

Assessing Competitiveness of Nations: The Global Competitiveness Index (Extracts)

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The World Economic Forum has been assessing the competitiveness of nations for nearly three decades since its first competitiveness report in 1979. The reports study factors enabling national economies to achieve sustained economic growth and long-term prosperity. They provide businesses and policymakers with a benchmarking tool to enable an objective assessment of the relative strengths and weaknesses of their national economy and to make informed comparisons between countries. The outcomes can also help identify best practice cases in specific areas. They often serve as a platform for public-private dialogue and a basis for policymaking. Box 1.1 outlines how the GCR results have been used to improve Croatia's competitiveness.

Over the past years, *The Global Competitiveness Report*, *The Global Information Technology Report* and *The Travel & Tourism Competitiveness Report* have become part of the toolkit of policymakers in many countries around the world to highlight strengths and weaknesses and track progress over time. This chapter provides an overview of the methodology used by the World Economic Forum to assess the competitiveness of nations.

1.1 The 12 pillars of competitiveness

With continuous progress in theoretical and empirical economic research, the methodology used by the World Economic Forum to assess national competitiveness has inevitably evolved over time. The latest step in this evolution is the Global Competitiveness Index (GCI), which has been developed in cooperation with Professor Xavier Sala-i-Martin from Columbia University and first introduced in 2004. Since then, the GCI – a highly comprehensive index for measuring national competitiveness, taking into account the microeconomic and macroeconomic foundations of national competitiveness – has been the World Economic Forum's main vehicle for assessing competitiveness.

The GCI is designed to assess the potential of countries to grow over the medium to longer term, taking into account the present level of development, based on the understanding that competitiveness is the set of institutions, policies and factors that determine the level of productivity of a country.

The level of productivity sets the sustainable level of prosperity that can be earned by an economy. 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 determinants of the growth rates of the economy, a more competitive economy is one that is likely to grow faster over the medium to long term.

Box 1.1 Croatia boosts competitiveness

The use of the Global Competitiveness Index by Croatia's National Competitiveness Council (CNCC)* is a good example of how the World Economic Forum's benchmarking research can be carried forward and impact the policy agenda.

Established in 2002, the council is a multi-stakeholder organization, comprised of 22 representatives of the business sector, trade unions, the government, and academia. Its ambition is to reform Croatia's economy to make it one of the 40 most competitive economies in the world by the time it joins the European Union (EU). One of CNCC's very first tasks was to collaborate with the World Economic Forum to include Croatia in *The Global Competitiveness Report (GCR)*. The council then used the results of the GCR, along with other data, to identify the strengths and, most importantly, the weaknesses impeding Croatia's competitiveness. The results were regrouped into seven categories: education, institutions, cost and price competitiveness, innovation and technology, strengthening of SMEs, regional and cluster development, change acceptance and leadership. Their analysis was presented in 2003 in the first *Report on Croatian Competitiveness*. The council then set up working groups of experts and practitioners with the task of formulating recommendations in each of the seven areas. This resulted in a total of 55 policy recommendations, which were reflected in the GCR results. Prime Minister Ivo Sanader made the recommendations an integral part of his economic agenda, while the Delegation of the European Commission to Croatia also declared that 90% of the recommendations are what the EU expects Croatia to do enroute to EU accession.

At the same time, the council laid out four quantifiable 'National Strategic Objectives' to be met within 10 years, achievable through implementing the recommendations. It also invested – and is still spending – time educating the public about the importance of competitiveness and the need for change.

Initially, the recommendations were to be implemented by taskforces co-chaired by CNCC representatives and government officials. However, this approach proved unsuccessful. Instead, ministries took on the responsibility. The council monitors progress through surveys, interviews and other metrics. After two years, some 85% of the recommendations were at various stages of implementation.

