

**Insight Report** 

# The Europe 2020 Competitiveness Report

**Building a More Competitive Europe** 

2014 Edition



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The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2014 Edition is published by the World Economic Forum within the framework of the Global Competitiveness and Benchmarking Network and in cooperation with the Europe Team.

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ISBN-13: 978-92-95044-72-2 ISBN-10: 92-95044-72-X

This report is printed on paper suitable for recycling and made from fully managed and sustained forest sources.

The full version of the *Report*, with profiles of all 28 European Member States, is available at **www.weforum.org/Europe2020**.

We thank Eric Schallenberg and Fabienne Stassen for their superb editing work, and Neil Weinberg for his excellent graphic design and layout.

## Contents

Preface	v
Executive Summary	vii
Part 1: Measuring Europe's Competitiveness	
Building a More Competitive Europe: Findings from <i>The Europe 2020 Competitiveness Report 2014 Edition</i> Introduction Measuring Europe's Competitiveness The Europe 2020 Strategy: Dimensions of Reform and Monitoring Mechanisms The Europe 2020 Competitiveness Report Framework Calculating The Europe 2020 Competitiveness Report Scores: Data, Methodology and Country Coverage Gauging Europe's Efforts to Support Smart, Inclusive and Sustainable Competitiveness Conclusions	3
Appendix A: The European Semester	35
Appendix B: Composition of the Europe 2020 Competitiveness Index	37
Appendix C: Technical Notes and Sources	39
Part 2: Country Profiles	
How to Read the Country Profiles	49
Index of Countries	51
Country Profiles	52

## Preface

**ESPEN BARTH EIDE**, Managing Director, Centre for Global Strategies, World Economic Forum **PHILIPP RÖSLER**, Managing Director, Centre for Regional Strategies, World Economic Forum

In 2010, the European Commission (EC) proposed the *Europe 2020* strategy as a means of focusing the European Union (EU) and its Member States on the important task of improving the EU's competitiveness. According to the strategy, its goal is to transform the EU into "a smart, sustainable and inclusive economy, delivering high levels of employment, productivity and social cohesion." Today, with the acute phase of the economic and financial crisis in the past, and with signs of moderate but uneven growth and sluggish job recovery amid a number of risks and fragilities in Europe, it is critically important to create renewed momentum around the long-term structural shifts required to meet these goals.

At the heart of competitiveness is the level of productivity of an economy. As such, competitive economies are those that are able to provide high and rising living standards, allowing all members of a society to contribute to and benefit from these levels of prosperity. In addition, competitive economies also have to be sustainable – meeting the needs of the present generation while not compromising the ability of future generations to meet their needs.

The World Economic Forum has been studying Europe's competitiveness for more than three decades since the first edition of its competitiveness study in 1979. Between 2002 and 2010, the Forum undertook the Lisbon Review series, which looked at Europe's progress in accomplishing its competitiveness agenda over the first decade of this century. In 2012, the first edition of *The Europe 2020 Competitiveness Report: Building a More Competitive Europe* assessed Europe's progress in enhancing competitiveness based on the Europe 2020 strategy. The 2014 Report, the second in a biennial series, provides a timely update and review of Europe's progress on its own competitiveness agenda, taking advantage of the Forum's data, analysis and comparisons to non-European economies.

The year 2014 marks the shift to a new European Parliament, EC and its President, and the beginning of the formal review of the Europe 2020 strategy. These open a window of opportunity for Europe to build momentum for the kinds of reforms that can turn potential into productivity gains over the long term. This requires reflecting on the progress towards the Europe 2020 goals as described in this Report, and even considering how this strategy might need to be adapted to post-crisis Europe in a post-crisis world.

We wish to thank the authors of *The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2014 Edition* – Caroline Galvan, Beñat Bilbao-Osorio, Jennifer Blanke, Nicholas Davis, Margareta Drzeniek Hanouz and Serena Pozza – for their energy and commitment in producing this study, as well as the other members of the Global Competitiveness and Benchmarking Network and the Europe Team for their support. We are also grateful to the members of our Advisory Board who have provided important intellectual support in this endeavour.

Finally, we would like to convey our sincere gratitude to our network of Partner institutes worldwide, without whose enthusiasm and hard work the administration of the annual Executive Opinion Survey and this Report would not be possible.

### **Executive Summary**

As Europe slowly emerges from the worst financial and economic crisis of the past 80 years, the need to focus on long-term strategies to increase competitiveness has never been greater. Following the vision set by European Union (EU) institutions in 2010, all European stakeholders need to work together to implement the *Europe 2020* strategy, thereby building a smarter, inclusive and sustainable economy to support robust economic growth and the generation of jobs.

In assessing the state of Europe's competitiveness, The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2014 Edition finds that:

Europe has weathered the financial storm thanks to the adoption of bold monetary policies, the restructuring processes in the banking systems and reforms that have reduced structural public spending in certain countries and brought tranquillity back to the markets. Fiscal consolidation and the restructuring of the banking system, as well as the current positive assessment of banks' asset quality, have restored market confidence. As a result, the gloomy predictions of the eurozone's breakup have evaporated, government debt yields of those economies particularly hit by the crisis have come down, and fiscal consolidation is starting to take shape in most economies.

Yet, this is no time to be complacent: decisive measures need to be adopted to raise Europe's competitiveness and, therefore, support higher levels of productivity, employment and prosperity. While the fiscal situation is improving, Europe continues to record modest growth and, in some cases, recordhigh unemployment rates with no sign of a quick fix. Against this backdrop, Europe needs to bring the competitiveness agenda back to the centre of economic policy by addressing the factors that determine its economies' level of productivity. This agenda should be firmly focused on productivity gains that allow European economies to increase the prosperity of their citizens.

The EU continues to underperform in comparison to the United States and other advanced economies in terms of building a smart, innovationbased, knowledge-driven economy. The EU trails the United States and other advanced economies in all four "smart" areas identified by the Europe 2020 strategy, as less competitive markets, more regulatory requirements and fewer available sources of finance make the European operating environment for businesses comparatively less conducive for entrepreneurship. More starkly, the EU is increasingly falling behind globally in building the digital infrastructure and innovative capacity that would allow its economies to unlock new sources of growth.

In addition, labour market adjustments have been constraining inclusive growth. On aggregate, Europe's fairly low score in terms of inclusive growth reflects the strong and persistent effects of the crisis coupled with comparatively rigid labour markets in several European countries. This has resulted in sharp increases in unemployment, of a long-term nature in many cases, which deprive a wide segment of the population of gainful employment. The situation is particularly dire for Europe's young population.

While the EU continues to perform better than the United States in ensuring more inclusive and sustainable growth, it lags other advanced economies. The EU does outperform the United States in certain important measures: healthcare services are more universally accessible, overall income inequality is lower, and the government is more effective in reducing poverty and inequality. In addition, Europe fares well in providing environmental sustainability, for example by using a higher share of renewable energies. However, despite the EU's strength in social inclusiveness and environmental sustainability, other countries such as Canada perform even better, pointing to room for improvements in these areas.

Looking at comparisons between EU Member States, a persistent knowledge divide between "innovation rich" and "innovation poor" economies prevails. Overall, important national and regional disparities exist in providing an enabling enterprise and innovative environment in Europe, with northern and north-western Europe performing strongly compared with a lagging southern Europe and Central and Eastern Europe. Highly competitive markets, well-developed clusters and an entrepreneurial environment provide the cornerstone of the business environment in northern and north-western European economies. A number of countries outperform the United States in enabling smart growth. But at the other end of the spectrum, many European economies, particularly in southern and eastern Europe, lag behind. Such a divide is problematic for the region as a whole, and not just for those EU Member States that are less innovative.

Addressing the competitiveness divide will require differentiated strategies that take national and regional characteristics into account. While a concerted and united effort is desired from all EU Member States to improve Europe's knowledgedriven economy, it is clear from the large regional disparities that paths towards this goal, and priorities for improvement, will differ across countries. For instance, innovation strategies for countries higher on the knowledge ladder will differ from strategies appropriate for countries lower down. However, for all European economies, investments in knowledge-generating assets will translate into important drivers for future productivity growth - those drivers being a common focus on education, information and communication technologies, the digital agenda and reforms to improve the overall enterprise environment across the region.

Implementing this reform and investment agenda will require strengthening the institutional capacity to overcome pressures from interest groups... Investing in competitiveness-enhancing measures is a formidable task, particularly in light of the long time lag with which such structural reforms are felt, and the short-term sacrifices they entail. This is further complicated by the conditions in post-crisis Europe, characterized by constrained fiscal stances and high levels of unemployment in many EU Member States. At the same time, enforcement and implementation at the supranational level is challenging. To achieve the goals outlined in this Report, effective governance mechanisms are necessary at the regional, national and European levels for managing, monitoring and enforcing change. Further, transformations that impact competitiveness and productivity require the combined support of government, business and civil society. Building a common vision and multistakeholder commitment to the national and European competitiveness agendas, and mobilizing support from leaders across sectors, will help fulfil the ambitions of the Europe 2020 agenda.

...and ultimately help create the right conditions for gainful employment to ensure social inclusion within and across EU Member States. Competitiveness-enhancing reforms have the potential to trigger a self-reinforcing and positive sequence of events. Laying the institutional framework for an enabling enterprise environment, as well as investing in innovation and, above all, education for young Europeans, will provide the necessary fundamentals for smart growth and, hence, for creation of gainful employment. This will further feed into a more inclusive Europe in which all citizens benefit from increased prosperity. In turn, a more inclusive Europe, with a shared vision and high levels of economic and political engagement, creates the conditions for further investments and higher returns for all stakeholders. In the short term, however, measures

that ease the negative or frictional effects of important reforms, combined with communication strategies that enhance debate and increase transparency, will be critical to ensure the initial public support that will enable this virtuous cycle to occur.

# Part 1 Measuring Europe's Competitiveness

Building a More Competitive Europe: Findings from The Europe 2020 Competitiveness Report 2014 Edition

BEÑAT BILBAO-OSORIO JENNIFER BLANKE NICHOLAS DAVIS MARGARETA DRZENIEK HANOUZ CAROLINE GALVAN SERENA POZZA World Economic Forum

#### INTRODUCTION

Europe's economic outlook has improved since the last edition of this Report in 2012. When the last edition of this Report was published in 2012, Europe was in the middle of a prolonged economic and financial downturn. The woes of the financial and ensuing economic crisis strained relations between European Union (EU) Member States; fears that financial contagion would spread from Greece to other southern European countries captured headlines; and rising unemployment and social tensions in several European countries raised many questions about the very viability of the European project. Fast-forwarding two years, Europe has shown the will to preserve unity and has weathered the worst part of the storm. Positive, albeit modest growth has returned in the last guarters of 2013, and forecasts for the eurozone expect year-over-year economic growth of 1.2% in 2014 and 1.5% in 2015.1 Even countries that have suffered more severely during the economic crisis are finally returning to economic growth, with fiscal consolidation measures and progress towards labour market reforms slowly restoring confidence. Italy, Spain and Portugal are expecting positive economic growth in 2014 (0.6%, 0.9% and 1.2%,<sup>2</sup> respectively), and government bond yields have been declining significantly. Bank lending is also showing modest signs of improvement. At the European level, measures such as the European Stability Mechanism have been institutionalized, and the Banking Union, which is intended to break the negative feedback loop between sovereign risks and the financial sector, is taking shape.

However, despite this improving outlook for Europe, it is not a time to be complacent. Indeed, growth appears asymmetric across the region: Germany and the United Kingdom (UK), for instance, are registering strong economic growth against modest growth in southern European economies. While recent forecasts anticipate positive growth for most European economies in 2014 (the exceptions being Slovenia and Cyprus), and for all European economies in 2015,<sup>3</sup> critical downside risks remain: low inflation and the risk of deflation threaten to stifle the nascent economic recovery and complicate fiscal consolidation; persistent levels of high unemployment and jobless growth are subduing consumption; and financial fragmentation in Europe is muting the European Central Bank's (ECB) loose monetary policy. Constrained bank lending continues to hurt small and medium-sized enterprises (SMEs), and is unlikely to improve unless the ongoing asset quality review leads banks to clean up their balance sheets.<sup>4</sup> High levels of private-sector indebtedness in Central and Eastern Europe, as well as southern Europe, are compromising growth in these regions.

With the need for short-term firefighting significantly reduced, implementing measures that will allow Europe to grow in a sustainable and inclusive manner over the long term is now urgent.

#### Box 1: Europe 2020: The Political Economy of Reform

#### ANN METTLER, Executive Director and Co-Founder of the Lisbon Council, a Brussels-based think tank

The Achilles heel of European reform programmes has always been implementation and enforcement. Many analysts point to the "Open Method of Coordination"—a soft law approach that is used in areas where EU Member States have exclusive competence, such as employment, social protection or education—to explain the lack of action: a European Commission which does not have the tools to enforce; Member States that have nothing to fear from noncompliance; and interest groups which tend to rally around targets with legislative teeth.

Looking back to the Lisbon Agenda, Europe's original growth and jobs agenda which was launched in 2000and with the benefit of hindsight of a decade of missed targets which in many ways laid the ground for the ensuing economic and financial crisis-the Europe 2020 strategy was supposed to be different. Instead of two headline targets, which often came across as simplistic, there would be five, making the strategy more comprehensive. Instead of one target for all Member States, there would be country-specific ones, encouraging top performers to get even better and giving laggards goals that were within reach. Instead of being marginalized as a "pro-business" agenda, the Europe 2020 strategy would be inclusive and list poverty reduction alongside innovation and education goals. The end result has been a feel-good agenda that no one could object to, but which also largely lacked the political friction that is necessary to make policy blueprints originating in Brussels relevant, hard-hitting and effective.

At the same time—and against the backdrop of years of intense crisis-fighting to save the euro, and bailouts of countries with unsustainable public finances and financial sectors—Brussels has reaped significant new powers. Particularly through the European Semester (Appendix A), the EU's annual cycle of economic policy guidance and surveillance, but also through other mechanisms such as the Two- and Six-Packs—the EU's fiscal and budgetary monitoring mechanisms—or the fiscal compact, there has been a real shift in economic power from sovereign Member States to the European level. Far from being a Brussels power grab, EU Member States realized that greater centralization and surveillance were needed to avoid moral hazard and financial contagion. However, these new powers have also led to a backlash in many countries that—after first agreeing to pool sovereignty within the EU—now blame Brussels for undue demands to enforce fiscal consolidation and implement measures to help underperforming economies get back on track.

And herein lies the underlying problem: a sizeable number of EU Member States still cannot find the political will to tackle deep-seated problems. After all, unemployment has never been so high, public finances as unsustainable or the long-term growth outlook more dire. An unwillingness or inability—to muster the courage at the national level to be honest with citizens about why reforms are necessary is in many ways the downfall of the EU. Because it is either blamed for not being effective—for instance when applying the Open Method of Coordination—or overly intrusive—when utilizing the new economic powers bestowed by the Member States themselves. So in many ways Brussels is dammed if it does, and dammed if it doesn't.

