3.04
Ethiopia	121	3.21	126	2.68	116	3.68	74	4.29	127	3.11	132	2.18	76	3.32
Finland	13	5.21	1	6.07	11	5.22	23	4.81	12	5.51	14	5.46	52	4.16
France	16	5.09	16	5.37	21	5.01	105	4.05	25	5.19	20	5.16	7	5.73
Gambia, The	107	3.36	105	3.21	68	4.18	38	4.66	87	3.96	91	2.90	132	1.26
Georgia	87	3.72	84	3.72	71	4.17	22	4.83	79	4.06	97	2.80	102	2.72
Germany	11	5.22	21	5.15	15	5.19	58	4.43	19	5.35	18	5.22	4	5.99
Ghana	95	3.49	111	3.12	97	3.91	108	4.00	69	4.28	115	2.52	86	3.09
Greece	57	4.16	38	4.52	64	4.22	116	3.89	67	4.29	59	3.50	33	4.52
Guatemala	86	3.72	103	3.27	54	4.38	81	4.25	95	3.85	74	3.20	74	3.36
Guyana	112	3.31	81	3.74	96	3.92	109	3.99	98	3.80	103	2.70	129	1.69
Honduras	91	3.62	93	3.43	75	4.11	82	4.23	84	4.02	96	2.81	84	3.12
Hong Kong SAR	6	5.43	28	4.78	2	5.71	4	5.62	1	6.19	10	5.60	26	4.68
Hungary	48	4.31	40	4.51	66	4.20	83	4.23	61	4.42	40	4.21	45	4.28
Iceland	22	4.89	4	5.69	27	4.89	6	5.41	20	5.31	6	5.65	118	2.36
India	33	4.49	63	4.06	47	4.52	89	4.16	34	4.98	69	3.27	5	5.96
Indonesia	49	4.29	71	3.88	37	4.67	43	4.59	57	4.48	88	3.02	17	5.11
Ireland	19	5.05	20	5.18	9	5.30	15	4.95	7	5.68	24	4.98	48	4.22
Israel	23	4.84	24	5.02	36	4.67	20	4.85	15	5.46	25	4.87	49	4.19
Italy	42	4.38	44	4.43	62	4.24	126	3.56	91	3.90	31	4.52	9	5.65
Jamaica	75	3.91	82	3.74	63	4.24	70	4.34	59	4.44	45	3.89	98	2.80
Japan	12	5.22	23	5.08	18	5.13	11	5.09	42	4.75	21	5.11	3	6.15
Jordan	63	4.07	42	4.46	44	4.55	93	4.13	48	4.61	57	3.59	88	3.08
Kazakhstan	64	4.05	59	4.12	80	4.09	12	5.02	97	3.81	75	3.19	55	4.08
Kenya	76	3.90	86	3.70	74	4.12	40	4.65	44	4.68	93	2.88	71	3.40
Korea, Rep.	15	5.15	12	5.51	22	5.00	41	4.60	37	4.85	13	5.51	13	5.44
Kuwait	52	4.19	76	3.82	53	4.46	24	4.79	51	4.59	50	3.70	59	3.79
Kyrgyz Republic	110	3.33	83	3.73	120	3.59	69	4.35	115	3.53	124	2.41	120	2.34
Latvia	47	4.31	33	4.67	52	4.46	32	4.71	39	4.80	41	4.00	79	3.24
Lesotho	125	3.16	106	3.20	102	3.89	84	4.21	118	3.42	125	2.41	128	1.83

(Cont'd.)

Table 7: The Global Competitiveness Index: Efficiency enhancers *(cont'd.)*

	EFFICIENCY ENHANCERS		PILLARS											
			5. Higher education and training		6. Goods market efficiency		7. Labor market efficiency		8. Financial market sophistication		9. Technological readiness		10. Market size	
Country/Economy	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Libya	114	3.29	75	3.83	121	3.56	133	3.27	131	2.95	98	2.79	77	3.31
Lithuania	43	4.37	26	4.85	48	4.52	49	4.52	56	4.50	38	4.29	69	3.51
Luxembourg	27	4.69	47	4.39	13	5.21	48	4.52	17	5.39	12	5.52	83	3.12
Macedonia, FYR	92	3.58	73	3.85	98	3.91	113	3.92	83	4.04	83	3.05	104	2.69
Madagascar	119	3.23	119	2.83	85	4.02	72	4.30	128	3.09	111	2.58	109	2.58
Malawi	101	3.42	116	2.85	84	4.03	42	4.60	62	4.40	127	2.33	121	2.34
Malaysia	24	4.82	35	4.63	23	5.00	19	4.86	16	5.40	34	4.41	28	4.65
Mali	122	3.20	122	2.77	95	3.93	94	4.13	120	3.35	105	2.64	119	2.36
Malta	44	4.35	39	4.51	43	4.55	100	4.08	18	5.36	27	4.75	97	2.84
Mauritania	130	2.91	133	2.35	126	3.45	112	3.92	126	3.13	102	2.71	126	1.91
Mauritius	66	4.03	67	3.97	40	4.64	65	4.37	32	5.02	55	3.62	110	2.54
Mexico	55	4.16	74	3.83	73	4.14	110	3.97	66	4.30	71	3.25	11	5.48
Moldova	98	3.48	88	3.62	105	3.84	55	4.45	104	3.69	95	2.85	114	2.42
Mongolia	105	3.39	85	3.71	109	3.76	71	4.32	110	3.63	101	2.74	124	2.16
Montenegro	72	3.95	55	4.18	69	4.17	53	4.47	35	4.96	43	3.96	125	1.95
Morocco	85	3.73	90	3.57	58	4.34	128	3.54	93	3.88	78	3.18	57	3.91
Mozambique	129	3.09	129	2.56	127	3.44	98	4.10	122	3.27	116	2.52	107	2.63
Namibia	93	3.57	110	3.13	94	3.93	50	4.49	53	4.54	85	3.03	122	2.31
Nepal	126	3.12	125	2.69	113	3.73	124	3.61	105	3.69	130	2.22	99	2.80
Netherlands	7	5.38	11	5.52	3	5.39	30	4.72	11	5.57	1	6.01	18	5.06
New Zealand	17	5.07	15	5.40	17	5.17	10	5.10	3	5.87	22	5.09	60	3.78
Nicaragua	116	3.27	113	3.06	112	3.73	99	4.10	100	3.72	122	2.42	108	2.61
Nigeria	71	3.96	108	3.13	56	4.37	59	4.43	54	4.53	94	2.87	39	4.41
Norway	14	5.19	10	5.52	20	5.05	14	4.97	13	5.51	4	5.81	44	4.29
Oman	61	4.09	66	3.98	39	4.65	44	4.58	50	4.60	68	3.34	75	3.36
Pakistan	89	3.67	123	2.74	100	3.90	121	3.79	71	4.24	100	2.75	29	4.58
Panama	67	4.02	77	3.82	57	4.36	77	4.27	26	5.17	62	3.45	85	3.10
Paraguay	111	3.31	117	2.85	104	3.87	117	3.87	96	3.81	119	2.46	93	2.98
Peru	69	4.01	89	3.62	61	4.25	75	4.28	45	4.68	87	3.03	50	4.19
Philippines	68	4.02	60	4.10	81	4.08	101	4.08	78	4.09	70	3.26	34	4.50
Poland	41	4.39	34	4.64	65	4.22	62	4.40	68	4.28	46	3.79	20	5.00
Portugal	34	4.47	37	4.59	45	4.53	87	4.18	43	4.71	32	4.51	43	4.32
Puerto Rico	38	4.44	36	4.62	29	4.87	37	4.66	30	5.04	44	3.92	68	3.53
Qatar	31	4.53	31	4.69	38	4.66	31	4.71	22	5.25	37	4.31	67	3.54
Romania	54	4.18	52	4.29	67	4.18	97	4.10	60	4.42	48	3.70	42	4.38
Russian Federation	50	4.29	46	4.40	99	3.90	27	4.74	112	3.60	67	3.36	8	5.71
Saudi Arabia	45	4.35	53	4.29	34	4.71	63	4.37	73	4.22	51	3.69	22	4.81
Senegal	96	3.48	92	3.44	60	4.26	120	3.82	111	3.60	81	3.11	105	2.66
Serbia	78	3.82	70	3.91	115	3.68	66	4.36	89	3.94	61	3.45	65	3.59
Singapore	2	5.52	8	5.56	1	5.83	2	5.71	2	5.94	7	5.65	41	4.41
Slovak Republic	32	4.52	45	4.43	35	4.71	36	4.67	31	5.04	36	4.35	56	3.94
Slovenia	37	4.45	22	5.15	50	4.49	61	4.41	46	4.67	30	4.53	70	3.44
South Africa	35	4.46	57	4.13	31	4.79	88	4.17	24	5.22	49	3.70	23	4.77
Spain	25	4.75	30	4.75	41	4.63	96	4.11	36	4.93	29	4.59	12	5.47
Sri Lanka	74	3.92	65	3.98	42	4.59	115	3.89	65	4.34	82	3.07	64	3.63
Suriname	127	3.11	100	3.30	125	3.50	104	4.07	114	3.54	108	2.61	130	1.64
Sweden	9	5.35	3	5.83	7	5.34	26	4.74	8	5.65	2	5.99	30	4.57
Switzerland	8	5.35	7	5.60	6	5.34	3	5.66	21	5.26	5	5.76	35	4.49
Syria	104	3.41	101	3.28	92	3.94	123	3.67	121	3.28	107	2.64	63	3.63
Taiwan, China	18	5.06	13	5.46	14	5.19	21	4.83	58	4.45	15	5.34	16	5.11
Tajikistan	124	3.19	104	3.24	118	3.64	78	4.26	123	3.26	128	2.31	115	2.41
Tanzania	108	3.34	132	2.42	111	3.74	73	4.30	94	3.86	117	2.51	80	3.21
Thailand	36	4.45	51	4.31	46	4.53	13	4.98	49	4.60	66	3.37	21	4.92
Timor-Leste	132	2.77	128	2.57	130	3.19	90	4.15	129	3.05	118	2.48	134	1.18
Trinidad and Tobago	80	3.78	78	3.81	90	3.96	76	4.28	52	4.57	63	3.40	103	2.69
Tunisia	53	4.19	27	4.85	30	4.80	103	4.07	77	4.09	52	3.68	62	3.63
Turkey	59	4.10	72	3.87	55	4.38	125	3.57	76	4.11	58	3.53	15	5.16
Uganda	106	3.37	120	2.81	114	3.69	25	4.75	102	3.70	121	2.44	96	2.85
Ukraine	58	4.12	43	4.46	103	3.87	54	4.47	85	4.00	65	3.38	31	4.56
United Arab Emirates	29	4.64	41	4.48	25	4.94	18	4.88	41	4.77	28	4.63	54	4.14
United Kingdom	4	5.45	18	5.27	19	5.05	8	5.19	5	5.81	8	5.62	6	5.77
United States	1	5.81	5	5.67	8	5.32	1	5.79	9	5.61	11	5.57	1	6.91
Uruguay	83	3.76	62	4.07	79	4.10	106	4.02	88	3.95	64	3.39	91	3.04
Venezuela	94	3.55	79	3.76	132	3.09	131	3.43	116	3.50	86	3.03	36	4.49
Vietnam	73	3.94	98	3.36	70	4.17	47	4.52	80	4.06	79	3.12	40	4.41
Zambia	100	3.43	118	2.83	78	4.11	102	4.08	55	4.51	106	2.64	112	2.43
Zimbabwe	131	2.87	107	3.18	133	3.05	127	3.56	90	3.92	129	2.28	133	1.25