The GCR is not the only World Economic Forum publication used by the council. Released in 2007, *The Recommendations for Increasing Information and Communication Technologies (ICT) Competitiveness of Croatia* heavily draw on the findings of the World Economic Forum's *Global Information Technology Report* to highlight the importance of ICT for economic development and push the ICT agenda in Croatia. The launch of major initiatives, such as e-Croatia and e-Education, are direct outcomes of CNCC's efforts in this area.

CNCC also intends to promote the sustainable development of tourism in Croatia – a sector with tremendous potential – using the results of the World Economic Forum's recently published *Travel & Tourism Competitiveness Report 2008*.

In addition, CNCC is one of the 140 institutions that form the World Economic Forum's community of Partner Institutes. In this capacity, it conducts the annual Executive Opinion Survey in Croatia and actively participates in the dissemination of the World Economic Forum's work. In return, Partner Institutes benefit from advanced and privileged access to results and to our unique dataset, as well as being part of a global network of experts on competitiveness.

CNCC's success story is one among many. From Ecuador to Ireland, from Kuwait to Pakistan, examples abound of competitiveness councils, universities, think tanks and governments, making extensive use of the World Economic Forum's benchmarking work to boost the competitiveness of their country.

* Website: <http://nvk.multilink.hr>.

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

The World Economic Forum's experience in studying competitiveness has made it clear that the determinants of competitiveness are many and complex. This is supported

by economic research. The question of what determines the wealth of nations has been at the forefront of economic research since its existence and has greatly influenced economic policymaking over time. In the 20th century, neoclassical economists emphasized investment in physical capital and infrastructure. What followed were investments in physical capital, particularly in transition economies, which had only limited results on the countries' wealth. Investment in physical capital was then complemented by education and training. Towards the end of the 20th

century, technological progress, macroeconomic stability, good governance, the rule of law, transparent and well-functioning institutions, market orientation and many other factors were added. The influence of each of these factors on productivity rests on solid theoretical foundations and makes economic sense; some have strong empirical support. In addition, econometric studies show that many of these factors need to be in place simultaneously for a country to grow.¹

This evolution of economic thinking is also reflected in the development of the GCI used to assess the competitiveness of nations. Since 1979, when the first Competitiveness Scorecard was published, the methodology has been regularly updated to reflect the latest thinking in economics. Ukraine was first covered in 1997 when the Competitiveness Scoreboard was still the main methodology. It was replaced in 2001 by the Growth Competitiveness Index developed by Professor Jeffrey Sachs, which served as the main instrument until 2005 when the Global Competitiveness Index (GCI), the current methodology, was introduced.

The GCI encapsulates the latest thinking on competitiveness and captures the complexity of the economic growth process by taking into account a weighted average of many different components, each of which reflects one aspect of the complex reality of competitiveness. The components are grouped into 12 different categories, called the *12 pillars of competitiveness*.

1st pillar: Institutions

The institutional environment forms the framework within which individuals, firms and governments interact to generate income and wealth in the economy, and therefore has a strong bearing on competitiveness and growth.² It plays a central role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. It also has a bearing on investment decisions and on the organization of production. Owners of land, corporate shares and intellectual property are unwilling to invest in the improvement and upkeep of their property if their rights as owners are insecure.³ Equally importantly, 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.

But the importance of institutions is not restricted to the legal framework. Government attitudes towards markets and freedoms and the efficiency of its operations are also very important: over-regulation, excessive bureaucracy and red tape,⁴ corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, or the political dependence of the judiciary system impose significant economic costs on businesses.

Private institutions are also important in the process of creation of wealth. As the large corporate scandals that have occurred over the past few years have highlighted, accounting and reporting standards for preventing

fraud and mismanagement and for maintaining investor and consumer confidence are also important ingredients in the process of creation of wealth. High ethical standards in all business dealings increase the level of trust and thereby lower the cost of transactions.⁵ Furthermore, transparency of business operations ensured through strict accounting standards helps prevent fraud and mismanagement.⁶ These aspects are captured under the *private institutions* subpillar.