Solving this conundrum ought to be a key focus of the mid-term review of the Europe 2020 strategy, as well as a larger reflection on how to bring citizens along on the next stages of the European (economic) integration process.

However, despite clarity and a shared vision on the core objectives-namely, and according to the Europe 2020 strategy, for Europe to become more "smart, sustainable, and inclusive"-far less clarity exists on the path and sequence of priorities to achieve this goal. The Europe 2020 targets<sup>5</sup> were already challenging when they were first formulated in 2010. Resuming progress towards these goals from an even less-favourable set of circumstances will require a fine balancing act between supporting the still-fragile recovery and investing in competitiveness-enhancing measures that will only play out in the medium to longer term, such as education or enhanced innovation (Box 1). Indeed, the legacy of the crisis-high unemployment in many European countries and rising (income) inequality-threatens to undermine European cohesion and lead to the rise of populist, eurosceptic parties that threaten the integration process of the past decades, as evidenced by the unprecedented success of eurosceptic parties in national elections<sup>6</sup> and in the recent 2014 European Parliament elections.<sup>7</sup>

In this difficult context, European policy-makers need to deliver on the promises of the Europe 2020

strategy. In this regard, 2014 is an important milestone, marking the start of the new multiannual framework. A mid-term review is to be held in 2015, and a new European Commission (EC) promises a window of opportunity to complete the Europe 2020 targets. Many of these reforms—from investment in research and development (R&D) and innovation in a broader sense, to education and training, and a decoupling of growth from resource use—will bear fruit only over the long run. Delivering on these promises requires more than just concerted action by policy-makers; it requires changes to Europe's political structure to ensure the effective implementation of reforms.

Diverging patterns of income between Europe and other economies are signalling the need to increase Europe's competitiveness. While the EU has been able to secure rising living standards, it has not been able to do so as a whole to the same extent that has been seen in other countries, such as the United States. Indeed, the gap between EU and US average incomes has been widening since the mid-1990s (Figure 1), and even more starkly so since the financial

#### Figure 1: Patterns of Income-The EU and the US: GDP per capita (PPP Int. \$)



Source: World Economic Outlook Database, International Monetary Fund, April 2014 and authors' calculations. Note: Projections as of 2013.

and economic crisis of the past years. The Republic of Korea has since then overtaken the EU in terms of income per capita. Europe must become a more competitive economy in order to remain able to provide high and rising living standards and gainful employment for its citizens.

Differences in productivity are driving diverging incomes. Figure 2 illustrates the productivity gap between the EU and the United States. For illustrative purposes, it also displays data for Japan and the Republic of Korea. It shows that productivity in Europe is more than 20% lower than in the United States and that the productivity gap has widened since the mid-1990s among the EU15 economies, and especially since the crisis. This stands in stark contrast to, for example, the Republic of Korea, which has experienced an unprecedented rise in labour productivity nearing the EU28 average. Thus, as other regions continue to forge ahead, boosting productivity in the EU is a priority to avoid falling behind. A recent study suggests that the EU-US productivity gap can likely be explained by more cumbersome regulations and lower investments in information and communications technology (ICT) and other intangible assets, such as R&D or human capital.<sup>8</sup>

#### MEASURING EUROPE'S COMPETITIVENESS

Europe 2020 is a decade-long strategy devised to make European economies more competitive by encouraging national and regional policies that provide smart, sustainable and inclusive growth to 2020. Its simplicity of five headline indicators is a direct reflection of the lessons learned from its predecessor, the Lisbon Strategy, which had been perceived as overly complex. Europe 2020's headline indicators serve as a useful and succinct communications tool, and a number of indicator scoreboards have been developed to measure progress more accurately—including the innovation and digital agenda scoreboard, and the recent suggestion to establish a scoreboard to follow employment and social developments.<sup>9</sup> Although the Europe 2020 indicators are not politically binding<sup>10</sup>—which can be seen as a weakness—they do serve as policy anchors for the EU Member States.

For its part, the World Economic Forum has been studying Europe's competitiveness for more than three decades. Indeed, the flagship Report on the Competitiveness of European Industry was, at its inception in 1979, primarily concerned with Europe's competitiveness compared with that of the United States. Between 2002 and 2010, the Lisbon Review series, which was carried out every two years, reviewed Europe's progress in meeting the Lisbon goals.

Building on this past work, *The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2014 Edition* is the second in a series that assesses Europe's competitiveness every two years based on the Europe 2020 strategy; it will run until the end of this decade. The goal of the Report is to provide a platform for constructive dialogue between business, civil society, governments and European institutions in the areas requiring attention to improve Europe's competitiveness. We hope that the Report will encourage positive policy reform and the necessary

#### Figure 2: EU-US-Japan-Republic of Korea Productivity Gap: GDP per hours worked (Geary/Khamis \$, Index US = 100)



Source: The Conference Board Total Economy Database<sup>TM</sup>, January 2014, http://www.conference-board.org/data/economydatabase/ and authors' calculations.

investments required to further Europe's economic and social progress.

Box 2 discusses how the Europe 2020 strategy works within the framework of the World Economic Forum's Global Competitiveness Index.

## THE EUROPE 2020 STRATEGY: DIMENSIONS OF REFORM AND MONITORING MECHANISMS

Now in its fourth year, Europe 2020, the EU's 10-year growth strategy launched by the EC in March 2010, seeks to enhance the delivery of growth and jobs for the present decade. At the heart of the agenda is the achievement of "smart, sustainable, inclusive growth brought about through greater coordination of national and European policy."<sup>11</sup> The three axes of the strategy are:

- Smart growth: developing an economy based on knowledge and innovation
- Sustainable growth: promoting a more resourceefficient, greener and more competitive economy/ decoupling economic growth from resource use
- Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion

The strategy further identifies seven flagship initiatives the EU should take to boost growth and jobs:

1. An Industrial Policy for the Globalization Era: to improve the business environment, notably for SMEs, and support the development of a strong and sustainable industrial base able to compete globally

- 2. A Digital Agenda for Europe: to accelerate the rollout of high-speed internet and reap the benefits of a digital single market for households and firms
- 3. Innovation Union: to improve framework conditions and access to finance for research and innovation that ensure innovative ideas can be turned into products and services, creating growth and jobs
- 4. Youth on the Move: to enhance the performance of educational systems and facilitate the entry of young people into the labour market
- 5. An Agenda for New Skills and Jobs: to modernize labour markets and empower people by developing their skills throughout the life cycle, with a view to increase labour participation and better match labour supply and demand, including through labour mobility
- 6. European Platform against Poverty: to ensure social and territorial cohesion such that the benefits of growth and jobs are widely shared, and people experiencing poverty and social exclusion are enabled to live in dignity and take an active part in society
- Resource-efficient Europe: to help decouple economic growth from the use of resources, support the shift towards a low-carbon economy, increase the use of renewable energy sources,

## Box 2: The Global Competitiveness Index and Europe 2020 Competitiveness Index—Complementary Measures of Competitiveness

#### XAVIER SALA-Ì-MARTIN, Professor of Economics, Columbia University, USA

When the Europe 2020 strategy was adopted by the EU, it aimed at defining a long-term growth agenda that would result in a more competitive, inclusive and sustainable society. To focus the attention and direction of the EU, and to avoid one of the main criticisms of the Lisbon Agenda as an overburdened "laundry list" of actions that made it difficult to prioritize measures, it was decided to focus on a limited number of areas and targets that underpinned the main overall objectives of the strategy. The Europe 2020 Competitiveness Index presented in this Report focuses on monitoring the implementation of this strategy and, thus, should not be regarded as an exhaustive measure of competitiveness, but rather as an analysis of three priorities to create a "smart, inclusive and sustainable" economy. The Europe 2020 targets should thus be considered as a starting point of what can be done to improve competitiveness specifically within the European setting of advanced, high-income economies. However, fostering competitiveness and productivity is a complex process that requires addressing other drivers that are not directly targeted by the current Europe 2020 strategy. The World Economic Forum defines competitiveness in The Global Competitiveness Report 2013-2014 as "the set of institutions, policies, and factors that determine the level of productivity of a country", and measures it through its Global Competitiveness Index (GCI) that analyses 12 interrelated factors summarized in the figure under the "12-pillar" framework for measuring competitiveness (see Figure 1).

As can be observed from the figure, this framework complements many of the measures identified by the Europe

2020 Competitiveness Index by including aspects related to the existence of efficient public and private institutions, as well as a sound macroeconomic environment, that affect the capacity of both governments and businesses to develop and implement effective and efficient policies and strategies to create the right set of conditions for enhancing productivity. Sound institutions, such as a strong judicial system, a low degree of corruption and undue influence, or the capacity of government institutions to design and implement effective policies, are crucial. Moreover, as the recent financial and economic crisis in Europe has shown, sound macroeconomic conditions are a further prerequisite for a well-functioning economy that can allow, for example, for financial resources to flow to the most productive activities and investments. The importance of many of these aspects has been recognized, and the strengthening of the European governance framework, with the European Semester or the European Stability Mechanism and efforts towards a Banking Union, has been adopted. However, there are many other aspects, notably in terms of the functioning of institutions and their capacity to deal effectively with the implementation of necessary policies and reforms, that may need to be considered and introduced in the strategy in view of its midterm review, if the final goal of building a more competitive economy is to be achieved. However, the Europe 2020 strategy provides a focused starting point to coordinate efforts towards a more competitive Europe for the 28 EU Member States.



#### Figure 1: The Global Competitiveness Index framework

#### Figure 3: The Europe 2020 Competitiveness Index



Source: World Economic Forum, 2014.

modernize the transport sector and promote energy efficiency

Since they were launched, these Europe 2020 strategy initiatives have been streamlined in what can be called a flexible approach of "learning by doing". Most notably, although the headline targets are being maintained as policy anchors to enter dialogue with EU Member States, in some cases additional monitoring processes were introduced.<sup>12</sup> The 101 actions in the digital agenda, for instance, were streamlined into seven new digital priorities as adopted in 2012.<sup>13</sup> In December 2013, the EC also suggested a new scoreboard of key employment and social indicators.<sup>14</sup>

The Europe 2020 Competitiveness Report complements the EU's efforts to measure progress by offering an assessment that is, in large part, based on the views of those people making the major investments in each country. The assessment differs from those efforts regularly carried out by the EU and other organizations, in that it is based on the results of the Forum's Executive Opinion Survey (EOS). This survey is carried out among chief executive officers and top executives in each of the countries under analysis.<sup>15</sup> The results from the survey can therefore be interpreted largely as the business community's perspective on the relative performance of European countries in meeting the Europe 2020 goals. Furthermore, the EOS offers two more advantages. First, as it is carried out on an annual basis, it provides a timely benchmark for many indicators that are otherwise often published with a significant lag, e.g. youth unemployment or social safety net protection.

Second, it provides qualitative measures such as social mobility, social inclusion, cooperation in labour-employer relations and the capacity to innovate.

#### THE EUROPE 2020 COMPETITIVENESS REPORT FRAMEWORK

The seven key dimensions of the Europe 2020 strategy described in the previous section can be represented in a seven-pillar framework, with some adjustments for presentational purposes (Figure 3). Each pillar mirrors one of the initiatives and is populated by a number of variables that help measure Europe's progress along each key dimension. Combined, these seven pillars create the Europe 2020 Competitiveness Index (Appendix B). The Index is grouped into three sub-indexes that monitor Europe's progress towards becoming an increasingly *smart, inclusive* and *sustainable* economy. Each of these sub-indexes is composed of pillars that reflect the spirit of the seven flagship initiatives, as described in the following section:

#### Smart growth

The smart growth sub-index aims to measure the extent to which European countries are developing economies based on knowledge and innovation. It is made up of four pillars that capture various aspects of Europe's ability to develop smart economies: enterprise environment, digital agenda, innovative Europe and education and training. Each pillar is described as follows:

#### 1st pillar: Enterprise environment

A prerequisite for improving the prospects of growth and employment in the EU is improving the overall enterprise environment. Critical to achieving this goal is enhancing competition through channels such as effective antitrust policy and appropriate regulation.

Another key objective is to stimulate entrepreneurship and facilitate business creation by improving the business start-up environment. This can be achieved by reducing the administrative impediments to doing business in the EU and reducing distortional or burdensome taxes, as well as by making it cheaper and easier to start a business and ensuring access to capital for new and growing businesses.

#### 2nd pillar: Digital agenda

This dimension measures the extent to which an economy has harnessed ICTs to share knowledge and enhance its industries' productivity. ICT has evolved into the "general purpose technology" of our time,<sup>16</sup> given the critical spillovers to other economic sectors, their capacity to transform business practices and economic activities, and their role as efficient infrastructure for commercial transactions. Countries with companies that aggressively integrate these new technologies into their production processes tend to see better productivity improvements than others. Low investment in and use of ICT in Europe, for example, has been found to account for a large part of the labour productivity gap between the EU and the United States.<sup>17</sup> Further, countries with governments that strongly prioritize the adoption of ICTs have often leapfrogged in this direction. To create a true information society that ensures maximum productivity gains from ICT adoption, all stakeholders in the economy (individuals, businesses and governments) must use these tools.

This dimension of the Europe 2020 strategy offers an excellent opportunity for exchange in information and experience between the strong and weak performers. It also highlights the need to complete the Digital Single Market in Europe, which would increase the openness and interoperability of those parts of the internal market which have the potential to be transacted online, further leveraging the value of ICT adoption for individuals and businesses.

#### 3rd pillar: Innovative Europe

Innovation is critical, especially for those countries that have moved very close to the technology frontier, as is the case of most EU economies. As well as making maximum use of existing technologies, as discussed in the digital agenda pillar, these countries must have the necessary framework to ensure they are at the forefront of innovation. Firms in these countries must design and develop cutting-edge products and processes to maintain a competitive edge. This progression requires an environment conducive to innovative activity, supported by both the public and private sectors. In particular, it entails sufficient investment in R&D, especially by the private sector; the presence of high-quality scientific research institutions; extensive collaboration in research between universities and industry; and sophisticated business practices. Results in these areas only show in the medium term. *The Europe 2020 Competitiveness Report 2012 Edition* warned it is important that public and private sectors resist pressures to cut back on R&D spending<sup>18</sup> and other innovation-driven activities that are so critical for sustainable growth in the future. In fact, the sum of all public R&D budgets in the EU decreased for the first time since 2011.<sup>19</sup>

However, innovation means different things depending on where a country stands in terms of development. For example, improvements in innovation that the Netherlands can and should pursue are very different from those relevant for Greece. At the innovation frontier, innovation linked to the commercialization of emerging technologies, and to scaling truly novel processes across regional or global markets, may be the most appropriate strategy. For countries and firms less technologically advanced, the broad dissemination of catch-up strategies and adoption of sector-leading practices is an essential first step. The adoption of ICTs and other sector-relevant technologies is an important factor in innovation, as evidence exists that firms employing more advanced technology than their main competitor innovate more than firms with less-advanced technology.20

#### 4th pillar: 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. In particular, today's globalizing economy requires countries to nurture pools of well-educated workers who are able to adapt rapidly to their changing environment and the production system's evolving needs. This pillar measures secondary and tertiary enrolment rates, as well as the quality of education provided. The extent of staff training is also taken into consideration because of the importance of vocational and continuous on-the-job training—neglected in many economies—to ensuring a constant upgrade of worker skills.