Table 8: The Global Competitiveness Index: Innovation and sophistication factors

Country/Economy	INNOVATION AND SOPHISTICATION FACTORS Rank	Score	PILLARS 11. Business sophistication Rank	Score	12. Innovation Rank	Score
Albania	130	2.74	123	3.27	132	2.22
Algeria	126	2.85	132	3.03	113	2.66
Argentina	81	3.43	71	3.99	98	2.87
Armenia	113	3.03	120	3.30	106	2.77
Australia	22	4.66	26	4.86	20	4.46
Austria	12	5.16	6	5.65	15	4.68
Azerbaijan	57	3.72	81	3.91	40	3.53
Bahrain	54	3.76	44	4.49	75	3.04
Bangladesh	115	2.98	105	3.46	122	2.51
Barbados	51	3.84	56	4.27	49	3.41
Belgium	15	5.02	11	5.36	14	4.69
Benin	100	3.21	103	3.49	95	2.93
Bolivia	134	2.59	133	3.03	133	2.16
Bosnia and Herzegovina	129	2.80	125	3.23	128	2.37
Botswana	98	3.22	106	3.45	83	2.98
Brazil	42	4.04	35	4.58	43	3.50
Brunei Darussalam	87	3.35	89	3.75	91	2.94
Bulgaria	92	3.30	92	3.69	96	2.91
Burkina Faso	95	3.27	96	3.58	89	2.95
Burundi	125	2.85	127	3.21	123	2.50
Cambodia	112	3.04	110	3.41	112	2.67
Cameroon	108	3.08	108	3.43	108	2.72
Canada	16	4.96	18	5.10	13	4.82
Chad	131	2.70	129	3.06	130	2.35
Chile	44	4.00	31	4.65	56	3.35
China	32	4.18	43	4.50	28	3.87
Colombia	60	3.71	64	4.20	61	3.22
Costa Rica	39	4.07	42	4.51	38	3.62
Côte d'Ivoire	94	3.27	88	3.76	105	2.78
Croatia	62	3.70	72	3.98	50	3.41
Cyprus	41	4.05	36	4.57	41	3.53
Czech Republic	25	4.37	29	4.77	25	3.98
Denmark	7	5.37	5	5.66	10	5.09
Dominican Republic	86	3.38	75	3.97	103	2.78
Ecuador	118	2.95	99	3.54	129	2.36
Egypt	74	3.54	77	3.93	67	3.15
El Salvador	96	3.24	79	3.93	118	2.56
Estonia	40	4.06	50	4.38	31	3.74
Ethiopia	114	2.98	122	3.27	109	2.69
Finland	5	5.53	10	5.49	2	5.57
France	14	5.08	9	5.50	16	4.67
Gambia, The	78	3.48	74	3.97	81	2.99
Georgia	109	3.07	112	3.39	107	2.74
Germany	4	5.54	1	5.87	8	5.22
Ghana	107	3.09	98	3.56	114	2.62
Greece	68	3.65	66	4.13	63	3.18
Guatemala	65	3.69	52	4.33	74	3.05
Guyana	111	3.04	95	3.60	124	2.49
Honduras	89	3.32	82	3.87	104	2.78
Hong Kong SAR	21	4.69	13	5.26	24	4.11
Hungary	55	3.75	68	4.05	45	3.45
Iceland	19	4.82	20	5.03	18	4.62
India	27	4.29	27	4.85	32	3.74
Indonesia	45	3.98	39	4.55	47	3.42
Ireland	20	4.72	19	5.05	21	4.39
Israel	13	5.10	23	4.95	6	5.26
Italy	31	4.19	21	4.99	53	3.38
Jamaica	72	3.57	69	4.01	68	3.14
Japan	3	5.65	3	5.78	4	5.52
Jordan	47	3.90	47	4.41	51	3.40
Kazakhstan	77	3.50	86	3.79	62	3.21
Kenya	50	3.87	63	4.21	42	3.52
Korea, Rep.	10	5.20	16	5.22	9	5.18
Kuwait	52	3.82	38	4.56	71	3.07
Kyrgyz Republic	123	2.90	121	3.28	121	2.51
Latvia	84	3.39	83	3.85	93	2.94
Lesotho	110	3.06	126	3.22	97	2.91
Libya	102	3.16	101	3.51	100	2.82
Lithuania	49	3.87	49	4.39	55	3.35
Luxembourg	24	4.51	25	4.87	23	4.15
Macedonia, FYR	105	3.16	107	3.45	99	2.86
Madagascar	97	3.22	102	3.49	87	2.96
Malawi	101	3.20	104	3.46	94	2.93
Malaysia	23	4.63	22	4.99	22	4.28
Mali	99	3.21	111	3.41	79	3.01
Malta	56	3.74	59	4.23	60	3.25
Mauritania	120	2.93	114	3.38	125	2.48
Mauritius	69	3.65	55	4.29	80	3.01
Mexico	70	3.60	58	4.24	90	2.95
Moldova	128	2.83	131	3.05	116	2.61
Mongolia	119	2.94	130	3.06	102	2.82
Montenegro	88	3.33	90	3.71	88	2.96
Morocco	76	3.51	70	3.99	78	3.02
Mozambique	127	2.84	128	3.14	120	2.55
Namibia	104	3.16	94	3.63	111	2.68
Nepal	121	2.91	117	3.34	126	2.47
Netherlands	9	5.20	8	5.58	12	4.82
New Zealand	28	4.26	37	4.57	26	3.95
Nicaragua	124	2.86	119	3.30	127	2.42
Nigeria	64	3.69	61	4.23	65	3.16
Norway	18	4.91	15	5.22	19	4.60
Oman	48	3.87	54	4.29	44	3.45
Pakistan	85	3.39	87	3.79	82	2.99
Panama	58	3.71	51	4.36	73	3.07
Paraguay	132	2.69	118	3.32	134	2.06
Peru	83	3.40	67	4.12	110	2.68
Philippines	67	3.65	57	4.26	76	3.04
Poland	61	3.70	62	4.23	64	3.17
Portugal	43	4.03	48	4.39	35	3.66
Puerto Rico	26	4.32	28	4.85	30	3.80
Qatar	35	4.14	45	4.47	29	3.81
Romania	75	3.53	78	3.93	69	3.14
Russian Federation	73	3.56	91	3.70	48	3.41
Saudi Arabia	37	4.09	41	4.51	34	3.68
Senegal	59	3.71	65	4.15	59	3.27
Serbia	91	3.30	100	3.51	70	3.09
Singapore	11	5.16	14	5.25	11	5.08
Slovak Republic	53	3.80	53	4.33	58	3.28
Slovenia	33	4.15	34	4.59	33	3.72
South Africa	36	4.13	33	4.62	37	3.64
Spain	29	4.25	24	4.89	39	3.61
Sri Lanka	34	4.14	32	4.64	36	3.65
Suriname	117	2.97	113	3.38	117	2.57
Sweden	6	5.53	7	5.64	5	5.42
Switzerland	2	5.68	2	5.81	3	5.54
Syria	80	3.45	76	3.94	84	2.97
Taiwan, China	8	5.26	12	5.28	7	5.23
Tajikistan	103	3.16	116	3.35	85	2.97
Tanzania	106	3.12	109	3.41	101	2.82
Thailand	46	3.91	46	4.43	54	3.38
Timor-Leste	133	2.62	134	2.92	131	2.32
Trinidad and Tobago	79	3.47	73	3.98	86	2.97
Tunisia	30	4.21	40	4.51	27	3.91
Turkey	63	3.70	60	4.23	66	3.16
Uganda	90	3.32	97	3.57	72	3.07
Ukraine	66	3.66	80	3.91	52	3.40
United Arab Emirates	38	4.09	30	4.76	46	3.42
United Kingdom	17	4.93	17	5.20	17	4.66
United States	1	5.80	4	5.75	1	5.84
Uruguay	82	3.42	85	3.82	77	3.02
Venezuela	116	2.98	115	3.35	115	2.61
Vietnam	71	3.59	84	3.84	57	3.35
Zambia	93	3.29	93	3.64	92	2.94
Zimbabwe	122	2.90	124	3.26	119	2.55

(Cont'd.)

excellent capacity for innovation (ranked 2nd on all three indicators). The country's overall competitive performance, however, is dragged down by its macroeconomic weaknesses, with an extremely high budget deficit (ranked 110th), which have led to the buildup of one of the highest public debt levels in the world (ranked 129th). Financial markets also remain an area of concern, traced to a lack of trust in the banking sector, for example (Japan ranks 93rd on the soundness of its banks). Japan's current ranking marks a drop of one position since last year, with a measurable weakening across a broad range of areas, most notably a number of aspects of the country's public institutions. In particular, the business community perceives that government spending has become more wasteful and public trust in politicians has diminished further since last year's assessment.

Canada moves up three places to join the top 10 (ranked 10th). Canada benefits from top-notch transport and telephony infrastructure; highly efficient markets, particularly labor and financial markets (ranked 7th and 10th respectively); and well-functioning and transparent institutions (ranked 15th). In addition, the educational system gets excellent marks for quality, which has prepared the country's workforce to adopt the latest technologies for productivity enhancements (ranked 9th). Canada's main weakness remains its macroeconomic stability, where it is ranked 43rd, mainly linked to the significant government debt of nearly 70 percent of GDP, which places the country 107th out of 134 countries on this indicator. On a more positive note, however, the government has been running small surpluses over recent years, which is allowing the country to put the debt level on a downward trend.

Europe

Europe continues to feature prominently among the most competitive regions in the world, with 12 European countries among the top 20, as follows: Switzerland (2nd), Denmark (3rd), Sweden (4th), Finland (6th), Germany (7th), the Netherlands (8th), the United Kingdom (12th), Austria (14th), Norway (15th), France (16th), Belgium (19th), and Iceland (20th). However, the picture for Central and Eastern Europe is bleaker, with several countries losing positions in the rankings echoing the recent economic downturn in the region.

The United Kingdom falls three positions to 12th place this year. Among the country's notable strengths is the efficiency of its labor market (ranked 8th), standing in contrast to the rigidity of many other EU countries. In addition, notwithstanding the recent financial crisis, the United Kingdom's financial markets continue to be assessed as among the most efficient in the world, although they have slipped from 2nd to 5th place since last year, attributable to rising concerns in the business sector about the soundness of banks and the ease of access to various forms of capital. The United Kingdom is also harnessing the latest technologies for productivity improvements; it is ranked 8th on the technological readiness pillar. On the other hand, the country's greatest weakness remains its macroeconomic environment (ranked 58th), with low national savings, a growing public-sector deficit, and consequential public indebtedness. A more detailed analysis of the United Kingdom's competitiveness can be found in Box 1.

France is ranked 16th in this year's GCI, up two places from last year and demonstrating a number of competitive strengths. The country's infrastructure is among the best in the world (ranked 2nd), with outstanding transport links, energy infrastructure, and communications. The health of the workforce and the quality and quantity of education provision are other clear strengths (ranked 9th for health and primary education and 16th for higher education and training), ensuring a healthy and educated workforce. In addition, the sophistication of its business culture (9th in the business sophistication pillar) and its leadership in the area of technological innovation (16th in the innovation pillar) are important attributes that have helped to boost the country's growth potential.

On the other hand, a number of weaknesses are hindering the country from unleashing its competitive potential. France's labor market flexibility continues to be ranked very low (131st) because of the rigidity of wage determination, high nonwage labor costs, and the strict rules on firing and hiring, as well as the poor labor employer relations in the country. It is clear that structural reforms in this area, long mooted, are long overdue. Another area of concern is macroeconomic stability (65th): the government budget deficit and the related public-sector debt ratio remain large, and the national savings rate, while growing, still remains low by international standards.

In spite of the economic slowdown recently observed in **Spain,** the country remains stable at 29th place. Spain's competitiveness performance continues to be boosted by the large market (12th) available to its national companies; a highly sophisticated business sector (24th), which is effectively leveraging ICT and exogenous technology (29th in the technological readiness pillar); first-class infrastructure (22nd); good-quality higher education and training (30th); and strong macroeconomic fundamentals (30th). On a more negative note, its institutional environment (43rd) and innovation potential (39th) could be strengthened to further buttress its economic potential. And the greatest area of concern remains the highly inflexible labor market (126th), a matter of particular concern given the recently rising unemployment in the country.

On a less positive note, **Italy** (ranked 49th) is down by three places this year. The country continues to do well in more complex areas measured by the GCI, particularly the sophistication of its businesses environment. Italy is ranked 21st for its business sophistication, producing goods high on the value chain using the latest

Box 1: The United Kingdom: Ensuring its future competitiveness

Over the past decade, the United Kingdom (UK) has seen a period of rapid growth. GDP per capita increased more than in most European Union (EU) and G7 economies, and the country has undergone profound shifts as it took advantage of globalization. Yet despite this positive growth trend, the United Kingdom's ranking in the Global Competitiveness Index (GCI) has dropped by 10 positions since 2006, to 12th place this year.[1]

There is no doubt that the UK economy benefits from a number of clear assets. Liberal policies in the area of trade and investment ensured efficient markets for goods and services through high levels of domestic and foreign competition. This in turn increased productivity. The country's highly sophisticated financial institutions took advantage of the increasing internationalization of financial flows to strengthen London's position as a key global financial center. The highly flexible and efficient labor markets, ranked 8th, enabled the shifting of workers from declining manufacturing industries to the rapidly growing services sector. As a result, unemployment was at a low 5.3 percent in 2006 despite considerable migration from Eastern Europe after the 2004 EU enlargement. All of these attributes contributed to healthy and stable economic growth over the past decade. Yet GDP growth in 2008 is now expected to be less than half the rate registered in 2007,[2] in large part because of the impact of the present financial crisis. This has highlighted the importance of addressing a number of challenges to improve the United Kingdom's competitiveness and better buttress the economy from future shocks.

Among the pillars of the GCI, the macroeconomic environment remains the weakest aspect of the UK competitiveness assessment. The United Kingdom ranks 58th on this pillar, down by 10 positions from last year. The significant and increasing budget deficit, ranked 105th and amounting to over 3 percent of GDP in 2007, has contributed to this worsening assessment. And although the 2008 budget is committed to tighter fiscal policy over the next two years, the efficiency as well as the quantity of spending are of concern: business leaders consider government spending to be increasingly wasteful, with the United Kingdom placing 76th on the related indicator, down from 40th last year. A recent OECD report echoes this perception,[3] in particular for publicly funded services such as the health sector.[4] Improving spending efficiency will be particularly important in the shorter term, because the current economic downturn is likely to decrease tax revenues.[5] Over the longer term, the aging of the population will put additional pressures on the budget.

The institutions pillar is another component of the GCI that stands out for its fairly weak and deteriorating assessment in the case of the United Kingdom. The country places 25th this year, 12 positions below last year's ranking. The more fragile security situation following the 2005 terrorist attacks, and the threat of new attacks, impose significant costs on business, as reflected in the rank of 124 on the related indicator. More generally, the business community has less faith in government institutions than in the past: there is less trust in politicians, and a feeling that policymaking is more opaque.

As mentioned above, the financial markets remain one of the competitive advantages of the United Kingdom. However, compared with last year, there has been a notable weakening of this area as measured by the GCI. Specifically, the assessment of the overall sophistication of financial markets has dropped from 2nd to 5th place over the past year. This drop is linked to less easy access to various forms of capital and to rising concerns in the business sector about the soundness of banks (falling by 40 positions to 44th place), not surprising given the collapse or near collapse of significant financial institutions in the country. In response to this development, the government has initiated substantial changes to the financial regulatory framework.

Another area for reform, as indicated by the GCI, is the educational system. Enrollment rates in secondary and, to a lesser extent, tertiary education are below the average of the EU15 countries, ranking 34th and 26th, respectively. This may lead to skills shortages in the future, particularly as the quality of the educational system is not among the world's best, with overall quality ranked 28th and the quality of math and science education 47th. A more efficient use of talent could be achieved through efforts to increase social mobility, as the socioeconomic background of a student is currently quite decisive for his or her educational attainment.

In light of the present economic downturn, policy priorities will certainly focus on supporting a rapid return to past growth rates. Yet it is equally important not to neglect these fundamental challenges that undermine the country's underlying competitiveness and may put longer-term growth at risk.

Notes

1 The United Kingdom was 2nd in the 2006 edition of the GCI and 9th last year.

2 IMF 2008b.

3 OECD 2007.

4 In 2005 public expenditure on health amounted to 7.2 percent of GDP (OECD 2008).

5 Increasing efficiency is also a more appropriate policy response than fiscal tightening given the slowing economy.

production processes, thanks also to strong business clusters. However, Italy's overall competitiveness performance is held back by some critical structural weaknesses in the economy. The labor market remains among the most rigid in the world, with Italy ranked 129th out of 134 countries for its labor market flexibility, creating a large hindrance to job creation. Another problematic area is its weak public finances and extremely high levels of public indebtedness (ranked 123rd on this indicator), related to the inefficient use of public resources (it is ranked 128th for the wastefulness of government spending). Other institutional weaknesses are its high levels of corruption and organized crime and a perceived lack of independence within the judicial system, which increase business costs and undermine investor confidence.