2nd pillar: Infrastructure

High-quality infrastructure is critical to ensure the efficient functioning of the economy. It is also an important factor determining the location of economic activity and the kinds of activities or sectors that can develop in an economy. As such, infrastructure is an important driver of competitiveness and has a significant impact on economic growth in a variety of ways.⁷ For example, high-quality infrastructure reduces the distance between regions, with the result of truly integrating the national market and connecting it to markets in other countries and regions.

Effective modes of transport for goods, people and services – such as roads, railroads, ports and air transport – enable entrepreneurs to get their goods to market in a secure and timely manner. It also facilitates the movement of workers around the country to the most suitable jobs. Economies depend on electricity supplies that are free of interruptions and shortages to ensure that businesses and factories can work unimpeded. Finally, a reliable 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.

3rd pillar: Macroeconomic stability

It is certainly true that macroeconomic stability alone cannot increase the productivity of a nation. However, it is equally true that macroeconomic disarray seriously harms the economy.⁸ The theoretical and empirical underpinnings of the relationship between a stable macroeconomy and growth have been firmly established.⁹ Firms cannot make informed decisions when the inflation rate is high (typically as a result of public finances being out of control), the financial sector cannot function if the government runs huge deficits (especially if, as a result, it represses banks and it forces them to lend money at below-market interest rates), and the government cannot provide services efficiently if it has to make enormous interest payments on its past debts. In sum, the economy cannot grow unless the macroeconomic environment is stable or favorable.

4th pillar: Health and primary education

A healthy workforce is vital to a country's competitiveness and productivity because ill workers cannot function to their full potential. Poor health leads to significant costs to business, as sick workers are often absent or less pro-

ductive. Investment in the provision of health services is critical for clear economic and moral considerations.¹⁰

In addition to health, this pillar takes into account the quantity and quality of basic education received by the population. Learning basic skills increases the efficiency of each individual worker, making the economy more productive. In addition, a workforce with little formal education can carry out basic manual work and finds it much more difficult to adapt to more advanced production processes and techniques. As a result, lack of basic education can become a constraint on business development, with firms finding it difficult to move up the value chain by producing more sophisticated or value-added products.

5th 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. To capture this concept, this pillar measures secondary and tertiary enrolment rates, as well as the quality of education as assessed by the business community. The importance of vocational and continuous on-the-job training, neglected in many economies, cannot be overstated as it ensures a constant upgrading of workers' skills to meet the changing needs of the production system.

6th pillar: Goods market efficiency

Countries with efficient goods markets are positioned to produce the right mix of products and services given supply and demand conditions. Such markets also 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. Such competition ensures that the most efficient firms, producing goods demanded by the market, are those that survive. To ensure the best possible environment for the exchange of goods, there must be a minimum of impediments to business activity through government intervention. For example, competitiveness is hindered by overly 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.

7th 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 have the flexibility to shift workers from

one economic activity to another quickly, 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.

8th pillar: Financial market sophistication

An efficient financial sector allocates the resources saved by a nation's citizens, or those invested from abroad, to its most productive uses. A proficient financial sector channels resources to the best entrepreneurs or investment projects, rather than to the politically connected. As a result, a thorough assessment of risk is a key ingredient. A modern financial sector develops products and methods to enable innovators with good ideas to develop their business. A well-functioning financial sector needs to provide risk capital and loans, and at the same time be trustworthy and transparent. Therefore, productivity is enhanced by 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 and venture capital.

9th pillar: Technological readiness

This pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries. This is a critical concept, as technological differences have been shown to explain much of the variation in productivity between countries. The relative importance of technology adoption for national competitiveness has been increasing in recent years, as progress in the dissemination of knowledge and the increasing use of information and communication technologies (ICT) have become increasingly widespread. Whether the technology used has or has not been invented within a country's borders is immaterial for the GCI's purposes in analyzing competitiveness. The central point is that the firms operating in the country have access to these advanced products and blueprints. 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 technological readiness is assessed separately from innovation, which is the object of the 12th pillar.