While this Report portrays the results for these four pillars separately for presentational purposes, it has to be noted that they are closely interconnected. The ability of an economy to shift towards more knowledge-intensive, higher-value-added activities will depend as much on its capacity to generate new knowledge through betterperforming innovation and educational systems, and the effective use of technologies, including ICT, as on the business conditions that facilitate or hinder the ability to

#### Box 3: Cheap Energy-Reindustrialization or Deindustrialization?

DANIEL GROS, Director, Centre for European Policy Studies (CEPS), Belgium

Newspaper headlines proclaim constantly that European industry faces much higher energy prices than their US competitors, and that this is one of the killers of the competitiveness of Europe. But this is only partially true, and one has to be careful to distinguish between the three major forms of energy:

- 1. Oil has the same price all over the world. Prices vary only because of local taxes or subsidies.
- 2. Power (electricity) costs vary enormously from country to country and even from sector to sector. Recent data from the International Energy Agency's World Energy Outlook 2013 suggests that the EU average is almost twice as high as that of the US. But this comparison does not take into account reduced rates for energy-intensive companies, as well as a higher efficiency in the energy use of European businesses. More detailed study shows that some very power-intensive sectors, at least in the north-west of Europe, face similar costs to those in the United States.
- 3. Gas also has prices that vary across countries, but the US level seems to be about one-third of the EU average, and it is likely to remain cheaper for quite some time.

Cheaper gas, and in many sectors cheaper power gives US companies undoubtedly a comparative advantage. But is this enough to expect a significant shift of industry across the Atlantic? Energy accounts for about 3-5% of the gross production and of the total costs in manufacturing. Energy costs constitute thus one factor, among many, that influence competitiveness.

Cheaper gas and power should of course lead to a renaissance of energy-intensive industry in the US like steel or chemicals. But this will go hand in hand with a relative decline of other US manufacturing industries and, sooner or later, an appreciation of the US dollar. Fracking itself is costly and if the sector remains open to competition, profits will be reduced to the point where costs plus a normal rate of return equals the price (shale gas is not a free lunch!). The resources needed to extract shale gas and expand the energy-intensive sector will not be available elsewhere. This immediately implies that some other sectors of the US economy will have to shrink or expand less than they would if the shale gas revolution had not materialized. US incomes will of course increase with domestic gas resources and US wages are likely to increase (thus offsetting cheaper energy), but this does not imply that US companies will outcompete the EU in non-energyintensive industries. Energy-intensive industry, and especially the gas-intensive industry, might shift to the US, but the nonenergy-intensive spectrum (which is often more knowledgeintensive) might well shift the other way: to Europe.

This is what has already happened over the last decade. The EU, which has fewer domestic sources of energy and raw materials than the US, now has to pay over \$500 billion each year for its energy import bill, much more than the US. The shale gas revolution will accentuate this difference, as it is estimated that the US energy bill will essentially go to zero, whereas that of the EU might increase.

But the EU has so far offset its higher energy bill by higher exports of non-energy-intensive manufacturing goods, with EU manufacturing exports maintaining their share in the world markets, whereas that of the US has fallen.

The energy sector needs of course fundamental reform in the EU. The huge differences in costs and prices across countries and sectors have indicated that the market is not integrated enough with large pockets of inefficiencies. There is thus an urgent need to make markets more integrated (more interconnectors needed), make the grid more "intelligent" and limit the cost of the roll-out of renewables. This will yield efficiency gains, which will benefit the entire European economy, not just industry.

However, if the EU is to achieve its aim of lowering the energy intensity of its economy by 20%, the migration of some energy-intensive industries (which, anyway, employ few people) to the US should be part of the picture. There is no danger for the competitiveness of European industry overall as other, less energy-intensive industries will then have more room to expand.

bring this new knowledge into the market in a timely and effective manner.

#### Inclusive growth

The inclusive growth sub-index captures the extent to which every member of society can contribute to and benefit from Europe's growth and development. This is captured through two pillars, one measuring the labour market and employment conditions, and the other measuring social inclusion more generally.

#### 5th pillar: Labour market and employment

This pillar gauges the capacity of an economy to mobilize all human resources to contribute to the economic growth of a society. The efficiency and flexibility of the labour market are critical to ensuring that workers are allocated to their most efficient use in the economy and are provided with incentives to give their best effort in their jobs. Labour 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 labour markets must also ensure a clear relationship between worker incentives and their efforts to promote meritocracy in the workplace, and they must provide equity in the business environment between women and men. Taken together, these factors have a positive effect on worker performance and the attractiveness of the country for talent, two aspects that are growing more important as talent shortages loom on the horizon.

#### 6th pillar: Social inclusion

This pillar aims to capture the extent to which all members of society have the opportunity to benefit from economic growth in their country. This is critical because higher median disposable incomes create demand and savings pools for investment; and, inclusive societies, which allow opportunities for all, will tend to be more stable and thus more conducive to economic activity and prosperity. By contrast, unequal societies have been shown to experience higher rates of crime, ill-health drug abuse and persistent poverty.<sup>21</sup> Social inclusion is measured here by the extent of inequality in the economy, as reflected by the Gini coefficient; the government's efforts to reduce poverty and inequality, including the existence of effective social safety net protection; and access to healthcare services within the country. Included in this year's Report is a new indicator that gauges social mobility, i.e. how far a person's economic situation can be improved through personal efforts, regardless of that person's socio-economic status.

As with the smart growth sub-index, policies to enhance labour market participation, employment and social inclusion are very closely intertwined, as the best way to secure social inclusion is to ensure gainful employment for a large share of the population. To a great extent, the inclusive growth sub-index therefore reflects the capacity of an economy to provide security of employment rather than security of jobs. In addition, social inclusion pertains to more than the two pillars of the inclusive growth sub-index, as universal access to education (4th pillar) caters further to an inclusive society. Indeed, addressing socio-economic inequalities is critical to sustainable growth.

#### Sustainable growth

The sustainable growth sub-index is made up of just one pillar, measuring the extent to which the natural environment is contributing to overall national competitiveness and the preservation of a pollution-free environment.

#### 7th pillar: Environmental sustainability

A high-quality and well-managed physical environment through a variety of channels is important for competitiveness. The efficient use of energy and other resources lowers costs and directly boosts productivity by making better use of inputs (Box 3). Further, a high-quality natural environment supports a healthy workforce, in that illness and lower human capital productivity that can result from pollution and other environmental degradation are avoided. Finally, related to the last point, environmental degradation can also directly reduce the productivity of sectors such as agriculture, which in turn lowers output and, potentially, the ability of a country to meet its population's food needs. In the Europe 2020 Competitiveness Index, this dimension is assessed by taking into account the share of renewable energy consumption, the enforcement of environmental legislation, the ratification of international environmental treaties and the quality of the natural environment, the latter including the measurement of air pollution levels through carbon dioxide (CO2) intensity and PM2.5 emissions.<sup>22</sup>

The multidimensionality of the Europe 2020 strategy reflects the multiple forces driving economic growth and development.

#### CALCULATING THE EUROPE 2020 COMPETITIVENESS REPORT SCORES: DATA, METHODOLOGY AND COUNTRY COVERAGE Data sources

The assessment of Europe's competitiveness is based on publicly available quantitative data, such as internet penetration rates and unemployment rates, from respected institutions, and data from the Forum's Executive Opinion Survey (EOS), a survey of business leaders conducted annually in over 140 countries that provides data for a variety of qualitative aspects of competitiveness for which statistical data are scarce or frequently non-existent (e.g. the quality of the educational system, the government's strategy for ICTs).

The EOS also allows capturing the critical perspective of business leaders on the state of their operating environments across a variety of detailed indicators. Most of the statistical data comes from 2013, the most recent end-of-year data available. The EOS was carried out in the spring of 2012 and 2013.<sup>23</sup>

#### Methodology

The overall scores for each country are calculated as unweighted averages of the individual scores from the seven pillars. The scores and rankings of the countries covered by the Report are extracted from a database covering 148 countries. The precise structure of the Index, including details on the specific quantitative and survey data used in making the calculations, is shown in Appendix B. All the scores are presented on a scale from one to seven, where higher values indicate stronger performance.

#### Country coverage

The EU's 28 Member States, which are meant to be striving towards the Europe 2020 goals, are at the core of the analysis. These countries are: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden and the United Kingdom. Their performance, according to the Europe 2020 Competitiveness Index, is compared among each

## Table 1: Europe 2020 Competitiveness Report 2014 Coverage: European Union's membership and relationships with selected countries

Country	EU code	Status/relationship with EU	Since	GDP p.c. (in current €), 2013
Austria	AT	Member €	1995	36,983
Belgium	BE	Member €	1952	34,311
Bulgaria	BG	Member	2007	5,493
Droatia	HR	Member	2013	10,161
Cyprus	CY	Member €	2004	19,033
Zzech Republic	CZ	Member	2004	14,220
Denmark	DK	Member	1973	44,391
stonia	EE	Member €	2004	13,760
inland	FI	Member €	1995	35,569
rance	FR	Member €	1952	31,333
ermany	DE	Member €	1952	33,346
reece	EL	Member €	1981	16,412
ungary	HU	Member	2004	9,912
eland	IE	Member €	1973	35,649
aly	IT	Member €	1952	25,554
atvia	LV	Member €	2004	11,597
ithuania	LT	Member	2004	11,697
uxembourg	LU	Member €	1952	83,416
lalta	MT	Member €	2004	17,008
etherlands	NL	Member €	1952	35,873
pland	PL	Member	2004	10,118
ortugal	PT	Member €	1986	15,806
omania	RO	Member	2007	7,096
lovak Republic	SK	Member €	2004	13,326
lovenia	SI	Member €	2004	17,128
pain	ES	Member €	1986	22,209
weden	SE	Member	1995	43,757
Inited Kingdom	UK	Member	1933	29,644
EU candidate countries				
eland		Candidate country	2010	33,923
lacedonia, FYR		Candidate country	2005	3,728
lontenegro		Candidate country	2010	5,378
erbia		Candidate country	2012	4,591
urkey		Candidate country	1999	8,136
Comparator countries				
RIC		Comparator group		
anada		Comparator country		39,436
apan		Comparator country		28,985
orea, Rep.		Comparator country		18,298
orway		Comparator country		75,738
ingapore		Comparator country		39,718
witzerland		Comparator country		61,109
Inited States		Comparator country		39,966

Source: European Commission, European Commission DG ECFIN AMECO Database. Figures for Singapore come from the IMF World Economic Outlook Database, April 2014, converted by the official US\$/EUR exchange rate as of 31 Dec 2013.

Note: € indicates member of the eurozone.

other to assess which countries are leading in achieving the goals, and which are trailing behind.

In addition, five countries have filed their candidatures to become Members of the EU, and therefore it is useful to gauge their level of competitiveness, as they may become full Members at some point and must then abide by the EU's overall goals. These countries are: Iceland,<sup>24</sup> Macedonia FYR, Montenegro, Serbia and Turkey. Finally, the Report also looks at the average performance of the EU as a political and economic entity, and compares it to a set of key advanced economies, notably the United States and Japan, as well as Canada, Switzerland, the Republic of Korea and some large emerging economies, i.e. Brazil, the Russian Federation, India and China (BRIC).

Table 1 provides an overview of the 2014 coverage of the Europe 2020 Competitiveness Index. Tables 2, 3

#### Table 2: Rankings and Scores of the EU Member States in 2012 and 2014

Europe 2020 Index 2014 Edition

	Europe 202	0 Index 2014 Edition	_		
Country	Rank (out of 28)	Score (1-7)	Rank using 2012 sample* (out of 27)	Europe 2020 Index 2012 edition (out of 27)	Change 2012–2014 (constant)
Finland	1	5.70	1	2	1
Sweden	2	5.55	2	1	-1
Netherlands	3	5.41	3	4	1
Denmark	4	5.32	4	3	-1
Germany	5	5.28	5	6	1
Austria	6	5.16	6	5	-1
United Kingdom	7	5.13	7	7	0
Luxembourg	8	5.07	8	8	0
Belgium	9	4.93	9	9	0
France	10	4.81	10	10	0
Ireland	11	4.75	11	12	1
Estonia	12	4.74	12	11	-1
Spain	13	4.47	13	15	2
Malta	14	4.44	14	18	4
Portugal	15	4.44	15	14	-1
Slovenia	16	4.44	16	13	-3
Lithuania	17	4.43	17	20	-3
	18	4.33	18	16	-2
Czech Republic			18	19	-2
Latvia	19	4.32			
Cyprus	20	4.22	20	17	-3
Italy	21	4.05	21	21	0
Poland	22	3.97	22	23	1
Slovak Republic	23	3.91	23	22	-1
Croatia	24	3.87	n/a	n/a	n/a
Hungary	25	3.83	24	24	0
Greece	26	3.79	25	25	0
Bulgaria	27	3.75	26	27	1
Romania EU28	28	3.64 <b>4.56</b>	27	26	-1
Benchmarking economies EU candidate countries					
Iceland		5.15			
Montenegro		4.07			
Turkey		3.83			
Macedonia, FYR		3.62			
Serbia		3.46			
Advanced economies					
Switzerland		5.60			
Norway		5.48			
Singapore		5.33			
Japan		5.07			
Canada		5.06			
Hong Kong SAR		5.02			
United States		5.00			
Korea, Rep.		4.63			
Key emerging economies					
Brazil		4.01			
China		3.99			
Russian Federation		3.81			

\* This column shows the rank of each economy based on the 2012 sample of 27 economies (excluding Croatia).