Among the 12 countries that joined the European Union (EU) since 2004, **Estonia** (ranked 32nd) continues to be, by a significant margin, the most competitive economy, despite a fall of five places in the rankings since last year. Estonia has built up efficient government institutions (ranked 23rd) and well-functioning markets. The government manages public finances adeptly and has been successful in its efforts to make Estonia one of the most aggressive countries in adopting new technologies for productivity enhancements (17th). The drop in the country's ranking is mainly attributable to a lower government budget surplus and increasing inflation, and echoes the recent economic downturn in the Baltic region. This stands in contrast to **Bulgaria** (ranked 76th), one of the newest and the lowest ranked EU members. Bulgaria's low ranking is attributed, among other factors, to infrastructure inadequacies and institutional weaknesses including burgeoning corruption. However, on a positive note, Bulgaria has moved up four places in the rankings since last year, an improvement possibly linked to the perceived benefits brought about by accession, a trend also witnessed in **Romania** (up six positions at 68th position), the other new EU member since 2007.

Russia is ranked 51st, up seven places from last year. Russia's main strengths are its large market size and improving macroeconomic stability (partly thanks to windfall oil revenues). However, to improve its competitiveness further, the country must tackle a number of structural weaknesses. Of major concern is a perceived lack of government efficiency (116th), the lack of independence of the judiciary in meting out justice (109th), and more general concerns about government favoritism in its dealings with the private sector. Private institutions also get poor marks, with corporate ethics in the country placing Russia 112th overall on this indicator. In addition, goods and financial markets are inefficient by international standards (ranked 99th and 112th respectively). All these areas make it very difficult to do business in the country and should be addressed to place Russia on a more sustainable development path going forward.

After improving last year, **Turkey** (63rd) has dropped by 10 places in the rankings this year. Turkey continues to benefit from its large market, which is characterized by relatively high competition (46th). However, some more basic issues must still be tackled, such as upgrading the quality of infrastructure (especially ports and the electricity supply), improving the human resources base through better primary education and better health care (78th), addressing the burgeoning inefficiencies in the labor market (125th), and reinforcing the efficiency and transparency of public institutions. Indeed, there has been measurable decrease since last year in the public's trust in government institutions, demonstrated by a drop in rank from 57th to 82nd on this subpillar, likely related in part to recent political turbulence, such as the failed attempt to ban the ruling party. The overall drop in rank can also be traced to a weakening of the country's perceived financial market efficiency (which fell from 61st to 76th place), with a drying up of credit through the banking sector and increasing concerns about the soundness of banks more generally in the country.

Latin America and the Caribbean

As was the case last year, the important progress recently made by Latin America in improving its macroeconomic stability and ensuring more stable growth does not seem to be fully reflected in the competitiveness performance of the region, as appraised by the GCI.[21] Only Chile, at 28th, continues to feature among the most competitive economies in the world, followed by the small Caribbean economies of Puerto Rico (41st) and Barbados (47th), and showing a significant gap with respect to the second highest ranked Latin American country, Panama (58th). Costa Rica (59th), Mexico (60th), and Brazil (64th) also figure in the top half of the rankings.

Chile remains at a comparatively high rank of 28, despite a fall of two places since last year, and is once again leading the region and most of the world in competitiveness. The country's remarkable success story has much to do with its sound macroeconomic management, coupled with timely market liberalization and opening to trade, all taking place within the context of a transparent and predictable regulatory framework. Specifically, Chile has successfully laid most of the basic foundations for competitiveness, including strong macroeconomic fundamentals (14th), well-developed infrastructure (30th), efficient institutions (37th), and a good health-care system (31st in the health subpillar). Moreover it displays efficient goods (26th) and labor (17th) markets, together with a fairly sophisticated financial market (29th), buttressed by the largest pension industry in the region (worth over 60 percent of GDP).[22] All of these attributes have contributed to Chile's "Asian style" growth rates for the past 25 years.

The current challenge for Chile, which is bound to become even more pressing as the country moves up

the growth path and gets closer to the technological frontier, relates to the quality of its educational system. Both basic (105th) and higher (50th) education receive middling to poor marks, which bodes poorly for the country's capacity for knowledge generation and innovation. In particular, a well-functioning higher educational system producing a sufficient pool of skilled workers (especially scientists and engineers) is crucial not only to address the changing needs of an efficiency-driven production system, but also to provide the necessary environment for technology absorption. Although Chile has significantly increased its investment in education in recent years, accompanied by rising educational attainment rates, much remains to be done to catch up with the standards of countries such as Korea, Israel, and the European Nordic countries, presently the world leaders in this area.

Down five places from last year and now ranked 41st, **Puerto Rico** is the second highest ranked economy in Latin America and the Caribbean. The island's competitiveness continues to rest on its well-functioning goods (29th), labor (37th), and financial (30th) markets, coupled with a dynamic and sophisticated business sector (28th), which displays an important innovative potential (30th). Within the Caribbean, **Barbados** is also very successful by regional standards, moving up three places to 47th this year. The rather worrisome macroeconomic weaknesses displayed by the country (114th) are counterbalanced by its excellent institutional environment (20th), first-class infrastructure (24th), and high-quality primary (5th) and higher (29th) education, among other factors.

Panama, fairly stable at 58th, and **Costa Rica,** up four positions to 59th, are the most competitive countries in Central America. Costa Rica, in particular, has showed an impressive upward trend in the past few years, gaining a total of nine positions since 2006. The country's main competitive advantages can be found in its fairly efficient institutions (50th), relatively good primary (36th) and higher (49th) educational systems, flexible labor markets (35th), and the impressive sophistication (42nd) and capacity for innovation (38th) displayed by its business sector. The country has also made important progress toward macroeconomic stability, improving its ranking significantly from 111th in 2007 to 85th in this area. For a more detailed analysis of Costa Rica's competitiveness performance, see Box 2.

Mexico, with a fairly stable score, loses eight positions from last year, and is now placed 60th. The country has made impressive strides toward macroeconomic stability (reflected in a relatively strong 48th position in the macroeconomic stability pillar) and toward opening, liberalizing, and diversifying its economy over the last decade, emerging as the second-largest economy after Brazil and the top FDI destination in the region.[23] Mexico has been able to leverage its privileged

Box 2: Costa Rica: A Central American success story in competitiveness

Blessed with rich natural resources and long standing political stability, Costa Rica is assessed by the GCI as one of the most competitive economies in Latin America and the Caribbean; at 59th position, it comes in ahead of Mexico (60th) and Brazil (64th), among others. Furthermore, an analysis of Costa Rica's evolution in the rankings over the last three years highlights a remarkable upward trajectory, with a nine-place improvement since 2006.

The unique development strategy followed by the country since its return to democracy in 1948 has allowed it to build up important competitive strengths, thus providing the rest of the region with best practices examples in dimensions as diverse as education, public governance, and product and export diversification.

The importance of good governance standards,[1] as well as high-quality education, are seen as prerequisites for a viable democracy, sustained growth and development. These elements have consistently underpinned the country's policy agenda over the decades. In particular, the early and steady focus on education, with the creation of the first public university in 1940 (the University of Costa Rica) followed by three more in the 1970s, and the establishment of world-class private higher education and training and research institutions—such as INCAE, EARTH University, and INBio—equipped the productive system with a relatively large pool of highly qualified professionals.[2]

The policy agenda has placed particular emphasis on diversifying the economy away from commodities toward more value-added products. In this sense, Costa Rica has been particularly successful in nurturing its high-tech sector over the last 15 years, with high-tech exports accounting for 30 percent and 40 percent of total and industrial exports in 2006, respectively, and with a 13 percent rise in the 2001–05 period.[3] The development of the high-tech sector has been boosted by the establishment in Costa Rica of an important group of multinationals in the 1990s, with Intel at the forefront, investing first in a large assembly and testing plant,[4] and later in a software development center. Instrumental in bringing about this development have been the targeted FDI promotion strategy pursued by the national investment promotion agency CINDE, the export fiscal incentives (namely the Export Processing Zone and the Export Contract regimes) adopted in the 1990s in parallel with trade liberalization,[5] and Costa Rica's geographical location and strong transportation logistics. Also critical have been the country's political stability and respect for the rule of the law, coupled

Box 2: Costa Rica: A Central American success story in competitiveness *(cont'd.)*

with the availability of a relatively low cost and educated labor force with good English language skills.

CINDE targeted high-tech FDI with a view toward diversifying Costa Rica's production structure away from agriculture and unskilled labor-intensive manufacturing (i.e., apparel produced in the *maquiladoras*), in which the country was already losing its competitiveness, to skill-intensive industries. This leveraged the country's educated labor force and ensured a more advantageous position in international markets. FDI was a crucial component of the cluster strategy envisaged by CINDE, since they were to develop backward linkages through the domestic suppliers and foster training and collaboration with national universities.

Another cluster that has been targeted and developed in a similar spirit of promoting higher value added industries is that surrounding the eco-tourism industry. Building on Costa Rica's extraordinary biodiversity (accounting for 5 percent of the world's total biodiversity), natural beauty, and pristine environment, the tourism sector has experienced an impressive dynamism in recent years, representing 6.3 percent of total GDP and 6.5 percent of total employment in 2007. Moreover, with 1.725 million tourist arrivals in 2007, bringing in an average US$940 in receipts per visitor, Costa Rica leads Central America and displays a more lucrative tourism sector than Mexico, the most-visited country in Latin America (with 21.35 million visitors), for which the average receipt per visitor is only US$570.[6] It is not by chance that Costa Rica, at 44th, is the second highest ranking country in the LAC region, after Barbados (29th), in the World Economic Forum's Travel & Tourism Competitiveness Index 2008.

The fairly successful economic diversification described above feeds into strong levels of business sophistication (42nd) and innovation (38th), particularly by regional standards. Companies established in Costa Rica are operating quite high on the value chain (34th), with comparative advantages based predominantly on sophisticated products and processes (30th). Further, their innovation capacity is assessed as being fairly high (43rd), thanks to high R&D spending (30th) and wide-ranging research collaboration with academia (33rd). The country gets good marks in the innovation and sophistication factors subindex (39th), the best showing across the three subindexes composing the GCI, which bodes well for the preparedness of Costa Rica's economy to evolve toward a higher, innovation-driven, stage of development.

Furthermore, Costa Rica has made important progress in the macroeconomic aspects of competitiveness, consistently improving its public finances over the last three years: public debt has been brought down from 55.2 percent of GDP in 2005 to 46.6 percent in 2007, while the government budget balance has been turned from a 1.6 percent (of GDP) deficit in 2005 to a 0.6 percent surplus in 2007. This has been facilitated by the strong growth experienced by the country in the last couple of years, but is also indicative of the current government's effective tax administration, with reduced tax evasion and tight control on nonpriority spending.[7]

On a less positive note, inflation continues to be a source of concern at 9.4 percent in 2007, reflecting high oil and food prices worldwide. Moreover, the poor state of the country's infrastructure (94th) looms as a potential bottleneck for the further modernization and diversification of the economy, as well as for its overall growth prospects. The adoption of fiscal reforms broadening the tax base should therefore be high on the government's agenda in order to free up important resources for investment in infrastructure and social programs, while not increasing the debt burden.

In addition, the long-awaited ratification of the Dominican Republic-Central American Free Trade Agreement (DR-CAFTA) could prompt the politically thorny liberalization of the telecommunications and insurance sectors, traditionally closed to private investors, thus enhancing their efficiency and eliminating important rigidities in the goods market.[8] This should be done in parallel with efforts to reduce red tape and excessive regulation. This area remains a major concern in the country, as reflected by the disappointing marks registered by Costa Rica in aspects such as the number of procedures to start a business (12, corresponding to 103rd position), the time required to start a business (77 days, corresponding to 118th place), and the burden of government regulation (72nd).

By tackling such weaknesses, Costa Rica will further strengthen the foundations of its competitiveness and ensure sustained economic growth and prosperity going forward.

Notes

1 The focus on good governance is reflected in the comparatively good marks the country gets for several aspects of its institutional environment, in particular public ethics (41st), undue influence (34th), and government efficiency (47th). This stands in marked contrast with the performance of other countries in the region.

2 In this respect, Costa Rica is ranked 46th for its availability of scientists and engineers, only behind Puerto Rico (12th) and Chile (35th) in the region, and well above countries such as Argentina (81st), Peru (103rd), and Mexico (105th).

3 Reyes and Condo 2007.

4 Intel has invested a record US$700 million since 1996 and is currently employing around 3,500 people in the country. The spillovers of Intel's investment in Costa Rica were many and diverse, ranging from a simplification of FDI regulation to creating specialized degrees in national universities and catalyzing further FDI in the country. In this respect, IT companies such as DSC Communications Corp., Remec, Sawtec Inc., Merrimac Industries, and Abbot and Baxter invested in the country, followed by Procter & Gamble, Western Union, and Sykes, which established service centers.

5 See Rodríguez-Clare 2001.

6 World Travel & Tourism Council, TSA Research 2007.

7 IMF 2008a.

8 Costa Rica was the last country among the signatories to ratify the DR-CAFTA, thanks to a narrow yes vote (51.6 percent) in a referendum called by President Arias in October 2007. Costa Ricans were bitterly divided on the agreement, because of the clauses imposing the liberalization and opening of the sensitive sectors of telecommunications, financial services, and energy.

geographical position between two oceans as well as between Latin and North America, its impressive network of preferential trade agreements, and its large domestic market of over 100 million people (ranked 12th in the world) to diversify its productive and export structure away from commodities: according to the Economist Intelligence Unit (EIU), 81 percent of Mexico's total exports in 2007 were in manufactures. This is also reflected by the country's fairly good marks for its business sophistication (58th), with reasonably developed clusters (58th), quality local suppliers (46th), and the fact that it has begun producing goods that are higher on the value chain (59th).