Because ICT has evolved into a "general purpose technology" of our time,¹³ ICT access and usage have become fundamental to determine economies' overall level of technological readiness, given the critical spillovers of ICT to the other economic sectors and its role as efficient infrastructure for commercial transactions. For this reason, both the penetration of ICT and the presence of an ICT-friendly regulatory framework are of key importance to a country's overall competitiveness.

10th pillar: Market size

The size of the market affects productivity because large markets allow firms to exploit economies of scale.¹⁴ Traditionally, the markets available to firms have been constrained by a nation's borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries. Although little research exists on the relationship between market size and growth¹⁵, there is vast empirical evidence that shows that trade openness is positively associated with growth. Some recent research casts doubts on the robustness of this relationship, however, it states that the effect of openness on growth is not negative.¹⁶ In light of this striking evidence in favor of a non-negative relationship, there is a general sense that the relationship between openness and growth is likely to be positive and robust, especially for small countries with small domestic markets.¹⁷

This is why both domestic and foreign markets are taken into account when constructing the 10th pillar of economic competitiveness, market size. By including both domestic and foreign markets in the measure of market size, it also avoids discriminating against geographic areas such as the European Union that are broken into many countries, but have one common market.

11th pillar: Business sophistication

Business sophistication concerns the quality of a country's overall business networks, as well as the sophistication of the operations and strategies of individual firms. This is conducive to higher efficiency in the production of goods and services, leading to increased productivity and enhancing a nation's competitiveness.¹⁸ This pillar is particularly important for economies in the innovation-driven stage of development (see below).

The quality of a country's business networks and supporting industries, which is captured through variables on the quantity and quality of local suppliers, is important for a variety of reasons. When companies and suppliers are interconnected in geographically proximate groups (clusters), efficiency is heightened, leading to greater opportunities for innovation and to reduced barriers to entry for new firms. Individual firms' operations and strategies – branding, marketing, positioning in the value chain, and the production of unique and sophisticated products – all lead to sophisticated and modern business processes, as they spill over to other companies.

12th 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 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 through technological innovation. Innovation is particularly

important for more advanced economies. These tend to operate at the technology frontier, so that the possibilities of integrating and adapting exogenous technologies, as captured in the 9th pillar, technological readiness, are limited.¹⁹

Less advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas. However, for countries that have reached the innovation stage of development, this is no longer sufficient. 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 entails sufficient investment in research and development, especially by the business sector; high-quality scientific research institutions; collaboration in research between universities and industry; and the protection of intellectual property.

1.2 Competitiveness and the stages of economic development

The first tenet on which the GCI is founded is that the determinants of competitiveness are many, complex, and open-ended. The second is that each pillar affects various countries differently; the best way for Zimbabwe to improve its competitiveness does not hold true for Finland. As countries move along the development path, wages tend to increase, and to sustain this higher income labor productivity must improve.

The GCI adapts Michael Porter's definition of stages.²⁰ 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 (1st pillar), appropriate infrastructure (2nd pillar), a stable macroeconomic framework (3rd pillar), and a healthy and literate workforce (4th pillar).

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 (5th pillar), efficient goods markets (6th pillar), well-functioning labor markets (7th pillar), sophisticated financial markets (8th pillar), the ability to harness the benefits of existing technologies (9th pillar), and a large domestic or foreign market (10th pillar).