BRIC economies

3.87

#### Table 3: Rankings on the Smart Growth Sub-index in the 2014 Edition

	SMART GROWTH PILLARS										
	Smart g	Smart growth Enterprise environment			Digital a	Digital agenda Innovative Europe				Education and training	
Country	Rank (out of 28)	Score (1-7)	Rank (out of 28)	Score (1–7)	Rank (out of 28)	Score (1-7)	Rank (out of 28)	Score (1–7)	Rank (out of 28)	Score (1–7)	
Austria	8	5.04	9	4.32	10	5.11	6	5.29	7	5.42	
Belgium	9	5.02	7	4.45	11	4.73	7	5.20	3	5.71	
Bulgaria	27	3.64	24	3.60	25	3.85	27	3.14	27	3.98	
Croatia	24	3.72	27	3.34	22	3.99	26	3.15	25	4.39	
Cyprus	19	4.18	14	4.07	24	3.88	18	3.82	14	4.96	
Czech Republic	18	4.23	16	3.82	17	4.31	17	4.03	21	4.76	
Denmark	6	5.23	11	4.24	5	5.59	3	5.70	8	5.41	
Estonia	12	4.73	12	4.21	8	5.30	13	4.28	12	5.12	
Finland	1	5.78	2	4.83	1	6.15	1	6.06	1	6.09	
France	10	4.91	10	4.26	9	5.23	10	4.94	10	5.22	
Germany	4	5.32	6	4.61	7	5.40	4	5.60	4	5.68	
Greece	25	3.70	28	3.19	26	3.81	23	3.32	23	4.50	
Hungary	23	3.84	26	3.49	21	4.03	22	3.37	24	4.47	
reland	11	4.80	8	4.38	14	4.69	11	4.60	5	5.52	
Italy	20	4.17	18	3.80	20	4.04	16	4.10	22	4.74	
_atvia	21	4.02	15	3.83	19	4.24	24	3.24	20	4.76	
Lithuania	16	4.25	17	3.81	15	4.63	24	3.65	16	4.90	
Luxembourg	7	5.06	4	4.75	6	5.51	8	5.18	19	4.78	
Malta	15	4.37	13	4.11	13	4.70	19	3.75	15	4.94	
Netherlands	3	5.55	3	4.80	3	6.06	5	5.51	2	5.81	
Poland	22	3.99	19	3.72	23	3.98	21	3.43	18	4.85	
Portugal	14	4.41	20	3.72	16	4.50	12	4.42	13	5.05	
Romania	28	3.51	20	3.61	28	3.61	28	2.88	28	3.95	
Slovak Republic	26	3.69	22	3.63	27	3.71	25	3.22	26	4.20	
Slovenia	17	4.24	25	3.53	18	4.30	15	4.25	17	4.88	
Spain	13	4.45	21	3.66	12	4.73	14	4.27	11	5.13	
Sweden	2	5.60	1	4.95	2	6.07	2	5.89	6	5.49	
United Kingdom	5	5.25 4.53	5	4.65 4.05	4	5.82 <b>4.71</b>	9	5.12 <b>4.34</b>	9	5.40 <b>5.00</b>	
Benchmarking econ EU candidate countrie											
celand		4.78		3.93		4.89		4.98		5.31	
Vacedonia, FYR		3.59		3.95		3.63		2.78		4.01	
Montenegro		3.85		3.88		3.91		3.34		4.28	
Serbia		3.33		3.16		3.66		2.70		3.80	
Turkey		3.86		4.20		3.45		3.53		4.28	
A <i>dvanced economies</i> Canada		4.94		4.58		5.21		4.50		5.45	
Hong Kong SAR		5.36		5.30		5.68		4.88		5.60	
Japan		5.17		4.54		5.55		5.28		5.29	
Korea, Rep.		5.13		4.01		6.01		5.24		5.25	
Norway		5.28		4.01		5.75		5.13		5.50	
United States		5.38		4.72		5.75		5.37		5.55	
Singapore		5.58		5.28		6.03		5.09		5.92	
Switzerland		5.47		4.77		5.42		5.09		5.88	
		5.47		4.77		0.42		0.01		0.00	
<i>Key emerging econor</i> Brazil	nies	3.65		3.41		3.95		3.32		3.93	
China		3.85		4.16		3.43		3.62		4.21	
ndia		3.61		4.10		2.95		3.31		4.08	
Russian Federation		3.73		3.46		4.02		3.04		4.38	
BRIC economies		3.71		3.78		3.59		3.32		4.15	

#### Table 4: Rankings on the Inclusive and Sustainable Growth Sub-index in the 2014 Edition

					/E GROWTH LARS				SUSTAINABLE GROWTH PILLAR		
	Inclusiv	Inclusive growth		Labour market and employment		Social inclusion		Sustainable growth		Environmental sustainability	
Country	Rank (out of 28)	Score (1–7)	Rank (out of 28)	Score (1-7)	Rank (out of 28)	Score (1-7)	Rank (out of 28)	Score (1–7)	Rank (out of 28)	Score (1–7)	
Austria	6	(1-7)	8	4.72	(out of 20)	5.84	(001 01 20)	5.43	(out of 20) 4	5.43	
Belgium	9	4.91	19	3.86	5	5.96	17	4.62	17	4.62	
Bulgaria	24	3.86	16	4.07	28	3.65	25	3.94	25	3.94	
Croatia	25	3.78	27	3.37	23	4.18	15	4.67	15	4.67	
Cyprus	16	4.43	15	4.09	16	4.77	24	3.96	24	3.96	
Czech Republic	13	4.60	14	4.18	13	5.02	22	4.18	22	4.18	
Denmark	1	5.52	1	5.07	4	5.98	5	5.27	5	5.27	
Estonia	12	4.81	2	4.88	17	4.73	16	4.67	16	4.67	
Finland	2	5.52	6	4.73	1	6.30	2	5.75	2	5.75	
France	14	4.50	21	3.69	11	5.31	9	5.03	9	5.03	
Germany	7	5.24	4	4.82	8	5.66	6	5.18	6	5.18	
Greece	27	3.72	26	3.39	25	4.04	21	4.27	21	4.27	
	27	3.92	20	3.39	23	4.04	21	3.59	21	3.59	
Hungary Ireland	11	3.92 4.81	12	4.34	12	4.09 5.28	20 18	4.42	20 18	4.42	
Italy	28	3.64	28	4.34 2.89	21	5.28 4.39	10	4.42	18	4.42	
Latvia	20 18	3.04 4.35	10	4.43	21	4.39	3	5.48	3	4.30 5.48	
Lithuania	17	4.39	10	4.43	22	4.27	10	4.93	10	4.93	
Luxembourg	5	5.28	9	4.57	3	6.00	14	4.68	14	4.68	
Malta	10	4.85	13	4.37	9	5.41	27	3.89	27	3.89	
Netherlands	3	5.46	3	4.84	2	6.09	13	4.77	13	4.77	
Poland	23	3.88	18	3.87	26	3.89	23	4.07	23	4.07	
Portugal	20	4.18	24	3.65	18	4.71	8	5.06	8	5.06	
Romania	20	3.73	24	3.68	27	3.79	26	3.94	26	3.94	
Slovak Republic	20	4.13	22	3.68	19	4.58	20	4.34	20	4.34	
Slovenia	15	4.13	23 17	3.90	15	4.56	20	4.34 5.17	20	4.34 5.17	
Spain	19	4.44	25	3.60	15	4.98 5.02	11	4.86	11	4.86	
Sweden	4	5.30	7	4.72	6	5.89	1	5.83	1	5.83	
United Kingdom	8	5.06	5	4.72	10	5.37	12	4.77	12	4.77	
EU28	0		5	4.74	10	4.99	12	4.77	12		
2020		4.57		4.10						4.68	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia		5.38 3.88 4.16 3.51		5.24 3.80 3.69 3.33		5.51 3.95 4.62 3.69		6.17 3.19 4.76 3.84		6.17 3.19 4.76 3.84	
Benchmarking econ EU candidate countrie Iceland Macedonia, FYR Montenegro	35	5.38 3.88 4.16		5.24 3.80 3.69		3.95 4.62		6.17 3.19 4.76		6.17 3.19 4.76	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies	35	5.38 3.88 4.16 3.51		5.24 3.80 3.69 3.33		3.95 4.62 3.69		6.17 3.19 4.76 3.84		6.17 3.19 4.76 3.84	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada	35	5.38 3.88 4.16 3.51 3.99		5.24 3.80 3.69 3.33 3.59		3.95 4.62 3.69 4.38		6.17 3.19 4.76 3.84 3.36		6.17 3.19 4.76 3.84 3.36	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR	35	5.38 3.88 4.16 3.51 3.99 5.29		5.24 3.80 3.69 3.33 3.59 5.01		3.95 4.62 3.69 4.38 5.57		6.17 3.19 4.76 3.84 3.36 5.11		6.17 3.19 4.76 3.84 3.36 5.11	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan	35	5.38 3.88 4.16 3.51 3.99 5.29 5.12		5.24 3.80 3.69 3.33 3.59 5.01 5.50		3.95 4.62 3.69 4.38 5.57 4.74		6.17 3.19 4.76 3.84 3.36 5.11 3.43		6.17 3.19 4.76 3.84 3.36 5.11 3.43	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep.	35	5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58		3.95 4.62 3.69 4.38 5.57 4.74 5.67		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway	35	5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States	35	5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States Singapore	35	5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64 4.75		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08 4.83		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20 4.66		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States Singapore Switzerland Key emerging econom		5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64 4.75 5.30 5.74		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08 4.83 5.63 5.60		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20 4.66 4.97 5.88		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States Singapore Switzerland Key emerging econon Brazil		5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64 4.75 5.30 5.74 3.97		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08 4.83 5.63 5.60		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20 4.66 4.97 5.88		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States Singapore Switzerland Key emerging econom Brazil China		5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64 4.75 5.30 5.74 3.97 4.53		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08 4.83 5.63 5.60 4.83 5.60		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20 4.66 4.97 5.88 3.91 4.31		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83 5.55 3.46		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83 5.55 3.46	
Benchmarking econo EU candidate countrie Iceland Macedonia, FYR Montenegro Serbia Turkey Advanced economies Canada Hong Kong SAR Japan Korea, Rep. Norway United States Singapore Switzerland Key emerging econom Brazil		5.38 3.88 4.16 3.51 3.99 5.29 5.12 5.13 4.23 5.64 4.75 5.30 5.74 3.97		5.24 3.80 3.69 3.33 3.59 5.01 5.50 4.58 4.12 5.08 4.83 5.63 5.60		3.95 4.62 3.69 4.38 5.57 4.74 5.67 4.34 6.20 4.66 4.97 5.88		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83		6.17 3.19 4.76 3.84 3.36 5.11 3.43 4.60 3.41 5.97 3.96 4.42 5.83	

#### Box 4: Public Debt and Economic Competitiveness in Europe

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In the recent financial and economic crisis, some Members of the eurozone faced the threat of sovereign default. The eurozone managed to avoid fiscal and financial mayhem through large-scale bailouts, drastic fiscal consolidation programmes in the countries concerned and unprecedented measures by the ECB. Given the still significant debt burden in many EU countries, the focus must now shift to the underlying ability to repay. This ability will depend on the growth and competitiveness of the countries concerned. In fact, there are complex linkages between economic growth and the level of public debt.

In the short term, fiscal consolidation usually suppresses growth—by how much depends on the design of the fiscal reform programme, among other things. Governments often choose to raise taxes to plug fiscal holes, rather than going down the more difficult but sustainable route of cutting expenditure. Higher taxes risk stifling business investment and private expenditure.

Yet Europe today has no alternative to fiscal consolidation. Continued fiscal and financial instability would undermine the continent's fledgling economic recovery. The banking and financial sectors of European countries are closely interconnected. If one country faces the risk of sovereign default (or a crisis in its banking sector that threatens to overwhelm its overly indebted government), instability would quickly spread through the eurozone and beyond. In the medium to long term, too, public debt has an impact on growth rates. Much depends on how governments spend the money they borrow. If they spend it on consumption, the longer-term growth effects will be zero—or even negative, if public borrowing crowds out private investment. If governments spend borrowed money on education, research or infrastructure, they can help to raise the economy's trend growth rate in the future. Higher growth, in turn, makes it easier to repay the initial debt.

Eurozone countries must strike the right balance between short-term consolidation of public finances and longterm growth-boosting investments. Governments often find it easier to cut back on research or road building programmes than to curtail social support and subsidies to which voters have become accustomed. However, such short-term political expediency tends to impose heavy economic costs.

Bearing in mind the risk of social dislocation, European governments should gradually cut subsidies, make their social support programmes more targeted and effective, and then shift spending towards growth-boosting investments. They should also do more to leverage private investments into infrastructure, education or healthcare. Such a strategy could create a virtuous circle in which higher spending today generates additional growth that, in turn, makes it easier not only to repay debt, but also to maintain a fair, social market economy. European politicians could start laying the groundwork today by explaining to their voters that fiscal reform is needed to safeguard their future standard of living.

and 4 show the overall result, as well as the breakdown of performance along the three sub-indexes—smart growth, inclusive growth and sustainable growth—and the seven pillars of the index.

#### GAUGING EUROPE'S EFFORTS TO SUPPORT SMART, INCLUSIVE AND SUSTAINABLE COMPETITIVENESS

As described earlier, to gauge the EU's efforts to ensure a smart, inclusive and sustainable economy, this Report carries out three types of analyses. First, it assesses EU competitiveness vis-à-vis a set of highly advanced countries such as the United States, Japan and Switzerland, which have been able to put into place the foundations for smarter growth. This analysis provides the global framework to identify the overall strengths and weaknesses that need to be taken into account when aiming to build a highly competitive Europe. In addition, a comparative analysis is also performed with the large emerging BRIC economies, which in recent years have rapidly become global players and, in spite of their slowing growth, are still regarded as a global benchmark.

Second, the Report describes the performance of individual EU Members, analysing their competitiveness

profiles and identifying their strengths and weaknesses. It also takes stock of the change in relative performances of individual countries since 2012, in order to measure relative progress.

Third, the Report assesses the economic competitiveness of the EU candidate countries, providing a sense of the challenges they currently face, and the extent to which they will likely contribute to overall European competitiveness.

Overall, the EU is trailing other advanced economies in laying the foundations for smart and inclusive growth, but is performing relatively strongly in environmental sustainability. Figure 4 gives a detailed analysis of the EU's performance in the smart, inclusive and sustainable sub-indexes. As expected, with an average value of 4.53 on the smart growth sub-index, the EU is trailing behind all three comparators in building a smarter economy that can help facilitate the transition to higher value added, more productive activities. The gap is particularly wide vis-à-vis the United States. The gap with Canada (4.94) and Japan (5.17) is narrower, but still significant. In 2014, the consequences of the economic crisis can also be seen reflected in the EU's declining performance on the overall inclusive growth sub-index. The EU registers an average value of 4.57

#### Figure 4: Europe's Performance against Comparator Economies by Pillar, Score (1-7)



Source: World Economic Forum, 2014.

compared with 4.75 for the United States, which has improved in this sub-index since 2012.

Europe continues to benefit from comparatively high levels of social inclusion. Figure 4 also provides a more nuanced analysis along the seven pillars of the Index. It compares the EU's performance in the smart, inclusive, and sustainable categories against a number of other comparators. Overall, the graph illustrates that the EU continues to fare better in building inclusive societies compared with the United States. Healthcare services are more universally accessible, overall income inequality is lower, and the government is more effective in reducing poverty and inequality. Indeed, the welfare state model predominating in Europe has managed to provide relatively high levels of social protection, even in the most severe economic downturn of the past 60 years. However, the EU is trailing Canada and Japan, suggesting that more can be done towards achieving inclusive growth. Moreover, fiscal consolidation efforts and continued pressure from high long-term unemployment in several European countries, especially those hit more strongly by the crisis, are placing increasing stress on the capacity of governments to support the existing models, calling into question their sustainability unless comprehensive reforms are implemented. In terms of sustainability, the EU performs relatively well with a score of 4.68 compared with that of the United States (3.96) and slightly above Japan

(4.60). Only Canada among the comparator countries outperforms the EU in this dimension.