On the other hand, a number of important weaknesses continue to hinder Mexico's competitiveness. These include its weak public institutions (97th) and rampant violence (123rd). Also problematic is its inflexible labor market (99th), characterized by burdensome labor regulations and high payroll taxes and social contributions, as well as a higher education and training system (74th) that does not provide the economy with the appropriate pool of skilled labor, notably scientists and engineers (105th). In addition, the goods market suffers from inadequate (foreign and domestic) competition, with overregulated and closed key economic sectors such as telecommunications and energy. The current administration has managed to pass some bills aimed at addressing some of these concerns, including reforms in the pension, fiscal, electoral, and criminal justice systems and in the energy sector. However, further action is required to continue liberalizing markets, upgrade the educational system, and improve public governance in the country.

Brazil, at 64th place, posts a remarkable eight-position improvement, partially closing the competitiveness gap with Mexico. The country has continued to move in the direction of sounder public finances and has seen improvements in many of the areas assessed by the Index. In particular, government debt has been significantly reduced from last year (from 65.5 percent of GDP to 47 percent). Brazil's main competitive advantages include the large size of the market available to its firms (10th out of 134 economies), access to one of the most sophisticated financial markets in the region (64th), a dexterity in absorbing and adapting technology from abroad and leveraging ICT (56th in the technological readiness pillar), and especially the remarkable degree of sophistication displayed by its business sector (35th), together with a prowess for generating innovation (43rd). The latter two elements are reflected in the rapid internationalization of a number of Brazilian large enterprises that have become global players in the international markets, also massively investing abroad. In this sense, Brazil in 2006 was a net source of FDI, whereby the outward flows amounted to US$26 billion vis-à-vis US$18 billion of inflows.[24]

Despite these encouraging trends, Brazil still faces important challenges in view of improving its competitiveness further. These include the still high debt levels (even after the reduction mentioned above), contributing to a low national savings rate and high interest rates, and a worrisome 122nd position in the macroeconomic stability pillar. There is also a general distrust of public institutions among the business community (98th), with weak public ethics (121st) and government inefficiencies (124th) as well as serious concerns regarding the security situation in the country (103rd). Educational standards also require upgrading (presently ranked 85th for primary education and 58th for higher education and training), with high dropout rates and large regional disparities in terms of attainment and quality. Last but not least, goods (101st) and labor (91st) markets are hampered by overregulation and important rigidities, which contribute to shifting a significant amount of activity and labor to the informal sector. Improvements in these structural and microeconomic weaknesses will better prepare Brazil to unleash its full competitive potential.

Peru is up three places to 83rd. This confirms the notable progress toward macroeconomic stability, based on a competent monetary and fiscal policy as well as goods and labor market liberalization, made by the country in recent years. Indeed, Peru has posted an important improvement since last year in the macroeconomic stability pillar (from 78th to 67th), due to increasing public surpluses (from 2.1 percent to 3.1 percent of GDP) and the related lowering of public debt (from 32.7 percent in 2006 to 29.2 percent of GDP in 2007). Peru has also seen improvements in the two pillars capturing goods and labor market efficiency (from 67th to 61st and from 87th to 75th, respectively). The country also continues to benefit from other competitive strengths, such as the reasonable size of its both foreign and domestic market (50th), and its fairly developed financial market (45th). Coupled with the high growth rates realized by the country in recent years,[25] as well as the investment grade status achieved in April 2008 for its foreign currency debt, the overall picture bodes well for Peru's competitiveness prospects. Going forward, a number of weaknesses will need to be addressed, including the poor quality of the country's institutional environment (101st), its underdeveloped infrastructure system (110th), and the inadequate state of health and primary education (95th) and higher education and training programs (89th). On a related note, poverty levels in Peru remain critical, despite the current administration's efforts to increase social expenditure and public investments in infrastructure.

Notwithstanding its strong recovery after the deep economic crisis of 2001, with high growth rates since 2003,[26] **Argentina** continues to place quite low in the rankings at 88th position, with an assessment similar to last year. The country has a number of important competitive advantages, including its relatively well educated

labor force (ranked 61st and 56th, respectively, on the health and primary education, and higher education and training pillars) and the large market size available to its enterprises (24th). However, the economy is characterized by some serious weaknesses, representing enduring elements of vulnerability going into the future. For example, despite debt restructuring, the public debt remains high, estimated at 56.1 percent of GDP in 2007 (placing the country 97th on this indicator); this, combined with continuing high inflation, may undermine the steps taken toward macroeconomic stability.

On a related note, the GCI highlights a deep distrust on the part of the business community regarding the quality and efficiency of the country's public institutions (128th), the respect and enforcement of the rule of law, and the even-handedness of the public sector in its relations with the private sector. This is likely linked to the government's tendency over recent years to adopt discretionary policies (such as the attempt to increase taxes on agricultural exports), coupled with the ongoing renegotiation of a number of utility provision contracts since 2001, eroding business confidence. Indeed, this tendency can also be seen in the country's overregulated and rigid goods (122nd), labor (130th), and financial (117th) markets, which are impeded from allocating resources to their most effective use. In this context, the most pressing challenges will be the institutionalization of sound fiscal policies and the restoration of investors' trust in the business climate and proper functioning of the economy.

Venezuela, at 105th place, continues to fall in the rankings, a trend seen over the past several years. This year the country has fallen seven more places despite some marginal improvements in its health and primary education standards and in the quality of the higher education and training system. This is due in large part to the fact that, despite windfall oil revenues, the macroeconomic environment continues to deteriorate: expansionary fiscal policies and discretionary administrative measures have led to increasing levels of public indebtedness and rampant and increasing inflation (ranked 132nd).

Related to the poor fiscal and monetary management, as last year, Venezuela ranks last out of all countries for the perceived quality of its institutions, reflecting the business sector's enduring concerns about the weak rule of law, government inefficiencies, and the government's lack of evenhandedness in its dealings with the private sector. There has been an increase in red tape, and goods, labor, and financial markets are not able to effectively allocate resources in the economy, with goods (132nd) and labor (131st) markets in particular assessed as among the least efficient in the world. Structural reforms are clearly needed to address the growing distortions in the economy and the high vulnerability to changes in oil prices. Competitiveness would also be improved if the increased public spending on health and education were better targeted. Perhaps most important would be actions to restore investors' confidence in the business environment and the rule of law in the country.

Suriname (103rd), **Ecuador** (104th), **Bolivia** (118th), **Nicaragua** (120th), and **Paraguay** (124th) continue to figure at the bottom of the GCI rankings, displaying similar weaknesses in their poor institutional environments and lack of respect for the rule of law, excessive red tape and overregulated markets, underdeveloped infrastructure and inefficient educational systems.

Asia

The competitive performances of Asia-Pacific economies continue to encompass the entire gamut, from highly competitive countries to the most challenged. Singapore, Hong Kong (11th), and Australia (18th) continued their ascent in the rankings while Japan, Korea (13th), and Taiwan (17th) dipped in their positions. Nine Asia-Pacific countries are among the top 30, led by Singapore and followed by Japan, Korea, Hong Kong, Taiwan, Australia, Malaysia (21st), New Zealand (24th)—and this year China enters the top 30, displacing Thailand (34th). Other members of the next tier include new entrant Brunei (39th) as well as India (50th), Indonesia (55th), Vietnam (70th), the Philippines (71st), and Sri Lanka (77th). Pakistan (101st) declined in the rankings to join those countries ranked 100 and below, which include Mongolia (100th), Bangladesh (111th), Cambodia (109th), Nepal (126th), and Timor-Leste (129th).

Hong Kong SAR, at 11th place, leads the world in financial market sophistication and also benefits from very efficient goods markets and a high level of macroeconomic stability. With regard to financial markets, Hong Kong is ranked 1st for its legal rights, capital flows, and access to financing through the local equity market. And Hong Kong's goods markets are characterized by openness to foreign ownership, extremely low tariffs, and low trade barriers (ranked 1st in these indicators). The country ranks 3rd for its macroeconomic stability, due to its excellent fiscal management which has resulted in a notably low level of government debt, and an improving macroeconomic environment more generally.

On the other hand, Hong Kong's competitive disadvantages stem primarily from its small domestic market size and its mixed performance in the areas of health and primary education as well as higher education and training. On health, although life expectancy in the country is among the highest in the world, there are some concerns related to high rates of diseases such as tuberculosis (ranked 79th) and malaria (ranked 66th). And attainment rates remain quite low at all levels of the educational ladder, with primary, secondary, and tertiary enrollment rates so low as to place Hong Kong 101st, 72nd, and 63rd, respectively.

Korea, at 13th place, derives its strong position from attributes such as its macroeconomic stability and a very innovative business sector. Korea's macroeconomic

environment is characterized by government budget surpluses, which have led to the reduction of the public debt, a high national savings rate, and a very low interest rate spread (ranked 3rd on this indicator). The country is also highly innovative, with high company spending on R&D and a strong government focus on procuring advanced technology products (ranked 2nd), which have contributed to the country becoming one of the most innovative in the world (ranked 7th for utility patents). Korea's competitiveness would be strengthened further by addressing a number of weaknesses, most notably inefficiencies in its financial and labor markets.

Taiwan, China, at 17th place, down three places from last year, draws its greatest competitive strengths from its education sector and related business innovation. With regard to education, Taiwan has high enrollment rates at all levels, and the educational system gets good marks for quality (although the quality rating is weaker than in past years). In addition, companies provide a high level of continuing on-the-job training, ensuring that the workforce can adapt to the rapidly changing economy. Related to innovation, Taiwan has a large pool of scientists and engineers, and it benefits from high company spending on R&D and strong collaboration between research institutes and the business sector in innovation. All of this has come together to place Taiwan 1st worldwide in terms of the patenting per capita of new inventions.

On the other hand, Taiwan's financial markets represent a comparative weakness, with concerns about the soundness of banks (ranked 117th) and the restriction of capital flows (78th). Similarly, public institutions could be further strengthened. The drop of three places in the rankings is due in large part to a deterioration of various aspects of the institutional environment, with relatively low public trust in politicians, some concerns about a lack of judicial independence, and increasing complaints about the regulatory burden faced by companies operating in the economy.

Australia, at 18th place, draws its strongest competitive advantages from the excellent functioning of its goods, labor, and financial markets. In terms of financial market sophistication, the country ranks 3rd for the regulation of its securities exchanges and for legal rights, and 4th for the soundness of its banks. Australia's goods markets are characterized by the ease of starting a business: the number of procedures and the time required to start a business are both ranked 1st internationally. And labor markets are very flexible, characterized by significant ease in hiring and firing employees and a lack of nepotism in the business sector by international standards. Australia also has very strong private institutions, ranked 2nd for the efficacy of its corporate boards and 3rd for the strength of auditing and reporting standards in the country. Higher education and training is also an area of strength, with high enrollment rates at all levels, and very good marks for the quality of the educational system (ranked 9th).

Malaysia, at 21st place, also benefits from the excellent functioning of its goods, labor, and especially financial markets. Labor markets are well evaluated for their efficiency (19th), with a strong relationship between productivity and pay (6th) as well as good cooperation in labor-employer relations (13th). Goods markets are assessed as efficient (23rd) with strong competition and business-friendly taxation. The financial market continues to perform well, clearly well recovered from the 1998 financial crisis, and is ranked 16th internationally for its sophistication, with a sound banking sector and a relative ease of access to various forms of finance for business development. Other strengths include the quality of the country's transport infrastructure and its strong business sophistication and innovative potential, which have contributed greatly to the country's growth over recent years.

On the other hand, efforts should be made in the area of education, where attainment rates at the secondary level remain low; and also in addressing the relatively poor health of the workforce. Finally, greater fiscal discipline would better ensure sustainable macroeconomic stability going into the future, with repeated government deficits (ranked 109th) to build up substantial government debt over the years.

New Zealand, at 24th place, benefits from the excellent health of its workforce as well as the high quality and quantity of education provided. The country also has transparent and well-functioning institutions—it is ranked 1st for its judicial independence, for example, and has very strong private institutions (ranked 3rd for the efficacy of corporate boards and 4th for the protection of minority shareholder interests). New Zealand's financial, goods, and labor markets are also highly efficient, with excellent investor protection and legal rights, low agricultural policy costs (ranked 1st on this indicator), few obstacles to starting a business, and very low trade barriers. The country's competitiveness would be enhanced by upgrading infrastructure, especially roads and the electricity supply.

China enters the top 30 this year, up four places from last year. The country benefits greatly from its large and rapidly growing foreign and domestic market size (ranked 1st and 2nd, respectively), allowing for significant economies of scale. Macroeconomic stability also remains a source of competitive advantage, with the government budget moving into surplus, and manageable debt levels, although rising inflation has become an area of concern, as in many other countries. Innovation is becoming another competitive advantage, with rising company spending on R&D coupled with strong university-industry research collaboration, and an increasing rate of patenting.

China's key competitive weakness is related to its financial market (109th), with restricted capital flows

(ranked 121st), inadequate regulation of securities exchanges (ranked 109th), and concerns about the soundness of the banking sector (ranked 108th). Related to these weaknesses is the need to strengthen private institutions (ranked 77th), with insufficient protection of minority shareholders' interests (ranked 94th), inefficient corporate boards (90th), and weak accounting and auditing standards (86th). And, given the increasing importance of innovation for the country's competitiveness, improving higher education and training should be a priority to address the low enrollment rates at the secondary and tertiary levels, and to upgrade the quality of the educational system more generally. See Box 3 for more details about China's competitive performance.

Thailand, ranked 34th, has fallen six places since last year. The country derives certain competitive strengths from its market size as well as the efficiency of its labor market (ranked 13th), the result of strong cooperation in labor-employer relations (ranked 17th) and low non-wage labor costs (ranked 20th), for example. The country's infrastructure is also very good, particularly roads and air transport. But the country lags in technological readiness (66th), with low penetration rates for Internet use, broadband, and mobile telephones in particular. The health of Thailand's workforce is another area of concern (ranked 76th), with high rates of HIV, tuberculosis, and malaria (ranked 108th, 96th, and 93rd, respectively). Some aspects of the financial market also require attention, especially concerns about the soundness of the banking sector. Given the political turmoil experienced over the past year, it is notable that the decline in the overall ranking this year can be traced in part to a weakening assessment of government institutions, with increasing concerns about the transparency of policymaking and public-sector efficiency more generally.