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,

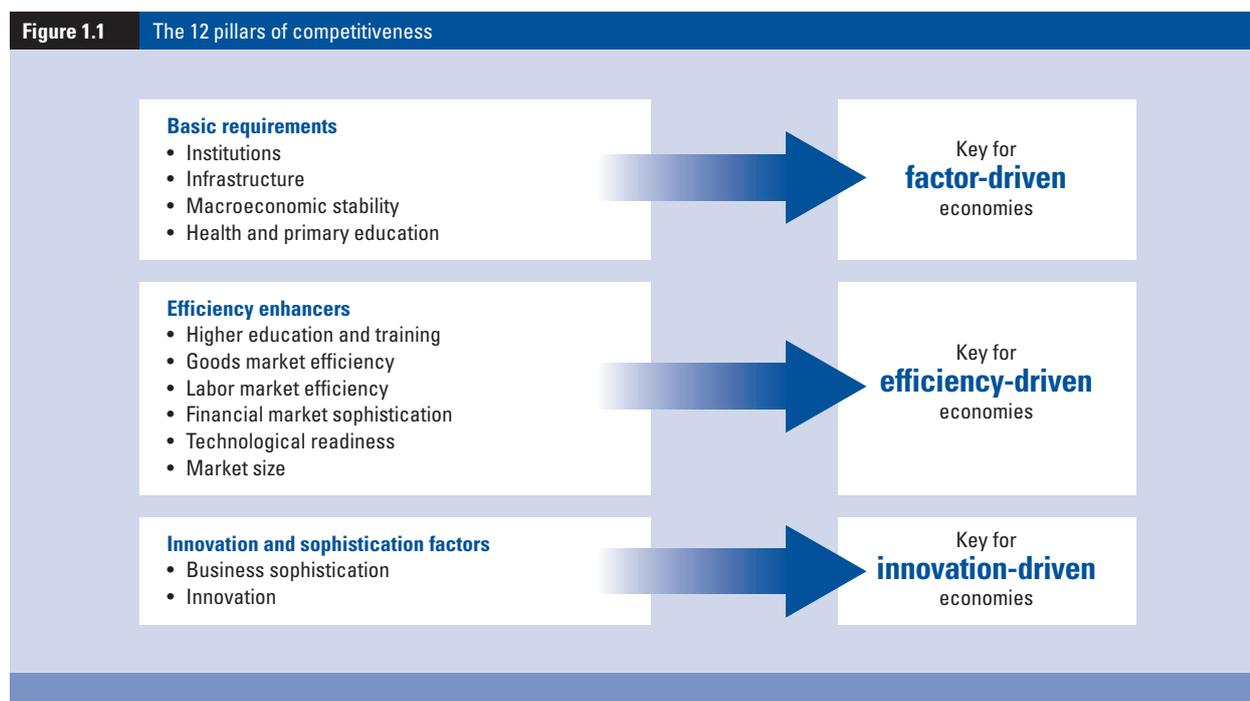


Table 1.1 Weights of the three main groups of pillars at each stage of development

Subindex	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

companies must compete through innovation (12th pillar), and producing new and different goods using the most sophisticated production processes (11th pillar).

The concept of stages of development is integrated into the GCI 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. The innovation and sophistication factors subindex includes all pillars critical to countries in the innovation-driven stage. The three subindexes are shown in Figure 1.1.

The specific weights attributed to each subindex in every stage of development are shown in Table 1.1. To obtain the precise weights attributed to each subindex in the overall GCI, 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. The rounding of these econometric estimates led to the choice of weights displayed in Table 1.1.

Table 1.2 Income thresholds for establishing stages of development

Stage of development	GDP per capita (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 are allocated to stages of development based on two criteria. The first 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. Table 1.2 shows the GDP per capita thresholds for the three main stages of developments and for the two transition phases. The second 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% of primary products are to a large extent factor-driven.²¹

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

Table 1.3 Classification of selected countries into stages of development

Stage	Comparator countries	Other countries in this stage	Important areas for competitiveness
Stage 1 (factor-driven)	India	Armenia, Egypt, Kyrgyz Republic, Moldova, Philippines, Tajikistan, Uzbekistan	Basic requirements (critical) and efficiency enhancers (very important)
Transition from 1 to 2	China, Colombia, Azerbaijan, Kazakhstan, Ukraine	Albania, Bosnia and Herzegovina, Tunisia, Venezuela	Basic requirements (critical) and efficiency enhancers (increasingly important)
Stage 2 (efficiency-driven)	Argentina, Brazil, Chile, Lithuania, Mexico, Poland, Romania, Russian Federation, Turkey	Bulgaria, Latvia, Peru, Serbia, South Africa, Thailand, Uruguay	Basic requirements (very important) and efficiency enhancers (critical)
Transition from 2 to 3	Estonia	Czech Republic, Hungary, Slovak Republic, Taiwan, China	Same as above, but innovation factors become increasingly important
Stage 3 (innovation-driven)	United States	Germany, France, Ireland, Israel, Japan, Korea, Spain, Sweden	All three areas important: basic requirements, efficiency enhancers and innovation factors