Unfortunately, the EU is trailing its comparator economies in creating gainful employment for a large share of its population. Figure 4 further points to the EU's labour market as the cause of its setback in laying the foundations for inclusive growth in this 2014 assessment. The EU's comparatively low score of 4.15 reflects the strong and persistent effects of the crisis, coupled with comparatively stronger rigidities in labour markets of several European countries. This has resulted in sharp increases in unemployment, of a long-term nature in many cases, thus depriving a wide segment of the population of gainful employment. It also shows the comparative difficulty of the EU economies to provide gainful employment, where the European median is close to a four on a scale of 1 to 7.

Most worryingly, the EU is significantly outdistanced in laying the foundations for smart growth, as other economies press ahead. In general, the gap in creating a knowledge-based economy is evident in all four pillars of the smart growth subindex, where the EU clearly falls short compared to other advanced economies. This is further illustrated by Table 5, which shows the categories within the four smart growth pillars. It shows that the EU, offering less favourable conditions for business development than other countries (and driven by less competitive markets, despite the integrated single market that is

#### Table 5: A Breakdown of Smart Growth in the Europe 2020 Index (2014 edition)

	EU28	United States	Japan	Korea, Rep.	Canada	Switzerland
	Score (1-7)	Score (1-7)	Score (1-7)	Score (1-7)	Score (1-7)	Score (1-7)
Smart growth	4.53	5.38	5.17	5.13	4.94	5.47
Enterprise environment	4.05	4.88	4.54	4.01	4.58	4.77
Competition	4.24	4.57	4.57	4.10	4.49	4.89
Clusters	4.32	5.28	5.60	4.60	4.34	5.48
Entrepreneurship	4.60	5.24	4.29	4.76	5.60	4.82
Availability of finance	3.03	4.42	3.72	2.58	3.90	3.87
Digital agenda	4.71	5.72	5.55	6.01	5.21	5.42
ICT readiness	4.93	5.27	4.97	5.31	4.80	5.44
ICT usage	5.33	6.28	5.99	6.39	6.06	5.75
ICT impact	3.89	5.61	5.70	6.35	4.78	5.07
Innovative Europe	4.34	5.37	5.28	5.24	4.50	5.81
Education and training	5.00	5.55	5.29	5.25	5.45	5.88
Education	5.34	5.73	5.62	6.02	5.73	5.72
Training	4.67	5.37	4.97	4.49	5.17	6.05

Source: World Economic Forum, 2014.

more advanced for goods than for services), has more regulatory hurdles and fewer funds to start businesses and enable them to grow. In addition, the EU falls behind compared to the other economies in promoting a digital agenda with integrated digital markets and higher levels of ICT. Against this backdrop, rolling out high-speed internet in the run-up to 2020 will be one of the most decisive factors for the EU to remain competitive. Similarly, the data indicates that the EU's innovative capacity is lower than that of other advanced economies. R&D expenditure in the EU, for instance, amounts to 1.6% of GDP-well below the Europe 2020 target of 3%-compared with close to 2.8% in the United States. In addition, comparatively low patent application numbers-half of the activity in the United States and over half of the activity of advanced Asian economiesnot only indicate a low level of innovation, but also may be a reflection of the lack of knowledge and capacity of SMEs to efficiently deal with the process of filing patents. A similar pattern exists for communication technology-related patents. Given the critical role of intellectual property in attracting investment, protecting against competitors and distinguishing businesses from one another, policies and information-sharing to facilitate patent filing, particularly for young companies, could help close the gap. Moreover, the EU also displays weaker linkages between universities and companies, impeding the translation of fundamental research into high-valueadded products. More also needs to be done to improve the overall quality of the educational system, through leveraging education and training activities, to provide the skills needed to build and strengthen the economy. Given the strong interconnections and complementarities among the four pillars necessary to create a truly smart

economy, addressing these weaknesses will require coordinated efforts in all four dimensions.

**Meanwhile, other countries have improved in building particularly smart growth.** Figure 5 shows the comparative competitiveness profiles of the EU15, the BRIC economies and the 13 countries that have joined the EU since 2004.<sup>25</sup> Overall, the EU13 and the BRIC economies perform in a similar fashion, especially in terms of developing smart economies, most notably in the enterprise environment and innovation pillars. The biggest difference among the two groups appears in the social inclusion pillar, where emerging economies still face a considerable gap.

Aggregate numbers, however, mask the big differences between EU Member States in progress made towards Europe 2020 goals. The EU is far from a homogeneous entity in terms of competitiveness. On the contrary, large disparities exist among Member States, with some countries performing better than both the EU average and other advanced economies, such as the United States, while some Member States perform far worse. The dispersion in performance across European countries in the seven dimensions is plotted in Figures 6 and 7.

An innovation and digital divide within Europe, and heterogeneity in the enterprise environment, is hindering the EU's overall potential. The spread in performance across European countries is particularly stark in areas such as innovation, where the "innovation divide" is illustrated by a three-point gap, on a scale of one to seven, that separates the best performers headed by Nordic countries—from the worst (Hungary, Bulgaria and Romania). Overall, north-western Europe as well as northern Europe boast innovative economies, some even outperforming the United States, while

#### Figure 5: Competitiveness Performance of EU15, EU13 and BRIC Economies by Pillar (Score 1-7)



Source: World Economic Forum, 2014.

EU13: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic and Slovenia EU15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom BRIC: Brazil, China, India, Russian Federation

Figure 6: Europe 2020 Competitiveness Index-Score Dispersion among EU Countries and Regions, (Score 1-7)



Source: World Economic Forum, 2014.

Note: The length of each bar is determined by the score of the best and worst performing EU Member State. Northern Europe: Denmark, Finland, Sweden North-Western Europe: Austria, Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, United Kingdom

Southern Europe: Cyprus, Greece, Italy, Malta, Portugal, Spain

Central and Eastern Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia

#### Figure 7: Europe 2020 Index-Score Dispersion among EU Countries (Score 1-7)

						PILLARS			
	Country/economy	Europe 2020 Index (2014 edition)	Enterprise environment	Digital agenda	Innovative Europe Coding	Education and training	Labour market and employment	Social inclusion	Environmenta sustainability
	Finland	5.70	4.83	6.15	6.06	6.09	4.73	6.30	5.75
Northern Europe	Sweden	5.55	4.95	6.07	5.89	5.49	4.72	5.89	5.83
uropo	Denmark	5.32	4.24	5.59	5.70	5.41	5.07	5.98	5.27
	Netherlands	5.41	4.80	6.06	5.51	5.81	4.84	6.09	4.77
	Germany	5.28	4.61	5.40	5.60	5.68	4.82	5.66	5.18
	Austria	5.16	4.32	5.11	5.29	5.42	4.72	5.84	5.43
lorth-	United Kingdom	5.13	4.65	5.82	5.12	5.40	4.74	5.37	4.77
Vestern Europe	Luxembourg	5.07	4.75	5.51	5.18	4.78	4.57	6.00	4.68
	Belgium	4.93	4.45	4.73	5.20	5.71	3.86	5.96	4.62
	France	4.81	4.26	5.23	4.94	5.22	3.69	5.31	5.03
	Ireland	4.75	4.38	4.69	4.60	5.52	4.34	5.28	4.42
	Spain	4.47	3.66	4.73	4.27	5.13	3.60	5.02	4.86
Southern Europe	Malta	4.44	4.11	4.70	3.75	4.94	4.28	5.41	3.89
	Portugal	4.44	3.70	4.50	4.42	5.05	3.65	4.71	5.06
	Cyprus	4.22	4.07	3.88	3.82	4.96	4.09	4.77	3.96
	Italy	4.05	3.80	4.04	4.10	4.74	2.89	4.39	4.36
	Greece	3.79	3.19	3.81	3.32	4.50	3.39	4.04	4.27
	Estonia	4.74	4.21	5.30	4.28	5.12	4.88	4.73	4.67
	Slovenia	4.43	3.53	4.30	4.25	4.88	3.90	4.98	5.17
	Lithuania	4.38	3.81	4.63	3.65	4.90	4.38	4.39	4.93
	Czech Republic	4.33	3.82	4.31	4.03	4.76	4.18	5.02	4.18
entral	Latvia	4.32	3.83	4.24	3.24	4.76	4.43	4.27	5.48
nd Eastern	Poland	3.97	3.72	3.98	3.43	4.85	3.87	3.89	4.07
urope	Slovak Republic	3.91	3.63	3.71	3.22	4.20	3.68	4.58	4.34
	Croatia	3.87	3.34	3.99	3.15	4.39	3.37	4.18	4.67
	Hungary	3.83	3.49	4.03	3.37	4.47	3.76	4.09	3.59
	Bulgaria	3.75	3.60	3.85	3.14	3.98	4.07	3.65	3.94
	Romania	3.64	3.61	3.61	2.88	3.95	3.68	3.79	3.94

Source: World Economic Forum, 2014.

Note: Colour coding according to maximum and minimum scores of the sample. The interval [x,y] is inclusive of x but exclusive of y.

southern and Central and Eastern Europe are falling behind. R&D expenditures in Nordic countries, for instance, amount to 3.4% of GDP-well above the Europe 2020 target of 3%-compared with less than 1% in southern Europe. The number of patent applications is 16 times higher in the Nordic countries compared with Central and Eastern Europe, and the collaboration between industries and universities to facilitate the translation of research into marketable products is critically higher. Similarly, Europe is divided digitally, with an extremely well-performing north, led by Finland, Sweden and the Netherlands, compared with a trailing south and east. Here, the notable exception is Estonia, which compares well with countries such as Germany and France, and is well ahead of its fellow Baltic countries Latvia and Lithuania.

More also needs to be done to focus on training and educating Europe's young population. A highly skilled and educated workforce will be the backbone for smart growth in Europe. While countries such as Finland, the Netherlands, Belgium, Germany and Ireland do well in educating and training their populations, this is not the case for a number of countries in south-eastern Europe. In the Nordic EU Member States, more than 80% of young people in the five-year cohort following secondary-school leaving age pursue tertiary education, compared with 65% in Central and Eastern Europe. While these numbers may not be directly comparable for all countries (e.g. a number of professional tracks in Germany's vocational system correspond to tertiary schooling in other countries), they largely give an insight into the number of high school leavers who embark on further studies. In some instances, tertiary education is also borne out of necessity in the absence of otherwise gainful employment, as evidenced by the surge in tertiary enrolment figures in Spain. However, the quality of education and ability of the educational system to provide the necessary skills to find gainful employment

is crucial. Beyond independent and critical thinking, creativity also plays an important role in innovation. In this regard, the regional disparities are even higher, ranging from 2.69 (on a scale of 1 to 7) in the Slovak Republic to 5.93 in Finland. This finding is further complemented by the Programme for International Student Assessment (PISA) benchmarking study of the Organisation for Economic Co-operation and Development (OECD), where Romania is at the bottom compared with Finland at the European top.

As expected, the competitiveness divide also reflects a divide in building more inclusive societies at the national level. Countries with a long tradition in consensus-based decision-making do well, as do those economies with strong social safety nets such as Denmark and Belgium. This stands again in stark contrast to the less-inclusive societies in Europe's southeast and east, where the ranking ends with Poland, Romania and Bulgaria. In the future, closing this gap will require a fine balancing act between the need for fiscal consolidation in southern Europe and muchneeded investments in smart growth across Europe, while providing a societal framework that caters to societal inclusion. This will be ever more challenging in view of an ageing population that will require higher spending in the health sector and pension system. Thus, investing in smart growth is also critical from the angle of social inclusion: in addition to creating employment opportunities, such investment lays the foundations for a knowledge-based and innovative society that will drive innovations in sectors such as health and social services in education, marrying cost-efficiency with better social inclusion.26

These results point to the complexity and difficulties of bridging the competitiveness divides in Europe, and raise questions about the sustainability of the income convergence that many European economies have experienced in recent decades. The recent declines in income of previously converging economies such as Spain, Greece and Portugal suggest that stable economic convergence may only be possible if decisive actions to address the competitiveness weaknesses of these countries are adopted.

The differences across EU Member States reflect, to a large extent, the internal differences within and across different regions. As Box 5 highlights, the differences across regions within countries are also stark.

To identify the singular competitiveness position of each EU Member State and their strengths and weaknesses, an analysis by country needs to be carried out and is as follows:

**Finland** ranks 1st in this edition of the Europe 2020 Competitiveness Index, supported by its stronger performance in laying the foundations for smart growth since the 2012 edition. This is driven by a large focus on education and training (1st in this pillar), which has provided the workforce with the skills needed to adapt rapidly to a changing environment, and has laid the groundwork for high levels of technological adoption and innovation. Finland remains one of the innovation powerhouses in Europe, ranking 1st in the innovative Europe pillar, and a global leader in moving towards a digital economy (1st). Finland's enterprise environment (2nd) fosters business creation, supported by readily available finance for business investment. Finland also receives a strong assessment in the inclusive growth component (2nd); it has a well-functioning labour market and relatively strong labour market participation, as well as strong social inclusion (1st) based on low inequality in the country, providing social services and the opportunity for its citizens to improve their economic status independent of their socio-economic background (1st in social mobility). Finland's strong showing on the sustainability component (2nd) demonstrates that its economic prowess does not come at the expense of environmentally sustainable practices and outcomes.

Sweden falls by one place and is ranked 2nd. It does well in the smart growth sub-index, driven by healthy competition in the national market, a strong culture of entrepreneurship, well-developed clusters, and financing that is more readily available than in many other parts of Europe. Sweden also has made great strides in encouraging the uptake of the latest digital technologies to enhance productivity and innovation (2nd in the digital agenda pillar). Such emphasis over the years on creating the conditions for innovation-led growth has paid off in Sweden's number two ranking in the innovative Europe pillar, with very sophisticated business techniques, high spending on R&D (albeit lower than in the previous edition) and excellent collaboration between universities and the private sector in research, leading to much innovation output making it to market. Sweden is also ranked 1st in the environmental sustainability pillar, demonstrating that sustainability and innovation can go very well hand in hand, with well-enforced environmental regulations and much lower pollution levels than in many other parts of the world. Sweden is somewhat less strong in the inclusive growth sub-index (4th). With low inequality and a strong provision of health and social services, Sweden's score is pulled down by its result in the labour market and employment pillar, where it is ranked 7th out of 28. This is related to a lack of flexibility in the labour market, some concerns about the relationship between pay and productivity in the country, as well as a notably high youth unemployment rate of 23.4%.

The **Netherlands**, ranked 3rd overall, continues to perform strongly, both in terms of building a smarter (3rd) and inclusive (3rd) society; this despite the economic and financial difficulties of the past years that have raised concerns about its housing and financial sectors, affecting the access to loans (9th), and have resulted in higher rates of unemployment. Overall, the country continues to perform strongly, with one of the most

#### Box 5: The Europe 2020 Regional Index

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To better grasp the regional dimension of Europe 2020, the European Commission has developed a Europe 2020 regional index,<sup>1</sup> which summarizes the distance to the Europe 2020 targets.<sup>2</sup> It shows a wide variation both between and within EU Member States (Map). In addition, almost all Member States have set national targets.<sup>3</sup> In general, Member States selected lower national targets when the distance to the EU target was great. Only the Nordic Member States, Austria and the Netherlands set most targets higher. Nevertheless, the distance to national targets remained higher for the Member States far removed from the EU targets, than for the ones close to them.