Brunei Darussalam enters the rankings for the first time this year at 39th place, buoyed by its strong macroeconomic stability, where it ranks 2nd internationally, thanks to its high government surplus and the complete absence of public debt. However, important competitive disadvantages abound, particularly regarding the sophistication of business operations and strategy (ranked 97th) as well as innovation and goods market efficiency (ranked 91st in both pillars).

India, at 50th place, derives substantial advantages not only from its market size (ranked 4th for its domestic market size and 5th for its foreign market size) but also from its strong business sophistication (ranked 27th)

Box 3: China: An emerging giant in global competitiveness

With annual average growth rates of 9.7 percent since the late 1970s, China has made impressive strides in developing and diversifying its economy, as well as in reducing poverty and improving standards of living for its population.[1] Its enormous GDP, estimated at US$3.3 trillion in 2007,[2] makes China one of the largest economies in the world, behind only the United States, Japan, and Germany, and an increasingly key player in the global economy. The size of the (domestic and export) market available to the companies established in its territory is second only to that of the United States globally, allowing extraordinary economies of scale and efficiency gains.

China ranks 30th in the Global Competitiveness Index (GCI) 2008–2009, up four positions from last year, entering the group of the 30 most competitive nations in the world, and well ahead the other three BRIC economies of India (50th), Russia (51st), and Brazil (64th).

This remarkable showing should not deemphasize the enormous challenges that face China in maintaining its competitiveness, in view of sustaining its rapid growth and moving up the value chain. As wealth is created, wages rise inexorably. Productivity must increase in line with rising prices and wages, as well the added value, quality, and diversity of the national production system. Practically, this means two things for China. First, the country must bolster the basic foundations of its competitiveness, namely the quality of its institutions, infrastructure, public health, and primary education, which are still very much lagging behind international norms, while maintaining sound macroeconomic management. Further, it needs to improve its efficiency-enhancing factors, notably the quality of higher education and its capacity to leverage information and communication technologies (ICT) and other technologies coming from abroad, as well as the efficiency of the goods, labor, and financial markets.[3]

Starting from the basic requirements of competitiveness, the quality of the institutional environment appears to be improving in the country, as reflected by an encouraging 21-place improvement in the institutions pillar since 2007. Although business executives in China estimate that there has been a strengthening in property rights and intellectual property protection, as well as public ethics and government efficiency, the overall rank of 56 points to the need for further progress. In particular, the quality of private institutions remains a concern, notwithstanding a dramatic 41-position improvement (from 101st in 2007 to 60th this year). The assessments of the country's auditing and reporting standards (86th), the efficacy of corporate boards (90th), and the protection of minority shareholders (94th) indicate significant room for improvement.

China's macroeconomic environment remains fairly favorable, despite the recent trend of rising inflation (4.5 percent in 2007, up from 1.50 percent in 2006), due in large part to increasing food and commodity prices. The other macro indicators point in the right direction. In 2007, the government budget

(Cont'd.)

Box 3: China: An emerging giant in global competitiveness *(cont'd.)*

balance was back in the black with a surplus equivalent to 0.7 percent of GDP, compared with a deficit of 1.2 percent the previous year. The national savings rate reached a staggering 52 percent of GDP in 2007 and the interest rate spread is narrowing, while government debt is down to a low 18 percent of GDP. Sound public finances should provide the country with the resources needed to improve social services and to address social and geographical inequalities. Indeed, China faces the challenges of its economically lagging western and northeastern regions and of widespread absolute poverty, with approximately 128 million people living on less than a dollar per day, often without access to clean water or sufficient education and health services;[4] this is reflected in the rather poor showing in the health subpillar (73rd).

In terms of efficiency enhancers, China presents some serious shortcomings, notably in the financial sector, ranked a dismal 109th this year. Efficiency and trustworthiness still lag behind in this area, with heavy restrictions placed on capital flows (121st) and inefficient and opaque stock exchange regulations (109th). The soundness of banks is assessed equally poorly, at 108th. Moreover, the country ranks 93rd for the extent to which borrowers' and lenders' rights are protected by law, as measured by the World Bank's Legal Rights Index. However, there are several encouraging signs. First, the government is aware of these issues and is taking major steps to tackle the problems, with some success as evidenced by the fact that the country is improving in eight of the nine indicators composing the pillar. Second, Chinese stock markets are large and active, based on a tremendous interest from national and international investors alike. It is expected that this will persuade the authorities of the need for more profound reforms.[5] Finally, if access to stock markets remains problematic, private equity and venture capital, as alternative sources of financing, are expanding rapidly, as indicated by China's 22-position leap to 49th place for venture capital availability.[6] Liberalizing, opening, and deepening financial markets should remain an absolute priority, in view of avoiding a potential bottleneck to China's further development.

Another area of weaknesses, although less severe, is China's level of technological readiness. This is critical for China's competitiveness given its present stage of development. ICT, in particular, enhances productivity through facilitating better production processes, and improves the efficiency of markets and resource allocation, thereby enhancing productivity. In addition, ICT has been shown to bring about important spillovers, notably for reducing poverty and social inequality. China lags behind its fellow BRIC countries in the technological readiness pillar, at a disappointing 77th place. The country ranks 83rd for availability of the latest technology, while foreign investment also is not viewed as an important source of new technology (79th). On a more positive note, Chinese firms seem to be relatively adept at adopting the technologies once they become available (46th). In terms of ICT infrastructure, penetration rates remain low by international standards, rendered more difficult by the large size of the Chinese population and land area. It is therefore encouraging that the government has placed ICT penetration high on its agenda of reforms through various initiatives such as the Golden Projects for E-government.[7]

Domestic and foreign competition, despite some progress, is in need of further liberalization in order to improve goods market efficiency. Creating a business in China remains very burdensome and time consuming, and the effective total tax rate represents a staggering 74 percent of corporate profits, one of the highest rates in the world (120th). Trade barriers are also significant, with the effective trade-weighted tariff rate on imports at over 14 percent, placing China in 122nd position on this indicator. In addition, the labor market remains inflexible, with costly firing procedures (108th), and non-wage labor costs as high as 44 percent of an employee's salary, placing China 126th.

The general portrait of China's competitiveness as depicted by this year's GCI results is largely positive, with most indicators moving in the right direction. Nevertheless, it will become increasingly challenging to sustain its competitiveness. China is reaching a critical point in its development, when it can no longer rely solely on the abundance of low-cost inputs to sustain growth. At home, a growing middle class is becoming ever more discriminating, while international companies continue to shop around for the best cost-to-productivity ratio in deciding where to locate activities. For the time being, many factors—including the size of its market, increasing domestic demand, and numerous reforms—place China in a strong position to maintain its vigorous growth and navigate the troubled global economic landscape.

Notes

1 According to the World Bank (World Bank 2007), China alone has been responsible for 75 percent of poverty reduction in the developing world over the last two decades.

2 IMF 2008c.

3 In the Global Competitiveness Index, this reality is captured through the concept of stages of development: the importance of each determinant of competitiveness shifts as a country moves up along the value chain. See text for details. In 2005, China was still in the most basic, factor-driven, stage of development (GDP per capita inferior to US$2,000). China has since entered a transition phase toward the second, efficiency-driven, stage (GDP per capita between US$3,000 and US$9,000), which, according to the IMF, China will reach by 2009.

4 World Bank 2008.

5 For instance, in May 2008, the total daily trading volume of the two main Chinese stock markets (Shanghai and Shenzhen) amounted to a record US$41 billion, more than all the other Asian markets combined. See IASC 2008. Also, the value of Chinese initial public offerings reached US$62.1 million in 2007, a world record. See World Bank 2008a.

6 According to a recent report by Deloitte (2007), China has become the primary target of American venture capitalists.

7 For more information, see World Bank 2007. For a detailed assessment of technological readiness across nations, see World Economic Forum 2008.

and innovation (ranked 32nd). The country is endowed with strong business clusters and many local suppliers, and ranks an impressive 3rd for the availability of scientists and engineers and 27th for the quality of its research institutions.

However, India's overall competitive position is weakened by its macroeconomic instability (109th) with the government running one of the highest deficits in the world (ranked 127th), unsustainable levels of government debt (ranked 113th), and fairly high inflation. Health and primary education is another area of concern, with poor health indicators (ranked 105th for both infant mortality and life expectancy), related to the high prevalence of diseases such as tuberculosis and malaria. Educational enrollment rates also remain low at all levels, with the primary educational system in particular getting poor marks for quality. Certain labor market efficiency indicators are also poor, including female participation in the labor force (ranked 122nd) and the facility with which firms can hire and fire employees (ranked 104th).

Indonesia, at 55th place, enjoys competitive advantage in selected areas, such as labor market efficiency, ranking 18th in pay and productivity and 19th in both cooperation in labor-employer relations and hiring and firing practices. In contrast, the country's main competitive weaknesses lie in the areas of technological readiness, infrastructure, and the quality of public institutions. With regard to technological readiness, Indonesia's penetration rates of ICT remain low (ranked 107th for Internet users, 105th for personal computers, and 100th for both mobile telephone subscribers and broadband Internet subscribers). The country's infrastructure also requires upgrading, with poor ratings for the quality of roads (ranked 105th) and ports (ranked 104th). Public institutions would also benefit from greater efficiency, with low rankings for the transparency of government policymaking (121st), the protection of property rights (ranked 117th), and intellectual property protection (102nd).

Kazakhstan is ranked 66th in this year's GCI, the highest ranked country in central Asia. Kazakhstan gets excellent marks for its labor market efficiency, which is ranked 12th worldwide, with high levels of flexibility in the hiring and firing process and in determining wages. Moreover, boosted by the country's natural resource wealth, it benefits from a number of macroeconomic strengths, including a balanced budget and a very low debt-to-GDP ratio. However, rising inflation, which has reached double digits, raises some cause for concern, placing the country 121st on this indicator. In addition, more will have to be done in Kazakhstan to improve the institutional environment. Particular attention should be focused on addressing weaknesses related to the quality of its institutions, notably judicial independence, the protection of property rights, government inefficiency, public trust of politicians, and security. A focus on improving the health of the workforce and the quality of the educational system, and placing a greater focus on technological adoption, will also be important in the country's efforts to improve its competitiveness.

Vietnam, at 70th place, enjoys specific key advantages in various areas, particularly related to its relatively large market size and the functioning of its labor market, with strong female participation in the labor force (ranked 10th) and a strong relationship between pay and productivity in the economy (ranked 17th). But the country's overall competitive position is eroded by weaknesses in the quality of infrastructure and institutions, as well as in higher education and training. Vietnam's infrastructure gets a poor rating overall (93rd), especially with regard to roads and port facilities. In terms of the quality of its institutions, Vietnam suffers from burdensome government regulation and weak auditing and reporting standards, where it is ranked 105th and 106th, respectively. And given the increasing importance of innovation for the country's competitiveness, its low university enrollment rate (placing the country 106th) and the poor assessment of the quality of its educational system (ranked 120th) require urgent attention.

The **Philippines,** at 71st place, benefits from its relatively large market size (ranked 34th). In addition, the country has seen an improvement in its macroeconomic stability since last year, with a shrinking government budget deficit and lower public debt. On the other hand, the main obstacles to greater competitiveness are related to the quality of the country's public institutions and a lack of efficiency in its labor market. The institutional environment is characterized by the perception that government spending is highly wasteful (ranked 120th), a lack of evenhandedness in the government's dealings with the private sector (117th), and general concerns about corruption in the public sphere. In addition, the threat of terrorism imposes significant costs on businesses in the country (ranked 125th). With regard to labor market inefficiencies, wages are not flexibly determined by companies (108th), regulations impede firms from freely hiring and firing workers (101st), and firing costs are excessive (ranked 108th), all of which hinders job creation.

Sri Lanka, at 77th place, has fallen seven places since last year. The country suffers from macroeconomic instability, ranked a low 132nd on this pillar, with the government running budget deficits that are among the highest in the world (ranked 130th), leading to the buildup of high levels of public debt (nearly 84 percent of GDP, placing the country 118th on this indicator). In addition, lax monetary policy has produced the second to highest inflation rate of all countries covered bar Zimbabwe. Another area requiring urgent attention is Sri Lanka's labor market, which lacks flexibility and efficiency (ranked 115th overall), and is characterized by

high firing costs, low female participation in the labor force, and a very high total tax rate.

Pakistan, at 101st place, benefits from its large market size (ranked 29th overall). However, a number of competitive weaknesses are hindering its ability to fully benefit from the potential economies of scale, mainly related to the human resources base. Specifically, Pakistan's rankings are low in the pillars measuring health and primary education (116th), higher education and training (123rd), labor market efficiency (121st), and technological readiness (100th). In addition, there has also been a measurable weakening over the past year in the perceived quality of public institutions.

Cambodia at 109th, **Bangladesh** at 111th, **Nepal** at 126th, and **Timor-Leste** at 129th constitute the least competitive economies in the region. Many of the disadvantages are common to these countries, but there are variations in the degrees of weakness. For example, in Cambodia, competitive disadvantages manifest in the financial market (130th) and higher education and training (127th) pillars. In Bangladesh, weaknesses are most concentrated in institutions (127th) and technological readiness (126th) pillars. More generally, in order to improve their economic prospects, these countries need to make efforts across all areas, particularly those important for countries at the more basic stage of development.

Middle East and North Africa

Record oil prices coupled with sound policies over the past few years have buoyed economic growth across the Middle East and North Africa region. Business environment reforms, investment in infrastructure, and targeted diversification are now paying off in many countries through higher competitiveness rankings. The rising energy prices have benefited not only the hydrocarbon exporters, but have also generated spillover effects throughout the entire region through increasing intra-regional FDI.[27] However, while the Gulf economies tend to improve in the rankings this year, all North African countries and Israel lose positions.

As in previous years, **Israel,** at 23rd position, leads the regional ranking, despite a drop of six places since last year. The most significant area of weakening is linked to the country's public institutions, with increasing concerns about the protection of property rights (49th), inefficient government spending (60th), and a deteriorating public trust in politicians (61st), perhaps related to last year's conflict with the Lebanese Hezbollah as well as corruption allegations against the country's leading politicians over the past year.[28]

Yet despite this more critical assessment of economic and political institutions, the country's well-developed human and institutional infrastructure for innovation, in particular at the early stage, as well as its widespread adoption of the latest technologies, continue to contribute to Israel's strong competitiveness and productive potential. Israel ranks 6th in terms of overall innovative capacity, with excellent national research institutes (3rd) and the government taking a proactive role in procuring high-tech products. The success of the resulting research activity is reflected in the high rate of patenting per capita (5th) registered by Israeli residents. The well-developed financial markets play a key role in supporting the process of turning ideas into marketable products through facilitated access to venture capital (8th) and equity finance (14th).