another. By introducing this type of transition between stages into the model – by placing increasingly more weight on those areas that are becoming more important for the country’s competitiveness as the country develops – the GCI can gradually “penalize” those countries that are not preparing for the next stage. The classification of comparator countries used in Chapter 2 of this report and other selected economies into stages of development are shown in Table 1.3.

1.3 Conclusions

This chapter presented an overview of the Global Competitiveness Index, the World Economic Forum’s main methodology for assessing competitiveness, which will serve as the main vehicle for assessing Ukraine’s competitiveness in this report. The GCI captures what government and business leaders have known for a long time. Competitiveness is a complex phenomenon and

the overall level of competitiveness of a nation can be improved only through a wide array of reforms in different areas. The GCI also highlights the fact that the priorities are different for different countries, depending on their level of development.

The GCI is an instrument that can be used to identify the competitive strengths of a country, as well as the barriers to its economic progress. It can also be used to establish comparisons with neighboring countries and the relative position in the overall rankings a particular country holds. Policymakers should also pay attention to the relative scores for each of the subcategories for each of the pillars. The GCI is constructed by combining hard data with the opinions of the top business leaders answering the Executive Opinion Survey questions. As a result, the relative scores of the various subcategories of the GCI provide useful information as to what the priorities for reform should be, both from the cold reality of the hard data and from the point of view of the business community that is currently operating in the country.

Notes

- 1 See, for example, Sala-i-Martin, Doppelhofer, and Miller 2004 for an extensive list of potential robust determinants of economic growth.
- 2 See Acemoglu, Johnson and Robinson 2001, 2002; Rodrik, Subramanian, and Trebbi 2002; and Sala-i-Martin and Subramanian 2003.
- 3 See de Soto 2000.
- 4 See de Soto and Abbot 1990.
- 5 See Shleifer and Vishny 1997; Zingales 1998.
- 6 See Kaufmann and Vishwanath 2001.
- 7 See Gramlich 1994; Aschauer 1989; Canning, Fay and Perotti 1994; and Easterly 2002.
- 8 See Fischer 1993.
- 9 See for example Fisher 1993.
- 10 See Sachs 2001.
- 11 See Schultz 1961; Becker 1993; Lucas 1988; and Kremer 1993.
- 12 See Aghion and Howitt 1992 and Barro and Sala-i-Martin 2003 for a technical exposition of technology-based growth theories.
- 13 A general purpose technology (GPT), according to Trajtenberg 2005, is the one which in any given period gives 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 GPT have been the invention of the steam engine and the electric dynamo.
- 14 At least in some industries there is microeconomic evidence that economies of scale lead to productivity increase.
- 15 For an overview, see Alesina, Spolaore and Wacziarg 2005.
- 16 See Frenkel and Romer 1999; Rodrik and Rodriguez 1999; and Sachs and Warner 1995.
- 17 See Alesina, Spolaore and Wacziarg 2005.
- 18 See Porter 1990. A recent study at the London School of Economics has shown that differences in the quality of management among firms explain variations in their productivity, see Bloom and van Reenen 2007.
- 19 See Romer 1990; Aghion and Howitt 1992; and Grossman and Helpman 1991.
- 20 Probably the most famous theory of stages of development was developed by the American historian W.W. Rostow in the 1960s.
- 21 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 its 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: <http://www.intracen.org/menus/countries.htm>.
All countries that export more than 70% 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 with 95% or more of its exports in minerals and that, based on the income criteria, would be in stage 3, will be in transition between stages 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% minerals. Countries that export only primary products would automatically fall into the factor-driven stage (stage 1).

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