Public policies need to take this regional variation into account to be effective. Boosting employment will require a different approach in the Italian regions of Bolzano, with an employment rate of 77%, and Campania, with a rate of 44%. Policies aimed at boosting innovation or enhancing education should take into account the needs of current firms and future starts-ups, which are likely to differ between regions.

#### Main results

In 2011, six regions already reached all the headline targets (Table 1): the capital regions of Denmark, Finland and Sweden, and the three Swedish regions that include Uppsala, Malmo and Gothenburg, respectively. The three countries have set higher national 2020 targets; therefore, these regions have not yet reached all their targets.

Regions with a national capital tend to score better than the other regions in the country. In 14 of the 22 EU Member States with more than one NUTS 2 region, the capital region scores the highest. Many countries harbour wide disparities in their distance to the Europe 2020 targets. The gap between the regions in Italy, Spain, Romania and Belgium is particularly high. Overall, the regions in Bulgaria, Romania, Greece, Croatia, southern Spain and southern Italy have the greatest distance to the 2020 targets.

Table 1: Top Ten Regions in 2011 According to the Europe 2020 Regional Index

Region	NUTS 2 Code	Score
Hovedstaden	DK01	1.000
Helsinki-Uusimaa	FI1B	1.000
Stockholm	SE11	1.000
Östra Mellansverige	SE12	1.000
Sydsverige	SE22	1.000
Västsverige	SE23	1.000
Oberbayern	DE21	0.997
Prov. Vlaams-Brabant	BE24	0.990
Etelä-Suomi	FI1C	0.990
Övre Norrland	SE33	0.985

#### **Policy implications**

The distance to the EU targets is greater for the Member States and regions with a lower GDP per capita. National targets modified this slightly, as some countries have set targets above and some below the EU targets. Nevertheless, less developed Member States still have the greatest distance to their national targets, showing their ambition to catch up. For example, the average distance to the national employment target in 2009 was 6 percentage points for Member states with an employment rate below 70%, while it was only 2.6 percentage points for those with a higher rate. This shows that catching-up is critical, as the EU is unlikely to reach the Europe 2020 targets without closing the gaps.

The spatial concentration of poverty or exclusion, early school leavers or low employment generates negative externalities which further reduce quality of life and can hinder economic development. Targeting regions where these problems are concentrated can therefore be more efficient.

The spatial concentration of R&D and the tertiaryeducated, however, can generate positive externalities. As a result, for these issues it may not be efficient to target the regions with the lowest scores, as concentration may generate more jobs and growth.

Both an ambitious programme of structural reforms and substantial investments will be needed to reach the 2020 goals. Structural reforms are particularly important for the performance of lagging regions, as many of them are affected by burdensome regulations.

Cohesion policy will co-finance a large amount of public investment, especially in lagging regions, during the 2014-2020 programming period. The focus of investments should take account of the regional situation. Some, but not all, of the lagging regions still require substantial investments in their transport and digital networks to improve their access to markets. Yet, this should not be the main focus. Improving administrative capacity and the business environment will encourage more start-ups, help SMEs to grow and attract foreign direct investment, all of which are crucial in lagging regions.

Given the important role of manufacturing in the economy of lagging regions, and the relatively low levels of energy efficiency of their building stock, more investments are needed. These should improve the reliability of the energy supply, reduce energy costs (through better networks and more open competition), and increase energy efficiency. Last but not least, actions to improve the functioning of the labour market, and match skills to regional labour market needs, can help these regions grow and reduce poverty and unemployment.

Cohesion policy has introduced "ex-ante and macroeconomic conditionalities" to try to ensure that the right institutional and economic framework, as well as structural reforms, are put in place to allow these investments to flourish. These conditions are linked to the country-specific recommendations issued as part of the European Semester.<sup>4</sup> These recommendations include, depending on the country, issues such as improving the fiscal framework, labour market reforms, promotion of R&D and innovation, and investing in infrastructure. Some of these can be co-financed by cohesion policy.

#### Notes

 Methodology: First, the distance to the Europe 2020 target is calculated. This is: (1) 75% of the 20-64-year-olds to be employed; (2) 3% of the EU's GDP to be invested in R&D; (3) education, as in (a) reducing the rates of early school leaving below 10%, and (b) at least 40% of 30-34-year-olds completing third-level education; and (4) lifting at least 20 million people out of the risk of poverty or social exclusion. The distance is then transformed into a score between 0 and 1. The region furthest removed from the target receives 0, while the regions that have reached or surpassed the target receive 1. As a result, higher scores imply a better performance. Second, the distances are linearly aggregated into an index between 0 and 1, with equal weights (0.25) for each of the four headline targets.



Source: Joint Research Centre and DG for Regional and Urban Policy, © EuroGeographics Association for the administrative boundaries. Notes: Low = far from target; High = close to target; EU average = 0.82. This index takes into account the following indicators: Employment, R&D spending, Education (ESL and TERT) and fighting poverty and social exclusion (AROPE).

Education uses two indicators for one headline target. Therefore, each has half of the normal weight (0.125=0.25/2). Regions that have reached or surpassed all the targets will have a score of 1. If a single region would have the maximum distance to all the targets, it would have the score of 0. Missing regional data were estimated where possible using higher geographical levels (NUTS 1 or national). If data could not be estimated, the weight of this component was then uniformly assigned to all others. The last target was transformed into a reduction of the at-risk of poverty or social exclusion rate using 2009 data. The robustness of the index ranking to changes in weights and aggregation function was assessed via an uncertainty and sensitivity analysis. The choice of weights and aggregation function were found to be roughly equally important input factors. Moreover, while the ranks of a handful of regions were quite sensitive to changes in weights and aggregation (primarily due to unbalanced performance across Europe 2020 headline targets), index ranks as a whole were quite robust. See: Athanasoglou, S.; Dijkstra, L. The Europe 2020 Regional Index, Joint Research Centre Report 2014 (forthcoming). This also includes an index measuring the distance to national 2020 targets, and a 2010 version of both indices using the same methodology to ensure comparability over time and between the two indices.

- 2. For the climate change and energy sustainability target, no regional data was available. Therefore it has not been included in this index.
- 3. See: http://ec.europa.eu/europe2020/targets/eu-targets/.
- 4. See: http://ec.europa.eu/europe2020/index\_en.htm.

efficient and pro-business operating environments in Europe (3rd) and outstanding ICT use (1st) that, coupled with a well-performing educational system (2nd), allows for high levels of innovation in a service-based economy. These assets should play an important role in sustaining robust growth in the future. In the current economic context, and despite the rise in unemployment and the persistent rigidities in the labour market, the Netherlands has managed to maintain a high level of social inclusion (2nd). This has come with no increase in income disparities, as evidenced by a very stable Gini coefficient (5th), and with effective government policies (2nd) to reduce poverty and inequality, and ensure access to public services such as healthcare (6th). In the future, the country should address the persistent rigidities in its labour market, based on the successful experience of some Nordic countries in implementing "flexicurity" models (that seek to reconcile employers' need for flexibility with employees' desire for security), and continue its public and private investments in productivity-enhancing intangible assets in areas such as R&D, education, training schemes or ICT.

Denmark falls by one place to rank 4th. While the country receives strong marks for its innovative capacity (3rd on the innovative Europe pillar), it experienced a deterioration of its enterprise environment, falling five places to 11th. By contrast, Denmark continues to distinguish itself through the benefits of its flexicurity system, as it has one of the most efficient labour markets (1st), combined with a strong social safety net, which has allowed the country to cope relatively well with the significant drop in employment during the downturn. Overall, the system has led to very high labour market participation, including among youth, at a time when many other European countries are struggling in this area. Yet, a decline in the education and training pillar is apparent, although the country is taking steps to reform public school and vocational training. Denmark also receives a relatively strong assessment for sustainability, although less so than the other Nordic countries, and with some concerns related to the amount of protected land area and relatively high CO2 emissions, although an improvement has taken place in the past four years.

**Germany** overtakes Austria in this edition, moving up one spot to 5th place. German companies are among the most innovative in the world, with heavy spending on R&D (ranked 4th)—notably with an increase from 2.5% to 2.8% of GDP in both public and private sectors between 2010 and 2012—and displaying a high capacity for innovation (2nd). Moreover, the country harnesses the digital agenda well to achieve higher productivity (7th). Germany is also relatively successful in its environmental sustainability efforts (ranked 6th in this pillar), with well-enforced environmental legislation leading to rather strong environmental outcomes. On a less positive note, and despite some efforts, Germany's labour market remains rigid (17th for rigid hiring and firing practices, although up from 22nd place two years ago), and with still relatively low participation of women in the labour market. While these rigidities have certainly kept unemployment low during recent economic difficulties, rigid rules continue to hinder job creation, and more flexibility would place the country on a more solid footing for the future.

Austria is ranked 6th in this year's Index, falling one spot since 2012. The country's greatest strength relates to the environmental sustainability component, and it ranks 4th on this pillar, with extensive use of renewable energy and well-enforced environmental regulations, as well as an unpolluted environment and relatively low CO2 emissions. Austria is ranked a similarly respectable 7th for social inclusion, based on its strong provision of social services and strong labour market participation, particularly among youth (ranked 2nd, with the secondlowest youth unemployment rate). With regard to areas for improvement, a more flexible labour market to encourage more job creation, as well as stronger private sector employment of women (15th), would further enhance this positive picture. Austria's greatest challenge will be to further improve its innovation capacity. The country ranks 8th out of 28 in the smart growth sub-index; its enterprise environment is of most concern compared to other European countries. Its 9th rank in this pillar is primarily pulled down by the many procedures and the significant time required to start a business in Austria, constraining business creation (Austria is ranked 24th in the entrepreneurship sub-pillar). Improvements in this area would give a significant boost to the country's innovation potential.

With a highly developed, service-oriented economy, the United Kingdom is positioned in 7th place in the overall ranking, though it scores 5th in building a smart economy, right after Finland, Sweden, the Netherlands and Germany. This has been possible because of strong leveraging of ICT (4th), which is instrumental in supporting business innovation in the services sector; relatively high levels of training (6th); and favourable business conditions (5th) related to high levels of competition (5th) and available financing through local equity markets (2nd) and venture capital (4th). Despite this relatively strong position, the country still faces problems in providing gainful employment for some segments of the population, especially for youth, who face unemployment rates of over 20% despite quite flexible labour markets (5th). The UK also registers one of the highest inequality rates in Europe (22nd). Altogether, this points to some areas that require improvement to continue competing successfully and spreading the benefits to all segments of society. More precisely, while the performance of the scientific system is good (4th) because of world class universities, the innovation uptake (9th) is relatively low due in part to falling rates of corporate R&D. While the country's economic structure may partially justify these lower rates, several

manufacturing industries may need to increase their investments to improve their innovative potential. Moreover, the overall quality of the educational system, while fairly good, scores behind many other European countries (declining two spots, to 9th), and enrols fewer students in tertiary education (18th). Finally, to ensure a more harmonious development process, greater focus should be placed on several dimensions supporting environmental sustainability (12th).

Luxembourg remains stable, in 8th place overall, despite comparative improvements in terms of building a smarter and more inclusive economy, moving up three places to 7th and one place to 5th, respectively. The country continues to demonstrate one of the most probusiness environments in the EU (4th), with high levels of competition (2nd), low taxes (1st) and, in comparative terms to other European economies, fairly fluid access to finance (3rd). In addition, and following a strategic long-term vision to diversify its economy, Luxembourg continues to strongly develop its digital readiness (1st) and usage (8th), and strengthen its innovation system. Despite this progress, the country still suffers from relatively low levels of R&D (15th) and a shortage of scientists and engineers (19th), which is partially explained by its service-based economic structure that may rely on other sources than R&D to support and foster innovation. To continue supporting a wellperforming knowledge-based economy, Luxembourg will need to address some of the persistent concerns about its educational system, both in terms of quality and quantity, to ensure a good supply of skilful labour, and to address any potential income disparities that may affect a fairly cohesive society (3rd) with effective government policies to reduce poverty and inequality (4th). More precisely, and according to the PISA results, while the quality of its educational system has improved in the past years, the country ranks 15th and continues to score below the EU average.

In 9th place, Belgium repeats its position in the overall ranking and depicts a very similar profile to the last assessment, both in terms of strengths and weaknesses. Overall, the country continues to enjoy one of the best-performing educational and training systems (3rd) that provides a skilful labour force. In addition, Belgium continues to excel in its scientific production (4th), which supports important innovations in a science-based industry with close ties to the university system (3rd), resulting in acceptable levels of technology development (9th). In general, pro-business policies, despite the high taxation system and very negative attitudes towards entrepreneurial failure (27th), have provided the right conditions for businesses to develop their activities (7th). In terms of cohesion (5th), strong social networks (1st), and access to basic core services such as healthcare (1st), continue to cement an inclusive society, where income disparities have not grown despite the economic downturn (7th). Notwithstanding

this important achievement, labour market participation, which is allegedly one of the best mechanisms to support inclusive societies in a sustainable manner, continues to be worrisome. Belgium has a very low activity rate (23rd) that could be partially explained by the negative effects of taxation on the incentives to work (25th), strong rigidities in hiring and firing practices (25th) and a certain disconnection between pay and productivity (22nd).

France is ranked 10th in the overall Index, despite a drop in score, with a stronger performance in the smart growth sub-index and environmental sustainability pillar than in components measuring inclusiveness. A relatively strong education and training system (10th) has provided the basis for a business sector that is aggressive in adopting digital technologies for productivity enhancements (ranked 9th for the digital agenda). These attributes have resulted in a relatively innovative business culture (10th in the innovative Europe pillar), with high R&D spending at 2.25% of GDP in 2012, and a strong marketing culture that helps new ideas get picked up by the market. To corroborate its business culture, France could benefit from reducing the procedures for starting a business (17th) and addressing the high level of taxation that reduces the incentive to invest (24th). Furthermore, France ranks only 14th in the inclusive growth sub-index, pulled down particularly by inefficiencies in the labour market (26th) and low labour participation overall, with high youth unemployment (16th) and particularly low labour force participation by women (27th). Compared with other European economies, France also offers fewer opportunities to improve one's economic status independent of one's socio-economic background.