The competitiveness of most **Gulf countries** covered by the GCI shows a robust upward trend. The most competitive among them, **Qatar,** 26th overall, has moved up by five places since last year, buoyed by the country's consistently well assessed institutions, but also by advances in the functioning of financial markets, as well as enhanced innovative capacity. The educational system has also received a better assessment than in previous years, possibly reflecting a signaling effect of the graduation of the first class from the Qatar Education City in early 2008, where many American universities have set up regional schools over the past few years.

Yet despite progress made in ensuring high-quality education, tertiary enrollment remains low given the country's advanced stage of development, and the economy remains characterized by a very low participation rate of women in the labor force. Another threat that could put Qatar's future competitiveness at risk is rising inflation, partly imported through the dollar peg and partly mirroring the economic boom on the peninsula as well as rising food prices. Inflation reached almost 14 percent in 2007, placing Qatar 129th out of 134 countries on this indicator.

Qatar is followed by **Saudi Arabia,** a country that has experienced a robust improvement by eight positions to place 27th this year, mirroring the government's determination to improve its performance on a number of competitiveness indicators under the ambitious 10x10 program (see Box 4 for more details on Saudi Arabia's competitive performance).

The **United Arab Emirates** confirms its position as one of the most competitive economies in the region, moving up by six positions to 31st place. Overall, the country improves its ranking across all pillars of the GCI, with a more stable macroeconomic environment and a better assessment of the educational system (at the basic and the advanced levels) as the main driving forces behind the significant improvement in the overall ranking.

The country's institutional environment remains, as in previous years, a competitive advantage, characterized by a low regulatory burden (5th), high public trust in politicians (8th), and reliable police services. Since the last edition of the *Report,* the macroeconomic environment in the Emirates has improved significantly to 24th place, with a narrowing interest rate spread testifying to a more efficient financial system. On the negative side, the country has one of the highest inflation rates in the world, ranked 123rd in international comparison. The

sources for increasing prices are to be seen in rising demand from investment projects and a quickly growing population of expatriates, as well as supply-side bottlenecks along with rising prices of imported goods, and in the dollar peg of the national currency.[29]

The country's efforts to expand access to higher education through the creation of state universities, while also encouraging foreign and domestic private investment in the sector, helped move the Emirates toward becoming a regional hub for higher education. Yet the share of young Emiratis attending higher-education institutions remains low by international standards, positioning the country at 79th overall. On the other hand, despite fairly low enrollment rates, the quality of education is improving in the eyes of the business sector, with the Emirates now ranking 33rd on this indicator.

Box 4: Saudi Arabia: Unleashing its competitive potential

In 2004, Saudi Arabia embarked on a visionary program aimed at turning the country into one of the most competitive economies worldwide by 2010, as measured by the three main indexes assessing the competitiveness of nations,[1] including the GCI. The framework, put into practice by the Saudi Arabian General Investment Authority and the newly created National Competitiveness Centre, encompasses reforms and investment that aim at diversifying the economy into industries where the country has comparative advantages in order to create 1.3 million jobs.[2] Major reforms in the areas of the investment climate, education, health, the financial sector, and the judiciary are envisaged or being implemented.

The progress made is reflected in this year's GCI, where Saudi Arabia moves up eight ranks from last year, placing 27th out of 134 countries. The most notable advances have been achieved with respect to the institutional framework for doing business, where the country moved from 41st to 34th, and the efficiency of goods markets, where it improved by 17 ranks, up from 51st to 34th. These results mirror recent reforms such as the greater ease of setting up new businesses and the overhaul of the judiciary, which has been initiated.

Yet despite those improvements, and alongside many competitive advantages—such as the stable macroeconomic environment, a solid institutional framework, and the large market size that allows for exploiting economies of scale—Saudi Arabia's assessment in the GCI points to important challenges that will have to be addressed if the country wants to move up the development ladder. In light of its ambitious goals, the question inevitably arises as to which are the most important remaining challenges to improving competitiveness. Three emerge from the analysis of the GCI results: a fairly weak educational system that prepares graduates insufficiently for jobs in the private sector, low levels of foreign competition, and underdeveloped financial markets.

Its low educational attainment has been Saudi Arabia's Achilles' heel for a long time. Aware of this weakness, the government has made impressive strides over the past decades toward increasing enrollment rates at all levels. Tertiary enrollment, for example, has tripled over the past 20 years.[3] However, the quality of education in the country did not keep up with this development and remains weak by international standards. Business leaders' appraisal of the suitability of national education for a competitive economy is low, ranking only 70th. In particular, math and science education and management training are not considered adequate, ranked 85th and 75th, respectively. In addition, when asked to name the most problematic factors for doing business, Saudi business leaders point to an inadequately educated workforce as the most important factor, obtaining 15.7 percent of the responses. Restrictive labor regulations and poor work ethic of the national labor force are also mentioned among the important aspects, receiving 14.5 and 8.3 percent of the responses, respectively.

Improving the quality of education will therefore be crucial toward both resolving the employment shortage looming on the horizon and removing constraints to private-sector growth. Changing demographics are putting increasing pressure on labor markets, and the problem is likely to be exacerbated in the future. To date, over 80 percent of the native workforce have been absorbed by the public sector while the private sector mainly relies on migrant labor.[4] Yet, with rising numbers of young Saudis entering the workforce every year,[5] only a very dynamic private sector will be able to create sufficient jobs, and higher private-sector employment in turn necessitates a better alignment of educational content with the needs of the business sector. Upgrading the quality of education in Saudi Arabia is set to be a lengthy process, as it will require a thorough overhaul of the curricula and setting up more powerful incentive schemes for both teachers and students.[6] The nexus of a fairly weak educational system, labor markets that rely on migrant labor and rapid population growth remains one of the most important challenges facing the Saudi society today, and addressing it will be crucial for ensuring social cohesion and securing current levels of prosperity for future generations.[7]

Despite WTO accession in 2005 and the increasing inflows of FDI, local business leaders consider Saudi Arabia to be fairly sheltered from foreign competition, as captured by the 82nd rank on the foreign competition component of the GCI. Barriers to trade remain fairly high, ranked 71st, with higher tariffs for agricultural products.[8] At the same time, the country is considered to be fairly difficult to enter for foreign investors because of investor-unfriendly regulations: Saudi Arabia ranks a low 92nd in the corresponding variable, and 114th on the prevalence of foreign ownership. Despite efforts to attract investment into key industries, many sectors remain sheltered from foreign engagement, and transparency in the corporate sector is not widespread. Further lowering barriers to entry for foreign

(Cont'd.)

Box 4: Saudi Arabia: Unleashing its competitive potential *(cont'd.)*

goods, services, and capital would intensify competition in the country, thereby raising the efficiency of the domestic economy.

Saudi Arabia's financial sector has been undergoing a major overhaul since 2002. The competition among banks was intensified by allowing foreign banks to set up branches in the country, legal gaps are being filled, and regulation has been reformed—in particular for capital markets and Islamic finance. In addition, greater transparency requirements for banks have strengthened bank supervision. Nevertheless, business leaders are assessing the financial sector as insufficiently meeting the needs of a competitive economy. Although credit and other forms of finance, such as venture capital, are fairly easily accessible, the overall level of sophistication is assessed low by international standards (63rd). In this respect, the poor assessment of the trustworthiness of the financial system, positioning at a low 98th rank, is noteworthy. Within this category, the legal system obtains low marks for its ability to protect investors (93rd). This is certainly a reflection of the fact that, until recently, the Saudi judicial system was ill adapted to protect commercial interests. The situation is set to improve in the wake of the recent judicial reform. In addition, despite progress made in the regulation of securities exchanges, business leaders assess its quality, ranked 88th, as not sufficient. Although new regulatory standards have been recently introduced, the implementation of these laws is lagging behind. The gradual opening of the Saudi stock market to foreigners may provide additional pressure for more transparency and a more consistent implementation of existing regulations.

Notes

1 In addition to the GCI, these measures include the *Doing Business* report of the World Bank and the *World Competitiveness Yearbook* published by IMD.

2 The reform program includes the construction of six so-called *economic cities* set up as special economic zones throughout the country that will provide modern infrastructure and a business environment free of red tape. These cities should also ensure equitable development in all regions.

3 Despite great progress achieved, Saudi Arabia's current ranking in terms of enrollment in tertiary education remains fairly low by international standards (70th).

4 World Bank 2008b.

5 According to ILO data (ILO 2008), about 515,000 people are entering the workforce in the first decade of the new millennium, as opposed to about 415,000 in the 1990s and about 635,000 in the 2020s.

6 Saudi Arabia has one of the highest education expenditure-to-GDP ratios in the world, and a high teacher-to-pupil ratio. For more information on the challenges the Saudi educational system is facing, see World Bank 2008b.

7 Related to this challenge is the enormous untapped opportunity of increasing women's participation in the labor force (Saudi Arabia ranks 134th on this variable).

8 WTO 2008.

The positive developments in innovation, technological readiness, and business sophistication bode well for the country's future and reflect the business leaders' optimism about the prospects going forward. The use and penetration of ICTs and other advanced technologies are widespread and are increasingly catching up with the rest of the world, allowing the country to move up in the rankings to 28th position in this area. Yet, although the country's firms are producing goods and services increasingly high on the value chain and are engaging more in marketing and distribution (21st and 38th rank, respectively), businesses still do not rely sufficiently on professional management (52nd). At the same time, the fairly low quality of research institutions (74th) and companies' low spending on R&D (50th), as well as shortages in qualified research staff (75th), constrain the strengthening of the innovative capacity, which, at 46th, remains far behind top international levels.

Kuwait ranks 35th in this year's edition of the GCI. The country's macroeconomic environment remains for the second year in a row the most favorable worldwide. A budgetary surplus of nearly 44 percent of GDP (the highest of all countries), the highest national savings rate, and extremely low government debt contribute to this excellent result. Yet in order to put the country's recent surge in growth on a more solid footing, Kuwait must continue to carry out structural reforms. A major priority will be an overhaul of the educational system, both in terms of providing more access and also in improving its quality. Kuwait ranks 81st and 106th, respectively, for the quantity of higher and primary education, and 83rd for the quality of education provided. More generally, business leaders perceive the educational system to be out of sync with the needs of a competitive economy, with math and science education highlighted in particular as needing improvement. In addition, further intensifying domestic competition by facilitating the entry of foreign firms and new business creation would benefit the country's competitiveness. This would allow the business sector to take advantage of the flexible labor market and inject new energy into the country's markets for goods and services.

Tunisia tops the rankings among the North African countries at 36th position, preceding Bahrain and Oman by a narrow margin. The country's institutions, which have been favorably assessed for a number of years, are one of its major competitive advantages. They rest on fairly transparent and trustworthy relations between the government and the civil society as expressed in the high public trust of politicians (16th), a favorable assessment of the efficiency of government spending (2nd), and transparent policies (15th), as well as limited favoritism on the part of government officials (14th). A well-functioning health and educational system, as well as sound levels of domestic competition (34th) and a strong innovative capacity (27th), round out the positive picture. Moving forward, Tunisia will need to focus on

reforming the rigid labor market (ranked 103rd) and further streamlining its macroeconomic management in order to improve its competitive position.

Bahrain and **Oman** rank 37th and 38th, respectively. Similar to most of their geographical neighbors, both countries improve this year (by six and four positions, respectively). As is the case within many countries in the region, prudently managed hydrocarbon wealth has ensured a stable macroeconomic environment in both economies. While Oman displays a solid institutional environment, the GCI results point to shortcomings in the educational system that will need to be addressed if the country wishes to advance its competitiveness. Bahrain is host to the most sophisticated financial market in the region, but needs to further improve the efficiency of its labor market and upgrade its innovative capacity.

Jordan occupies the 48th rank this year, much in line with previous years' assessments. Well-defined property rights (23rd), efficient government spending (26th), a low burden of government regulation (18th), and a fairly efficient legal framework (29th), coupled with a very safe and secure environment (14th) ensure that the country's institutions receive a positive assessment. At the same time, the country's weak and deteriorating macroeconomic position is worrying, ranked a low 111th, 11 positions lower than last year, with a growing budget deficit and accompanying debt level. Moving forward, Jordan should also address its low primary education enrollment rate, which could otherwise lead to a literacy gap that will become increasingly difficult to close over time. In addition, policies aimed at making the labor market more flexible would also be beneficial for the country's business sector and employment creation.

Morocco has fallen by nine ranks this year, to 73rd place, in line with the deteriorating performance of North Africa as a whole. In the case of Morocco, a weakening security environment and a deteriorating assessment of the quality of the educational system contribute to the country's declining competitive position. At the same time, the macroeconomic environment—traditionally one of the country's weaknesses—has improved because of laudable efforts to curb inflation, control spending, and streamline the tax collection system.[30] The country also boasts a regulatory environment that is conducive to business activity and to business creation, ranked 19th and 22nd for the number of procedures and time required to start a business. At the same time, the rigid labor market, assessed at a low 128th rank, remains a serious drag on the country's competitiveness.

Syria, at 78th position, has moved up by two ranks since last year. Syria is a still largely state-controlled economy that only recently embarked on a reform path. The successful reforms of the business environment are reflected in the relatively favorable and improving assessment of institutions, although business leaders still identify corruption (100th) and the lack of transparency of government policymaking (106th) as major shortcomings. Tighter monetary policy has helped to curtail inflation, which nevertheless still remains at a relatively high level (ranked 88th),[31] while the high government budget deficit (121st) further undermines macroeconomic stability (93rd). As well as imposing more fiscal and monetary discipline, moving forward, Syria should also focus on upgrading higher education and training institutions (101st), freeing up the very rigid labor market (123rd), and continuing to reform its financial institutions (121st).[32]

Egypt ranks 81st in this year's edition of the GCI, down four places compared with last year. Despite some improvements, macroeconomic instability remains a major challenge for the government as mirrored in the very low 125th rank the country obtains on this pillar. High government debt, double-digit inflation, and a still high—although decreasing—budget deficit continue to weaken the macroeconomic environment, despite improving fiscal management.[33] In addition, labor market efficiency is poor in international comparison, ranked last among all 134 countries. Firing costs (119th), a significant brain drain of the country's talent (129th), and reliance on friends and relatives for professional management positions (124th) are the most important weaknesses in this context.

At the same time, Egypt has made progress in fostering technological readiness (84th), although the increased penetration of the latest technologies, such as the Internet, PCs, and mobile telephones, has not been sufficient for the country to move up in the rankings, as other countries are improving more quickly. To further benefit from internationally available technology, Egypt will need to upgrade its educational institutions, which continue to receive weak assessments (124th).

Libya ranks 91st, down three positions since the last edition of our *Report*. Benefiting from increasing exports of hydrocarbons, the country boasts one of the strongest macroeconomic environments in the world (ranked 6th). The high government surplus and low government debt contribute to this good assessment. Yet mounting inflationary pressures are putting the country's macroeconomic stability at risk. Although educational enrollment rates are overall satisfactory, the curricula need to be overhauled to become more in line with the needs of present economic realities: the quality of the educational system receives one of the weakest assessments among all countries covered (121st). Similarly, the quality of infrastructure is assessed as dismal, in particular air transport (126th), ports (110th), and railroads (116th). In this context, to improve its competitiveness, windfall oil profits should be invested in structural improvements such as upgrading the educational system and the transport infrastructure.

Algeria has dropped 18 positions to 99th rank, and is now the weakest regional performer. Despite robust growth reaching on average 4.8 percent over 2003–07,[34]

and relative macroeconomic stability, the business sector assesses the operating environment in the country as more difficult than in previous years, in particular with respect to public and private institutions as well as innovative capacity. Trust in politicians is eroding, as business leaders see the institutional framework deteriorate and the already precarious security situation worsen.[35] In addition to upgrading the institutional environment, improving the country's competitive position will require reforms in what is one of the most rigid labor markets in the world (132nd) and a restructuring of the very inefficient and unstable financial system (132nd). Labor market reforms could also contribute to improving the security situation by creating more jobs for the rising numbers of fairly well educated yet unemployed young people.

Sub-Saharan Africa

The improving economic climate observed in sub-Saharan Africa in recent years, with annual GDP growth accelerating to 6.8 percent in 2007 according to the IMF, is at last being reflected in the improved competitiveness rankings of a number of countries in the region. South Africa and Mauritius, already in the top half of the rankings last year, have been joined by Botswana, and there have been measurable improvements across specific areas in a number of other African countries. However, notwithstanding this positive development, sub-Saharan Africa as a whole continues to lag behind the rest of the world in competitiveness, requiring efforts across many areas to place the region on a firmly sustainable growth path going forward.

South Africa, ranked 45th overall, remains the highest ranked country in sub-Saharan Africa, with a very stable performance. Among the country's strengths is the large size of the economy, particularly by regional standards (ranked 23rd in the market size pillar). The country continues to receive good marks in more complex areas measured by the GCI, such as intellectual property protection (23rd), the quality of private institutions (25th), and goods (31st), as well as financial market efficiency (24th), business sophistication (33rd), and innovation (37th). South Africa benefits from high spending on R&D, accompanied by strong collaboration between universities and the business sector in innovation (both ranked 28th). It is thus not surprising that in recent years the country has a higher rate of patenting than a number of European countries. These combined strengths explain South Africa's position at the top of the regional ranking.

However, South Africa does face a number of obstacles to competitiveness. For example, the country ranks 88th in labor market flexibility, encompassing hiring and firing practices (129th), flexibility of wage determination (123rd), and poor labor-employer relations (119th). Further, the country's innovative potential could be at risk with a university enrollment rate of only 15 percent, which places the country 93rd overall. South Africa's infrastructure, although good by regional standards, requires upgrading (ranked 48th), with particular concerns about the quality of the electricity supply that has been getting worse in recent years (ranked 101st, down from 83rd last year) and the short supply of telephone lines. The poor security situation remains another important obstacle to doing business in South Africa. The business costs of crime and violence (134th) and the sense that the police are unable to provide protection from crime (109th) are highlighted as particular concerns. The greatest obstacle, however, remains the health of the workforce, ranked 129th out of 134 countries, due to high rates of communicable diseases and poor health indicators more generally. These are areas that must be tackled in order to improve South Africa's competitiveness outlook.

Botswana, ranked 56th, follows only South Africa in sub-Saharan Africa. The country regains its position this year in the top half of the rankings, moving up a remarkable 20 places, the largest improvement this year. In this light, the GCI is beginning to weight more heavily those more complex factors from which Botswana derives its competitive strengths. The government has succeeded in using its wealth from key natural resources to invest in factors that have set it on a more sustainable growth trajectory. Among the country's strengths are its reliable and legitimate institutions, ranking a high 21st worldwide for the efficiency of government spending, 22nd for public trust of politicians, and 26th for judicial independence. Botswana is rated as the country with the lowest corruption in Africa (22nd out of 134 countries). Over past years, the transparency and accountability of public institutions have contributed to a stable macroeconomic environment, and this is one key area of improvement: the government has been running a healthy budget surplus, which is allowing it to reduce debt levels, and inflation has come down from its peak in 2006 as well.

Botswana's primary weaknesses are related to the country's human resources base. Despite high spending on education, educational attainment rates at all levels of the educational ladder remain low by international standards, and the quality of the educational system receives mediocre marks. Yet it is clear that by far the biggest obstacle facing Botswana in its efforts to improve its competitiveness is the health situation in the country. Botswana has the highest HIV prevalence rate of all countries covered, as well as very high malaria (111th) and tuberculosis (128th) incidence. However, these rates are for the most part coming down, leading to an improvement in life expectancy from 40 to 52 years by the most recent estimate. Continuing to improve the health and educational levels of the workforce will remain the main priorities for the government for some time.

Mauritius has seen an improvement of three places since last year, moving up to 57th position and following Botswana directly in the rankings. The country is characterized by strong and transparent public institutions, with well-protected property rights (ranked 22nd), reasonable levels of judicial independence, and a security situation that is good by regional standards (37th). Private institutions are rated as accountable and improving, with strong auditing and accounting standards and a system that protects minority shareholders' interests. The country's infrastructure is well developed by regional standards, and goods and financial markets function well, ensuring an efficient allocation of resources in the country.

However, efforts will be required in the area of education. Educational attainment rates remain low, particularly at the university level (placing Mauritius 90th), education spending remains low, and the educational system gets mediocre marks for quality. Beyond the educational weaknesses, labor markets could be made more flexible, with stringent hiring and firing laws (110th) and wages that are not flexibly determined (118th). Furthermore, there are some health concerns with regard to the workforce—particularly the high prevalence of HIV. Finally, Mauritius must work to improve the stability of the macroeconomic environment going forward (ranked 117th), with a government budget deficit that places the country 115th (which over time has led to the buildup of significant national debt and high interest rates), as well as high and rising inflation.

Namibia has moved up nine places to 80th place this year, with improvements across many of the areas measured by the GCI. Among Namibia's comparative strengths is the quality of the institutional environment (ranked 42nd). Property rights are well protected (ranked 25th) and the judiciary is perceived as independent from undue influence (22nd). With regard to private institutions, auditing and accounting standards are strong and minority shareholders' interests are well protected. The country's strong institutional environment continues to contribute to responsible macroeconomic management. The government budget remained in surplus between 2006 and 2007, helping to significantly relieve the country's debt burden, although rising inflation still remains high by international standards (ranked 83rd on this indicator). The quality of the country's infrastructure is also excellent by regional standards (ranked 33rd), most particularly the transport infrastructure.

With regard to weaknesses, Namibia's health and education indicators are worrisome, with the country ranked a low 124th on the health subpillar. The country is characterized by high infant mortality, low (albeit rising) life expectancy, the result in great part of the high prevalence rates of HIV and malaria (ranked 130th and 129th, respectively) as well as the second-to-highest incidence of tuberculosis of all 134 countries. On the educational side, attainment rates remain low, with primary, secondary, and tertiary enrollment rates placing the country 114th, 103rd, and 112th, respectively. The quality of the educational system is assessed as being among the worst of all countries in the Index, ranked 114th overall, despite high government per capita spending on education. In addition, Namibia's goods markets suffer from a number of distortions, such as a long time required for starting a business (99 days, placing the country 122nd), ineffective antitrust policy, and poor customer orientation. Finally, the country could do more to harness new technologies to improve its productivity levels. Companies are not considered to be sufficiently aggressive in absorbing new technologies, and Namibia has low penetration rates of new technologies such as mobile phones and the Internet.

Notwithstanding the post-election political and social turmoil ravaging the country earlier in the year, **Kenya** (ranked 93rd overall) has moved up by six places this year, with its key strengths found in the more complex areas normally reserved for countries at higher stages of development. For example, Kenya's innovative capacity is ranked an impressive 42nd, with high company spending on research and development, and good scientific research institutions collaborating well with the business sector in research activities. Supporting this innovative potential is an educational system that—although educating a relatively small proportion of the population compared with most other countries (primary, secondary, and tertiary enrollment rates are ranked 116th, 108th, and 126th, respectively)—gets good marks for quality (33rd) for those attending schools. The economy is also supported by financial markets that are sophisticated by international standards (44th), with relatively easy access to loans and share issues on the local stock market.

However, there are a number of basic weaknesses that are eroding at Kenya's overall competitive potential. The country's public institutions continue to be assessed as highly inefficient (100th), plagued by undue influence (111th) and high levels of corruption (101st). The security situation in Kenya is also extremely worrisome, particularly crime and violence (126th), the potential of terrorism (129th), and the prevalence of organized crime (118th). Health is another area of serious concern (ranked 117th), with a high prevalence of diseases—particularly tuberculosis and HIV, which are among the highest of all countries covered (124th and 125th, respectively), contributing to the low life expectancy of 53 years.

Nigeria is ranked 94th this year. The country's greatest area of strength remains the macroeconomic environment (ranked 26th), with windfall oil revenues contributing to large (although declining) government budget surpluses, and a high national savings rate. Nigeria also benefits from a relatively large market, allowing for economies of scale. In addition, its financial markets are quite sophisticated by regional standards (ranked 54th).

On the other hand, the GCI shows that Nigeria's economy is characterized by weak and deteriorating institutions (ranked 106th, down from 87th in 2006)—including a serious security problem (125th)—and poor assessments for its infrastructure (120th) as well as basic health and education (126th). In addition, the country is not harnessing the latest technologies for productivity enhancements, as demonstrated by its low levels of ICT penetration. The rankings show that Nigeria is not taking the opportunity presented by the windfall oil revenues to upgrade the population's access to basic health care and education, and to make improvements in other areas such as infrastructure. Movements in this direction would be critical to set the basis for sustainable growth going forward.

Zimbabwe continues to be ranked among the least competitive economies included in the GCI, second to last at 133rd overall. This compares with last year's rank of 129, and represents a decline of one place even in a constant sample. The institutional environment is among the worst of all countries, with a complete absence of property rights (ranked last out of all countries at 134th), high levels of corruption (130th), and a lack of even-handedness of the government in its dealings with the public (129th) as well as basic government inefficiency (130th). The extreme mismanagement of the public finances and monetary policy has placed Zimbabwe once again at the bottom of all countries covered with regard to macroeconomic stability (ranked 134th), with enormous—and growing—deficit spending, negligible national savings, and raging hyperinflation that is unparalleled anywhere else in the world. The economy is now characterized by mismanagement and weaknesses across all areas, including health (ranked 128th in the health subpillar), low educational enrollment rates, and official markets that have ceased to function for all intents and purposes (particularly goods and labor markets, ranked 133rd and 127th, respectively).

Conclusions

This chapter has presented and analyzed the results of the World Economic Forum's Global Competitiveness Index. Covering 134 countries in this year's edition, the GCI provides a comprehensive picture of the numerous factors, institutions, and policies that determine the productivity and prosperity of a nation.

Since its introduction in 2004, the GCI has been used by an increasing number of countries and institutions to benchmark national competitiveness. The clear and intuitive structure of the GCI framework is useful for prioritizing policy reforms as it allows countries to determine the strengths and weaknesses of the national competitiveness environment and to identify those factors most constraining its economic development.

At the national level, numerous entities—such as competitiveness councils and observatories—have been created to analyze and closely monitor the competitiveness performance of their countries, and several national competitiveness reports have been prepared based on the GCI framework. At the global level, international organizations specializing in economic development studies increasingly use the GCI alongside other methodological approaches, as a tool for identifying and prioritizing areas for growth-enhancing reform.

In this context, the particular strength of the World Economic Forum's competitiveness work is that it provides a platform for dialogue among government, business, and civil society that can serve as a catalyst for productivity-raising reforms, with the aim of boosting the living standards of the world's citizens.

Notes

1 Schumpeter 1942; Solow 1956; and Swan 1956.

2 See, for example, Sala-i-Martin et al. 2004 for an extensive list of potential robust determinants of economic growth.

3 See Acemoglu et al. 2001, 2002; Rodrik et al. 2002; Easterly and Levine 1997; and Sala-i-Martin and Subramanian 2003.

4 See de Soto 2000.

5 See de Soto and Abbot 1990.

6 See Shleifer and Vishny 1997; Zingales 1998.

7 See Kaufmann and Vishwanath 2001.

8 See World Bank 1994; Gramlich 1994; Aschauer 1989; Canning et al. 1994; and Easterly 2002.

9 See Fischer 1993.

10 See Sachs 2001.

11 See Schultz 1961; Becker 1993; Lucas 1988; and Kremer 1993.

12 It is important to note that the effects of the global financial crisis may not be fully reflected in the GCI results discussed in this chapter, as they are based on data from the past year.

13 See Aghion and Howitt 1992 and Barro and Sala-i-Martin 2003 for a technical exposition of technology-based growth theories.

14 A general purpose technology (GPT), according to Trajtenberg (2005), is one which in any given period makes a particular contribution to overall economy's growth thanks to its ability to transform the methods of production in a wide array of industries. Examples of GPTs have been the invention of the steam engine and the electric dynamo.