Ireland overtakes Estonia, moving into 11th place overall, and registers improvements in creating a more entrepreneurial environment and providing better education (3rd). The traditionally good-quality and well-performing educational system has created a dynamic and skilful labour force, including scientists and engineers who are instrumental in boosting the country's technological capacity. Moreover, the dense network of national universities has also managed to build a scientific base scoring high at the European level (8th), and pro-business policies have helped to create a highly entrepreneurial culture (4th). Access to financial resources has improved slightly (from 27th to 21st following the severe financial crisis of 2008). Corporate efforts to embrace innovation more decisively will need to be recognized as the way out of the crisis, and higher investments to improve the innovation capacity (11th) and raise the number of trained staff (10th) will be necessary. The data also points to a rebound in the country's capacity to create an inclusive and cohesive society (up four places to 11th). Although Ireland can count on fairly flexible labour markets (5th), several factors have caused a severe deterioration in this area: the high and persistent levels of unemployment, especially in

particular segments of the population including youth (26% in 2013); and the low participation of women in the labour market (22nd), coupled with the inability of both governments and individuals to provide comprehensive safety nets because of their high levels of debt.

Estonia ranks 12th in the overall Index, declining one place since the 2012 assessment and effectively swapping places with Ireland. Estonia's greatest strength is in the country's digital agenda (8th), driven by strong ICT laws (2nd) as well as a strong government strategy and strong company use of ICT. However, more efforts are needed to improve the country's internet bandwidth, ranking a surprisingly low 26th, and to foster internet usage (currently at 80% of the population). Its environment is supportive of enterprises overall, with the country ranking 3rd in Europe on the entrepreneurship sub-pillar. In the past two years, access to finance has become easier (10th), but further efforts need to be made. The same holds true for building a more competitive environment, which could help leverage the digital agenda to a greater extent. By the same token, its strong digital agenda has not yet translated into an equally strong performance as an innovative business culture (ranked 13th in the innovative Europe pillar), where the country is being negatively impacted by a shortage of researchers, low registration of patents and industrial designs, and little collaboration between universities and the private sector in research. This is also reflected in the education and training pillar, where the country does relatively well in educating its citizens, but could make progress by upgrading training schemes. Estonia further improved in the labour market and employment pillar, moving up six places to 2nd. The country's high labour market efficiency (2nd), driven by a strong alignment of pay and productivity (1st) and flexible hiring and firing practices (2nd), has translated into high labour participation, with a notable exception of young people, whose unemployment rate-similar to other European countries—is drastically high at 20%. On the other hand, Estonia still needs to undertake more efforts towards building an inclusive society, where it ranks at a low 17th, and in promoting greener growth, where it performs well below neighbouring Latvia, as evidenced by its very high CO2 emissions (28th), limited ratification of environmental treaties and high dependence on nonrenewable resources (18th).

Following a series of important reforms that have set the Spanish financial situation on more solid footing than two years ago, **Spain** improves two places and ranks 13th. In past years, the country undertook important reforms in the banking system and consolidated public spending which, coupled with potential measures announced by the ECB, have restored higher levels of confidence in the markets. However, affordable credit continues to be scarce (24th) and affects the overall entrepreneurial environment, which hinders the capacity of new ideas to flourish and be translated into new products and services. At present, Spain is searching for new engines of growth and employment, and seeks to diversify its economy away from past overexposure to the construction sector. In this process, both the government and the business community will need to enhance and materialize the potential for innovation by recognizing the strategic importance of making sustained investments in knowledge generation, such as R&D (16th) or ICT (14th), and improving the guality of the educational system (16th). The latter is now evidenced by the PISA results, and needs to be enhanced by the right set of skills to support more technological and non-technological innovation. In terms of fostering an inclusive society (25th), the effects of the financial and economic crisis continue to be evident. While labour market reform has helped increase the flexibility in the labour market (19th), the current economic context has not yet allowed the country to showcase its full potential. Opportunities to engage large segments of the population, and notably youth (28th), continue to be limited. As a result, income disparities, as measured by the Gini coefficient, are one of the highest within the EU (27th).

Malta improves by four places to 14th in this edition. It performs well in terms of the inclusive measures, led by one of the lowest youth unemployment rates in Europe (5th), relatively low income inequality (9th) and widespread access to healthcare (7th). Compared to Cyprus, Malta has a sounder digital agenda (13th), with excellent government prioritization of ICT (1st) and sizeable access to basic online services (6th). The enterprise environment ranks 13th, with mixed results between comparatively high availability of finance (4th) and a somewhat competitive environment (9th), but low cluster development (16th) and the second-tolast entrepreneurial economy in Europe (27th). Indeed, it takes close to 40 days to start a business, and education and training could be better harnessed for the country's competitiveness, especially by increasing the availability of research and training (19th). Finally, the low score obtained in the environmental sustainability pillar represents the main limiting factors of Malta's performance, owing especially to little commitment to international environmental treaties (28th) and concerns about the quality of the natural environment (26th).

Despite the impressive wide range of reforms that it has recently adopted and that have allowed the country to exit the financial bailout programme of the past years, **Portugal** drops one place to 15th (albeit with a very stable profile). In terms of supporting smart growth, the country has adopted important regulatory reforms that allow new businesses to open in less than three days, the fastest opening period in the EU. Improving the innovation capacity (12th) through continued and more efficient investments by both the public and private sectors will be crucial to supporting the economic transformation of a larger share of the Portuguese
economy and direct it towards more knowledgeintensive, higher-productivity activities. To support this process, improving the quality of an educational system (16th) that otherwise counts on relatively important enrolment rates in both secondary (6th) and tertiary (15th) education will be critical. In addition, progressive improvement in overall economic conditions, coupled with positive effects of the recent labour market reforms that have substantially increased the flexibility (20th) of a dual market function, are likely to open new opportunities for higher labour market participation, most notably among the younger segments of the population (24th). Employment opportunities for youth have been significantly reduced during the economic downturn, and have affected the levels of internal cohesion (26th). As the adopted reforms are progressively implemented and the macroeconomic conditions continue to ease, an improvement in the country's performance is expected in the future, even if it is no time to be complacent.

Slovenia shows a strong 16th ranking overall in the Index, or 2nd (after Estonia) among countries that joined the EU in 2004. Slovenia's educational system turns out large numbers of graduates with fairly good skills and knowledge, and the country has a stronger capacity for innovation than most countries from the region because of high R&D expenditures, its many available scientists and engineers, and numerous patent applications. Coupled with the absence of administrative barriers to setting up new businesses that facilitate entrepreneurial activity, these factors ensure solid progress towards building a knowledge-based economy. The country has also managed to distribute its prosperity in an inclusive manner; it boasts the lowest income inequality in the EU, and manages its natural environment in a sustainable manner (7th). Yet, the considerable downturn that Slovenia experienced in 2009 also points to areas for improvement to make economic performance more sustainable. The availability of finance for business ventures remains constrained (27th); foreign direct investment (FDI) is held back by rules and regulations (28th); and competition suffers from the domestic market's small size, which gives rise to dominance in the market by a few firms (21st). Last but not least, Slovenia's labour markets are considered rigid and inefficient (27th) compared to the EU's, and may endanger social inclusion in the future. These concerns are equally highlighted by the country's drop of three places in the overall index since 2012.

Moving up three positions, **Lithuania** takes 17th place in the 2014 edition, overtaking the Czech Republic and Latvia. The improvement mirrors progress across all three areas of smart, inclusive and sustainable growth. The enterprise environment has improved significantly, and some of the barriers to entrepreneurship were removed. It is easier for businesses to access finance, and the administrative burden has been reduced. The cornerstones of the country's productivity are its efficient labour market (11th), high levels of environmental sustainability (10th) and the progressive digital agenda (15th), with widespread use of ICTs (12th) and solid results in education and training (16th) reflecting, in particular, the country's high enrolment levels in tertiary institutions (5th). However, Lithuania's good labour market outcomes do not fully translate into high levels of social inclusion, with a high level of income inequality (20th) and a low, albeit improving overall rank on social inclusion (20th). Improving educational quality (20th on PISA) would help the country move towards a knowledge-based economy and, at the same time, increase social inclusion.

The Czech Republic is ranked 18th overall, down four places since the 2010 assessment. The drop reflects a decline in two areas related to the enterprise environment: competition and entrepreneurship. The country is characterized by a rather inclusive economy, led by low income inequality as measured by the Gini coefficient (3rd) and an efficient labour market with a healthy relationship between pay and productivity (4th). In terms of smart growth, the Czech Republic ranks 18th; its enterprise environment attains a performance similar to the European average, with relevant strengths in local competition (7th) and openness to foreign investment (13th). However, government regulations are somewhat burdensome (22nd), and the time and procedures required to start new businesses are still relatively long. Finally, the lack of innovation is one of the Czech Republic's main weaknesses, as it trails the EU average, especially in terms of patent applications and the availability of the latest technologies (20th). The deterioration of the country's assessment in education and training over the past four years could undermine efforts to strengthen innovation capacity if it remains unaddressed. The other main area for improvement is environmental sustainability, where it ranks 22nd due to high dependence on non-renewable energy sources, high levels of CO2 emissions per energy use (21st) and a relatively low commitment to international environmental treaties (27th).

Latvia retains its 19th position and places behind the Czech Republic and ahead of Cyprus. While the country outperforms most EU28 economies on the sustainable growth sub-index (3rd), it is not sufficiently geared towards a knowledge-based economy (21st). And despite efficient labour markets (10th), considerable segments of Latvian society do not benefit from rising prosperity (22nd on social inclusion). Putting growth on a more stable footing will require reforms and investments in a number of areas. In particular, Latvia's low innovative capacity (24th) does not bode well for the future. It is constrained by a lack of scientists and engineers (28th), and inefficiencies related to scientific output, which is not recognized internationally. At the same time, competitiveness would benefit from more sophisticated businesses practices such as marketing

(22nd), which would enable the local business sector to move up on the value chain (23rd). Over the longer term, moving towards a knowledge-based economy will require considerable efforts in education to increase participation, in particular at the tertiary level, as well as quality.

Following its economic woes, Cyprus falls three places to rank 20th in this edition, driven by a strong deterioration of its performance in the inclusive growth sub-index (down five places to 16th). While Cyprus has a relatively efficient labour market (8th), its economic woes have led to a drastic fall in labour participation, most notably for youth (whose unemployment rate stands at 39%, ranking 25th), and a low participation of women in the labour force (18th). Furthermore, social cohesion remains low compared with other EU Member States, characterized by relatively high inequality (18th), a limited social safety net (17th) and low social mobility (19th). Another point of concern is the country's deterioration along the smart growth dimension. While the entrepreneurship capacity (7th) and a low burden of government regulation (5th) are conducive to an entrepreneurial environment, a drastic fall in access to finance through loans (from 6th to 16th) and equity markets (from 9th to 23rd) has produced a critical bottleneck to more entrepreneurial activity. The smart growth sub-index performance (19th) is further undermined by unsatisfactory results in the digital agenda pillar (24th), as ICT is not fully used by businesses (24th) and individuals (24th), with only twothirds of the population using the internet. The impact of ICT is therefore limited (23rd), and needs to be further developed. Environmental sustainability does not seem to be a priority (24th), especially because of low renewable energy production and excessive CO2 emissions (both 27th). On the upside, education and training has improved (up six places to 14th) on the back of perceived improvements in training (15th).

Italy remains ranked 21st in this edition, despite a drop in the overall score by 0.25 points. Notwithstanding its low overall performance, Italy still has some strengths in its enterprise environment, in particular its well-developed clusters (1st), and corporate activity spread among many firms (7th), ensuring competition. Also, the country is characterized by good innovation potential, ranked 6th for both the number of industrial designs produced and its ability to compete, based on its unique products and processes rather than on low costs or natural resources. Additionally, Italy ranks 14th for its capacity for innovation and number of citations in scientific articles. However, overall Italy's business environment deteriorated by four places to 18th: its potential is not fully leveraged because of lack of competition (21st), and burdensome government regulation and red tape (28th) representing important obstacles to competitiveness. Further, the country's innovation capacity is not fully exploited, as R&D

expenditure (1.2% of GDP) and the absorption of technology at the firm level (26th) are not in line with the country's advanced stage of development. Moreover, Italy's competitiveness is hindered by an inefficient labour market (28th), with a misalignment of the cost of labour and its productivity, low labour participation rates and high youth unemployment.

Poland moves up one place to rank 22nd overall in the Index, with a fairly even performance across the three sub-indexes. Competitiveness is supported by the country's relatively good educational outcomes (18th). These are reflected in rather high tertiary enrolment rates and high and improving quality of education, as assessed by the PISA study and a training system that benefits from numerous training institutions and enterprises providing on-the-job training to their employees. Compared with other EU Members, Poland also performs fairly well in terms of labour market indicators, which mainly stems from a close link between pay and productivity. Poland will need to further intensify efforts in a number of areas to make progress towards the Europe 2020 agenda, in particular by catching up with the EU in terms of social inclusion. Polish citizens have more difficulty than their peers from other countries to access quality healthcare (28th), and social safety net protection is the weakest in the entire EU. Addressing social inclusion should go hand in hand with measures aimed at improving the smart dimension (22nd), to ensure stable growth performance in the future based on knowledge-intensive sectors. In this respect, despite its solid results on education, Poland has not yet managed to develop a strong innovative capacity (21st). Patent applications are few, firms are less able to adopt new technology within their operations, and the latest technologies are more difficult to access in Poland than in other EU countries. In addition to building a more robust innovative capacity, Poland should continue improvements in the business environment (19th), for example by making it easier and less expensive to start businesses, as well as fostering the use of digital technologies (23rd).

The Slovak Republic ranks 23rd among the 28 EU countries, performing somewhat better in the sustainable and inclusive growth sub-indexes (20th and 21st, respectively) than in smart growth (26th). The country's enterprise environment (22nd) benefits from better functioning clusters (18th) and a better availability of finance (15th) compared to many other European economies, but lacks competition (23rd). Putting the Slovak Republic on a higher and more stable growth path will require more support for innovative activity (25th) and measures to more fully implement the digital agenda (27th). The capacity for innovation is among the lowest in the EU, and enterprises tend to produce on the lower end of the value chain (28th). ICT usage could be improved (20th) by enhancing the supporting environment for ICT, which is the least conducive in the

EU (28th), so that ICT use achieves a higher impact on the overall economy (25th). Education (26th) is a third area that needs to be addressed to move the country towards a knowledge-based economy over the longer term. Educational outcomes for the Slovak Republic trail most EU countries in terms of quantity and quality, and vocational training is well below EU standards.

Croatia became the 28th EU Member State on 1 July 2013 after six years of negotiations, and occupies the 24th, overall position in the current Index. While the country's performance is close to the EU average in terms of environmental sustainability, it faces many challenges to strengthen its competitive environment and to more strongly converge towards the EU along all other pillars. With respect to the smart growth subindex (24th), Croatia has a long way to go towards becoming a more knowledge-based economy. Increased competitiveness is particularly hampered by a weak enterprise environment (27th) that is characterized by difficulties in obtaining finance, and weak competition in the local market (28th). The private sector considers cumbersome government regulation and an inefficient tax system and labour market as among the many impediments, indicative of the myriad reform efforts that will be needed to increase Croatia's competitiveness. The education and training system (25th) will also require reforms to develop the country's human resources base to lay the groundwork for an innovative economy that would allow both the public and private sectors to engage in innovation-oriented investments. Besides addressing labour market inefficiencies, as evidenced by the high level of youth unemployment and low overall participation rate, Croatia must work towards improving the overall accessibility of healthcare services and ramp up its social safety net to achieve not only smart, but also inclusive growth.