15 See Frenkel and Romer 1999; Rodrik and Rodriguez 1999; Sachs and Warner 1995; and Alesina et al. 2005.

16 This is particularly important in a world in which economic borders are not as clearly delineated as political ones. In other words, when Belgium sells goods to the Netherlands, the national accounts register the transaction as an export (so the Netherlands is a foreign market of Belgium), but when California sells the same kind of output to Nevada, the national accounts register the transaction as domestic (so Nevada is a domestic market of California).

17 See Romer 1990; Aghion and Howitt 1992; and Grossman and Helpman 1991.

18 Probably the most famous theory of stages of development was developed by the American historian W.W. Rostow in the 1960s (see Rostow 1960). Here we adapt Michael Porter's theory of stages (see Porter 1990). Please see Chapter 1.1 of *The Global Competitiveness Report 2007–2008* for a complete description of how we have adapted Michael Porter's theory for the present application.

19 Some restrictions were imposed on the coefficients estimated. For example, the three coefficients for each stage had to add up to one, and all the weights had to be non-negative.

20 In order to capture the resource intensity of the economy, we use as a proxy the exports of mineral products as a share of overall exports according to the sector classification developed by the International Trade Centre in their Trade Performance Index. In addition to crude oil and gas, this category also contains all metal ores and other minerals as well as petroleum products, liquefied gas, coal, and precious stones. Further information on these data can be found at the following site: http://www.intracen.org/menus/countries.htm.

All countries that export more than 70 percent of mineral products are considered to be to some extent factor driven. The stage of development for these countries is adjusted downward smoothly depending on the exact primary export share. The higher the minerals export share, the stronger the adjustment and the closer the country will move to stage 1. For example, a country that exports 95 percent of mineral exports and that, based on the income criteria, would be in stage 3, will be in transition between stage 1 and 2. The income and primary exports criteria are weighted identically. Stages of development are dictated uniquely by income for countries that export less than 70 percent minerals. Countries that export only primary products would automatically fall into the factor-driven stage (stage 1).

21 According to the IMF (IMF 2008b), the region has withstood rather well the global financial slowdown so far, also thanks to strong commodity prices, with a still solid 5.6 percent growth rate in 2007. This is projected to slow gradually to 4.4 percent and 3.6 percent respectively in 2008 and 2009.

22 OECD Development Centre 2007.

23 Attracting US$19.04 billion in FDI in 2006 (UNCTAD 2007), ahead of Brazil (US$18.78 billion) and Chile (US$7.95 billion).

24 OECD Development Centre 2007.

25 These growth rates are an average annual 6.5 percent of GDP in the 2003–2007 period according to the IMF (2008a).

26 Argentina experienced average annual growth of 8.8 percent from 2003 to 2007 IMF (2008a).

27 See IMF 2008e for more details.

28 See *The Economist* 2008c.

29 IMF 2008e.

30 OECD Development Centre 2008.

31 IMF 2007a.

32 IMF 2007a.

33 IMF 2007b.

34 IMF 2008e.

35 *The Economist* 2008d.

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Appendix A: Structure of the Global Competitiveness Index 2008–2009

This appendix presents the structure of the Global Competitiveness Index 2008–2009 (GCI).

The numbering of the variables matches the numbering of the Data Tables. The number preceding the period indicates to which pillar the variable belongs (e.g., variable **1**.01 belongs to the 1st pillar).

The hard data indicators used in the GCI are normalized on a 1-to-7 scale in order to align them with the Executive Opinion Survey's results.[a] The Technical Notes and Sources at the end of this *Report* provide detailed information on all the hard data indicators.

Those variables that are followed by the symbol 1/2 enter the GCI in two different places. In order to avoid double counting, we give them a half-weight in each place by dividing their value by 2 when computing the aggregate score for the two categories in which they appear.[b]

The percentage next to each category represents this category's rounded weight within its immediate parent category. The computation of the GCI is based on successive aggregations of scores, from the variable level (i.e., the lowest level) all the way up to the overall GCI score (i.e., the highest level), using the weights reported below. For example, the score a country achieves in the 9th pillar accounts for 17 percent of this country's score in the *Efficiency enhancers* subindex. Similarly, the score achieved on the subpillar *Networks and supporting industries* accounts for 50 percent of the score of the 11th pillar. Reported percentages are rounded to the nearest integer, but exact figures are used in the calculation of the GCI.

Unlike for the lower levels of aggregation, the weight put on each of the three subindexes (Basic requirements, Efficiency enhancers, and Innovation factors) is not fixed. It depends on each country's stage of development, as discussed in the text.[c] For instance, in the case of Ecuador—a country in the second stage of development—the score in the *Basic requirements* subindex accounts for 40 percent of its overall GCI score, while it represents just 20 percent of the overall GCI score of Denmark, a country in the third stage of development.

	Weight (%) within immediate parent category
BASIC REQUIREMENTS	
1st pillar: Institutions	**25%**
A. Public institutions	**75%**
1. Property rights	20%
1.01 Property rights	
1.02 Intellectual property protection 1/2	
2. Ethics and corruption	20%
1.03 Diversion of public funds	
1.04 Public trust of politicians	
3. Undue influence	20%
1.05 Judicial independence	
1.06 Favoritism in decisions of government officials	
4. Government inefficiency	20%
1.07 Wastefulness of government spending	
1.08 Burden of government regulation	
1.09 Efficiency of legal framework	
1.10 Transparency of government policymaking	
5. Security	20%
1.11 Business costs of terrorism	
1.12 Business costs of crime and violence	
1.13 Organized crime	
1.14 Reliability of police services	
B. Private institutions	**25%**
1. Corporate ethics	50%
1.15 Ethical behavior of firms	
2. Accountability	50%
1.16 Strength of auditing and reporting standards	
1.17 Efficacy of corporate boards	
1.18 Protection of minority shareholders' interests	
2nd pillar: Infrastructure	**25%**
A. General infrastructure	**50%**
2.01 Quality of overall infrastructure	
B. Specific infrastructure	**50%**
2.02 Quality of roads	
2.03 Quality of railroad infrastructure	
2.04 Quality of port infrastructure	
2.05 Quality of air transport infrastructure	
2.06 Available seat kilometers (hard data)	
2.07 Quality of electricity supply	
2.08 Telephone lines (hard data)	
3rd pillar: Macroeconomic stability	**25%**
3.01 Government surplus/deficit (hard data)	
3.02 National savings rate (hard data)	
3.03 Inflation (hard data) [d]	
3.04 Interest rate spread (hard data)	
3.05 Government debt (hard data)	

(Cont'd.)

Appendix A: Structure of the Global Competitiveness Index 2008–2009 *(cont'd.)*

4th pillar: Health and primary education 25%

A. Health.....50%

4.01 Business impact of malaria[e]
4.02 Malaria incidence (hard data)[e]
4.03 Business impact of tuberculosis[e]
4.04 Tuberculosis incidence (hard data)[e]
4.05 Business impact of HIV/AIDS[e]
4.06 HIV prevalence (hard data)
4.07 Infant mortality (hard data)
4.08 Life expectancy (hard data)

B. Primary education 50%

4.09 Quality of primary education
4.10 Primary enrollment (hard data)
4.11 Education expenditure (hard data)[1/2]

EFFICIENCY ENHANCERS

5th pillar: Higher education and training.....17%

A. Quantity of education 33%

5.01 Secondary enrollment (hard data)
5.02 Tertiary enrollment (hard data)
4.11 Education expenditure (hard data)[1/2]

B. Quality of education.....33%

5.03 Quality of the educational system
5.04 Quality of math and science education
5.05 Quality of management schools
5.06 Internet access in schools

C. On-the-job training 33%

5.07 Local availability of specialized research and training services
5.08 Extent of staff training

6th pillar: Goods market efficiency.....17%

A. Competition 67%

1. Domestic competition.....variable[f]

6.01 Intensity of local competition
6.02 Extent of market dominance
6.03 Effectiveness of anti-monopoly policy
6.04 Extent and effect of taxation[1/2]
6.05 Total tax rate (hard data)[1/2]
6.06 Number of procedures required to start a business (hard data)[g]
6.07 Time required to start a business (hard data)[g]
6.08 Agricultural policy costs

2. Foreign competition .....variable[f]

6.09 Prevalence of trade barriers
6.10 Trade-weighted tariff rate (hard data)
6.11 Prevalence of foreign ownership
6.12 Business impact of rules on FDI
6.13 Burden of customs procedures
10.04 Imports as a percentage of GDP (hard data)

B. Quality of demand conditions.....33%

6.14 Degree of customer orientation
6.15 Buyer sophistication

7th pillar: Labor market efficiency 17%

A. Flexibility 50%

7.01 Cooperation in labor-employer relations
7.02 Flexibility of wage determination
7.03 Non-wage labor costs (hard data)
7.04 Rigidity of employment (hard data)
7.05 Hiring and firing practices
6.04 Extent and effect of taxation[1/2]
6.05 Total tax rate (hard data)[1/2]
7.06 Firing costs (hard data)

B. Efficient use of talent 50%

7.07 Pay and productivity
7.08 Reliance on professional management[1/2]
7.09 Brain drain
7.10 Female participation in labor force (hard data)

8th pillar: Financial market sophistication.....17%

A. Efficiency 50%

8.01 Financial market sophistication
8.02 Financing through local equity market
8.03 Ease of access to loans
8.04 Venture capital availability
8.05 Restriction on capital flows
8.06 Strength of investor protection (hard data)

B. Trustworthiness and confidence.....50%

8.07 Soundness of banks
8.08 Regulation of securities exchanges
8.09 Legal rights index (hard data)

9th pillar: Technological readiness.....17%

9.01 Availability of latest technologies
9.02 Firm-level technology absorption
9.03 Laws relating to ICT
9.04 FDI and technology transfer
9.05 Mobile telephone subscribers (hard data)
9.06 Internet users (hard data)
9.07 Personal computers (hard data)
9.08 Broadband Internet subscribers (hard data)

10th pillar: Market size 17%

A. Domestic market size.....75%

10.01 Domestic market size index (hard data)[h]

B. Foreign market size.....25%

10.02 Foreign market size index (hard data)[i]

INNOVATION AND SOPHISTICATION FACTORS

11th pillar: Business sophistication 50%

A. Networks and supporting industries 50%

11.01 Local supplier quantity
11.02 Local supplier quality
11.03 State of cluster development

B. Sophistication of firms' operations and strategy 50%

11.04 Nature of competitive advantage
11.05 Value chain breadth
11.06 Control of international distribution
11.07 Production process sophistication

Appendix A: Structure of the Global Competitiveness Index 2008–2009 *(cont'd.)*

11.08 Extent of marketing
11.09 Willingness to delegate authority
7.08 Reliance on professional management[1/2]

12th pillar: Innovation.....50%

12.01 Capacity for innovation
12.02 Quality of scientific research institutions
12.03 Company spending on R&D
12.04 University-industry research collaboration
12.05 Government procurement of advanced technology products
12.06 Availability of scientists and engineers
12.07 Utility patents (hard data)
1.02 Intellectual property protection[1/2]

Notes

a The standard formula for converting hard data is the following:

$$6 \times \frac{(\text{country score} - \text{sample minimum})}{(\text{sample maximum} - \text{sample minimum})} + 1$$

The *sample minimum* and *sample maximum* are, respectively, the lowest and highest country scores in the sample of countries covered by the GCI. In some instances, adjustments were made to account for extreme outliers. For those hard data variables for which a higher value indicates a worse outcome (e.g., disease incidence, government debt), we rely on a normalization formula that, in addition to converting the series to a 1-to-7 scale, reverses it, so that 1 and 7 still corresponds to the worst and best possible outcomes, respectively:

$$-6 \times \frac{(\text{country score} - \text{sample minimum})}{(\text{sample maximum} - \text{sample minimum})} + 7$$

b For those groups of variables that contain one or several half-weight variables, country scores for those groups are computed as follows:

$$\frac{(\text{sum of scores on full-weight variables}) + \frac{1}{2} \times (\text{sum of scores on half-weight variables})}{(\text{count of full-weight variables}) + \frac{1}{2} \times (\text{count of half-weight variables})}$$

c As described in the chapter, the weights are the following:

Weights	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

d In order to capture the idea that both high inflation and deflation are detrimental, inflation enters the model in a U-shaped manner as follows: for values of inflation between 0.5 and 2.9 percent, a country receives the highest possible score of 7. Outside this range, scores decrease linearly as they move away from these values.

e The impact of malaria, tuberculosis, and HIV/AIDS on competitiveness depends not only on their respective incidence rates, but also on how costly they are for business. Therefore, in order to estimate the impact of each of the three diseases, we combine its incidence rate with the Survey question on its perceived cost to businesses. To combine these data we first take the ratio of each country's disease incidence rate relative to the highest incidence rate in the whole sample. The inverse of this ratio is then multiplied by each country's score on the related Survey question. This product is then normalized to a 1-to-7 scale. Note that countries with zero reported incidence receive a 7, regardless of their scores on the related Survey question.

f The *Competition* subpillar is the weighted average of two components: *Domestic competition* and *Foreign competition*. In both components, the included variables provide an indication of the extent to which competition is distorted. The relative importance of these distortions depends on the relative size of domestic versus foreign competition. This interaction between the domestic market and the foreign market is captured by the way we determine the weights of the two components. Domestic competition is the sum of consumption (C), investment (I), government spending (G), and exports (X), while foreign competition is equal to imports (M). Thus we assign a weight of (C+I+G+X)/(C+I+G+X+M) to *Domestic competition*, and a weight of M/(C+I+G+X+M) to *Foreign competition*.

g Variables 6.06 and 6.07 combine to form one single variable.

h The size of the domestic market is constructed by taking the natural log of the sum of the gross domestic product valued at PPP plus the total value (PPP estimates) of imports of goods and services, minus the total value (PPP estimates) of exports of goods and services. Data are then normalized on a 1-to-7 scale. PPP estimates of imports and exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP. The underlying data are reported in the Data Tables section.

i The size of the foreign market is estimated as the natural log of the total value (PPP estimates) of exports of goods and services, normalized on a 1-to-7 scale. PPP estimates of exports are obtained by taking the product of exports as a percentage of GDP and GDP valued at PPP. The underlying data are reported in the Data Tables section.