Hungary ranks 25th, right after Croatia, in terms of progress towards Europe 2020 goals. Hungary's traditional strengths in innovation and ICTs are mirrored by good results in these two pillars (innovative Europe and digital agenda). The country benefits from good availability of scientists and engineers (17th), some collaboration between universities and industry (16th) and a patenting rate that is higher than in most economies of Eastern Europe (16th). The country's relatively strong innovative and technological capacity is complemented by a rather favourable environment for entrepreneurship (15th) and relatively efficient labour markets (18th), providing a base for the creation and growth of high-value-added enterprises. Moving towards the Europe 2020 goals will require Hungary to address a number of important challenges currently constraining productivity. Notable gaps in the country's education and training systems (24th) should be addressed, as they may undermine its innovative and technological capacity in the future. Fostering on-the-job training (23rd) and supporting the growth and creation of training services

(25th) are important to success in this respect. Moreover, access to finance—ranked a low 25th—remains an important obstacle to enterprise growth. Measures to foster economic growth need to be complemented by more and better protection of the environment, a dimension on which Hungary ranks 28th, the poorest performance among EU Member States.

Greece ranks 26th in its progress towards the Europe 2020 agenda, the lowest ranking of the EU15 countries. Although Greece demonstrates some good performances on individual indicators (ranking 2nd on availability of scientists and engineers, 2nd for the tertiary enrolment rate and 11th on environmental protection efforts), it decidedly struggles in achieving both smart (25th) and inclusive growth (27th). The Greek business environment is weak on all four dimensions of the enterprise environment pillar, lacking competition (27th) and entrepreneurship (21st), with poor cluster development (27th) and a lack of availability of finance (28th), the latter of which certainly deteriorated in the wake of the recent financial crisis. In addition, Greece's digital agenda, which could help address some of the traditional inefficiencies, trails behind most European economies (26th) with one of the lowest scores for ICT usage (26th), both in individual and business terms. Inclusive growth is limited by labour market inefficiencies (22nd), and by particular difficulties for women (26th) and youth (27th) to participate in the labour market.

Bulgaria ranks 27th overall; results confirm that it is still in the process of reinforcing its institutions. The labour market and employment area (16th) represents Bulgaria's main strength. Flexibility in hiring and firing practices (8th) and a healthy relationship between pay and productivity (12th) make the labour market relatively efficient (14th), while the relatively high participation of women in the labour force (9th) is a competitive strength. Bulgaria also can count on a relatively sound environment for entrepreneurship (16th), characterized by a somewhat accepting attitude towards entrepreneurial failure (15th) and non-distortive taxation (13th). However, Bulgaria trails other EU countries in terms of competition policy (ranking 26th), as well as in the use and impact of ICT, which reflect low performance on the digital agenda pillar (25th). Education and training are other relevant areas for improvement, ranked 27th and 28th on the two sub-pillars, respectively, indicating the necessity to work on both the access to education and the quality of the system. Bulgaria's environmental performance is also among the lowest in the EU, with a particularly low assessment of the capacity to enforce environmental regulations (27th) and concerns about the guality of the natural environment (28th).

**Romania** is 28th overall, the lowest position in the Europe 2020 Competitiveness Index ranking. The performance is relatively better in the area of sustainable growth because of a comparatively acceptable level of renewable energy production (11th) and CO2 intensity

#### Figure 8: Competitiveness Performance of Central and Eastern Europe and Candidate Countries by Pillar



Source: World Economic Forum, 2014.

Notes: Central and Eastern Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia; EU candidate countries (excluding lceland): Macedonia FYR, Montenegro, Serbia, Turkey

(14th). At the same time, the country attains the lowest performance in the EU in the smart category (28th). Romania trails almost all EU economies in most of the pillars, with only a few relatively better results in the labour market and employment pillar, where it ranks 22nd. The country's labour market is flexible (ranking 10th in terms of hiring and firing practices), with a relatively better participation of women in the private sector (19th). In terms of smart growth, Romania's performance shows that the country still needs to concentrate on developing sound institutions and market structures before it will become as competitive as the most advanced economies. Romania ranks only 23rd in the enterprise environment pillar. Despite a positive entrepreneurial attitude (3rd), improvements need to be made in the competition component (25th) and towards stronger development of clusters (24th). At the same time, the availability of finance is better than in other countries (i.e. 15th on access to loans). Also, performance on the digital agenda and the innovative Europe pillars needs to be reinforced; Romania's ranking is 28th on both, pointing to the country's very low capacity for innovation. Taking a holistic approach to building up different areas of development is necessary to enable Romania to close the gap between its competitiveness and European targets.

## Are candidate countries getting ready to join the EU in terms of competitiveness?

In general, EU candidate countries, with the exception of Iceland, depict a competitiveness profile similar to those of Central and Eastern Europe. This pattern is present across all seven dimensions analysed (Figure 8). Preparing the countries for accession will require addressing their specific competitiveness weaknesses. The competitiveness profile of each of these countries is described in the following section.

An official candidate country since 2010, Iceland's application is currently suspended following domestic political disagreement on whether or not to hold a referendum on the continuation of EU accession negotiations. Iceland distinguishes itself from the other candidate countries through its membership in the European Economic Area, through which the country has been participating in the European single market since 1994. The economic crisis appears to have hit the country hard, as reflected by falling scores in the innovative Europe and education and training pillars where it has traditionally performed well. It remains, however, among the EU's top 10 economies in these pillars. Iceland's great strength is in the Index's environmental sustainability and labour market and employment components, which are characterized by a highly efficient labour market and very strong labour participation in particular. Regarding areas for improvement, Iceland performs below the EU28 average in enterprise environment, driven by limited access

to finance and poor performance in the competition sub-pillar. The country also needs to scale up efforts to improve its digital agenda, where its score is being particularly dragged down by low e-participation.

In a customs union with the EU since 1995, Turkey holds strong trade ties with the EU, with which it conducts half of its trade. Some alignment with EU policies already exists, such as on competition and intellectual property law. Since the start of accession negotiations in October 2005, 22 chapters have been opened, including those on company law, enterprise and industry, and one-science and research-has been closed. Regarding the Europe 2020 strategy, Turkey performs slightly above the EU average in enterprise environment, driven by intense local competition and low barriers to the creation of new businesses, as evidenced by a low number of procedures and limited amount of time it takes to start a business. However, important steps remain to be taken to catch up to the EU average. Turkey needs to build its human resource base by advancing its education and training system, as well as improving its labour market efficiency and raising opportunities for its citizens to participate in the labour market, particularly for women and youth. In parallel, investing in innovation-led growth is critical. While Turkish companies do well in absorbing the latest technology, a stronger focus on innovation-led investments and innovative products would provide important impetus towards improving long-term productivity, and could be leveraged by Turkey's solid enterprise environment. The country faces the challenge of embarking on significant efforts in environmental sustainability, particularly the ratification of environmental treaties, as well as lowering its CO2 emissions and improving its air guality to converge with the EU average.

In Montenegro, a candidate country since 2010, accession negotiations opened on 29 June 2012. In terms of its performance along the Europe 2020 Competitiveness Index, Montenegro performs on a par with Cyprus and outperforms most of the countries of Central and Eastern Europe. Its economy is characterized by a supportive environment for entrepreneurship, above the EU average and well ahead of other candidate countries, and is fostered by few administrative procedures and short time required to start a business. The country needs to address challenges related to its digital agenda and labour market to bring down youth unemployment, which has risen dramatically to 41% in 2012. In the future, further steps would be needed to build its knowledge-based economy, including improvements captured by the innovative Europe as well as the education and training pillars. EU financial assistance has so far focused on building institutional capacity (accounting for almost 90% of financial aid), but as of 2013 the allocation of funds is covering additional areas, with the EU providing assistance of about € 15 million or over 40% of financial aid to support regional development.

Serbia is the most recent candidate country (as of March 2012). To increase its competitiveness, significant efforts along all pillars of the Index will be needed. Serbia scores lower than its neighbours, including the Member States of Bulgaria and Romania, in all areas captured by the index. Comprehensive reform efforts are required to improve the enterprise environment, digital agenda and education and training as a basis for smarter growth. Nonetheless, a first priority will be to build the institutional capacity in the country. Considerable room for improvement also remains along the inclusive growth sub-index, in view of severe rigidities in the labour market (characterized by a mismatch between productivity and pay, weak labour-employer relations and a high youth unemployment rate of over 50% in 2012) as well as in the environmental sustainability pillar.

For Macedonia FYR, a candidate country since 2005, accession negotiations have yet to be opened. As with its neighbouring peers, the country's most imminent challenge will be to advance its institutional capacity as a basis for a knowledge-based economy. In this regard, the country has seen improvements in the smart growth sub-index since 2010, characterized by, at the basis, more competition, fewer administrative burdens to open a business and a slight but continuous improvement in access to finance. Improvements in ICT infrastructure, such as mobile phones and internet bandwidth and use, have helped the country advance its digital agenda. However, Macedonia FYR faces multiple challenges in the areas of education and training, innovation and environmental sustainability. It is also notable that the country registered deterioration in its labour market efficiency and participation, driven by a dramatic rise in youth unemployment to over 50% and low overall participation in the labour market.

#### CONCLUSIONS

This Report has benchmarked the EU's progressboth as a whole as well as for its 28 individual Member States-to become a smart, inclusive and sustainable economy according to the seven dimensions of the Europe 2020 strategy. Overall, the EU trails other advanced countries in building a knowledge-intensive economy characterized by an enabling environment for business activities and an innovative framework that facilitates the translation of fundamental research into marketable, high-value added products. The gap to other advanced economies is particularly evident in implementing Europe's digital agenda, in which other countries are rapidly pressing ahead. This raises concerns about Europe's overall ability to boost competitiveness and its potential to continue providing high and rising living standards. Indeed, the legacy of the crisis-high and persistent levels of unemployment, particularly for its youth, coupled with comparatively

stronger rigidities in labour markets of several European countries—is reflected in the performance in inclusive growth. In this regard, emphasizing efforts to educate and train Europe's youth will be the critical lever both for a more inclusive European economy—by providing youth with the skills and training for gainful employment in an increasingly knowledge-driven global economy—and for a smart Europe.

This Report further shows that similar disparities prevail at a regional level. While EU Member States in northern and north-western European are often at the world's forefront in building a knowledge-driven economy, Europe's southern and south-eastern economies are critically and increasingly falling behind. Closing the European knowledge divide will be an important driver of sustainable growth within the continent, particularly for the most hard-hit economies currently undergoing internal adjustments. It will also alleviate social discord that has been straining social cohesion in Europe's difficult post-crisis environment. For European countries that are faring relatively well, this is also not a time to be complacent as, globally, other economies are rapidly raising the bar. This highlights the need to revitalize Europe's competitiveness agenda-that is, putting in place the right set of institutions, policies and factors that will drive Europe's productivity to ensure sustained prosperity and productive jobs on the continent, today and in the future.

Addressing this competitiveness divide will require differentiated strategies, taking into account the comparative and competitive advantages of regions and EU Member States. Overall, addressing investment gaps in important intangible assets, such as ICTs, public- and private-sector R&D and skills development schemes that cater to a knowledge-driven economy, will be important to achieve a more competitive Europe. These investments will need to go hand in hand with policies that create favourable business conditions for innovation and entrepreneurship. Shortterm pains from economic structural change initiated by these policies and investments would need to be mitigated by accompanying measures to facilitate and speed up the transformation processes. In the long run, investments and policies for smart growth will create the opportunities for gainful employment and cater to a socially inclusive Europe. Against this backdrop, institutional capacity and effective governance mechanisms to monitor and implement change are key success factors, as is the need to build shared commitments from all stakeholders of the economy.

#### NOTES

- 1. International Monetary Fund (IMF), 2014.
- 2. Ibid.
- 3. European Commission (EC), 2014a.

- Indeed, the current investment-to-gross domestic product (GDP) ratio in the EU of 18.9% in the third quarter of 2013 remains far below its share of about 21% in the early 2000s (EC, 2014a).
- 5. These are (1) employment levels of 75% of the 20-64-year-olds to be employed, (2) 3% of the EU's GDP to be invested in research and development (R&D), (3) greenhouse gas emissions 20% lower than in 1990, 20% of energy from renewables and a 20% increase in energy efficiency, (4) reducing the rates of early school leaving to below 10%, (5) at least 40% of 30-34-year-olds completing third-level education, and (6) at least 20 million fewer people in or at risk of poverty and social exclusion.
- Such as the unprecedented success of the Alternative für Deutschland (AfD) party in the elections to the German Bundestag in 2013, and the recent landslide success of the UK Independence Party (UKIP) in the country's local elections, to name a few.
- The 2014 European Parliament election results, for instance, mark landslide successes for the Front National (FN) in France and the UK Independence Party (UKIP) in the UK, topping the vote in their respective countries. See: http://www.euronews.com/2014/05/23/ european-elections-2014-live-coverage-results-and-reactions-/ and http://www.economist.com/blogs/charlemagne/2014/05/ european-elections-0.
- 8. EC, 2013a.
- 9. See: http://europa.eu/rapid/press-release\_MEMO-13-837\_en.htm.
- 10. Use of renewable energy and the reduction in greenhouse gas emissions are the exceptions.
- 11. EC, 2010a.
- 12. EC, 2014b.
- 13. These are (1) creating a new and stable broadband regulatory environment, (2) new public digital service infrastructure, (3) launching Grand Coalition on Digital Skills and Jobs, (4) proposing an EU cyber-security strategy, (5) updating the EU's copyright framework, (6) accelerating cloud computing through public-sector buying power, and (7) launching a new electronics industrial strategy. See: http://ec.europa.eu/digital-agenda/en/digital-agenda-europe.
- 14. See: http://europa.eu/rapid/press-release\_IP-12-1389\_en.htm.
- 15. More information on the coverage and characteristics of the EOS can be found in chapter 1.3 of *The Global Competitiveness Report 2011-2012*. Available at: www.weforum.org/gcr.
- 16. A general purpose technology (GPT), according to Trajtenberg and Rosenberg (2004), is one which, in any given period, makes a particular contribution to the overall economy's growth thanks to its ability to transform the methods of production in a wide array of industries. Examples of GPTs are the invention of the steam engine and the electric dynamo.
- 17. EC, 2014b.
- 18. EC, 2013b.
- 19. Ibid.
- 20. Alder, S., 2010.
- 21. Wilkinson, R.; Pickett, K., 2009; EC, 2010b.
- 22. Measuring environmental sustainability is a current work in progress within the World Economic Forum's Sustainability-adjusted Global Competitiveness Index. This index uses the most renowned and reliable indicators (e.g. World Bank data, and data used in the Environmental Performance Index, the latter created as a joint project between the Yale Center for Environmental Law & Policy and the Center for International Earth Science Information Network at Columbia University). Yet, measuring environmental sustainability is still in its infancy, and improvements in quality, reliability and coverage are needed.
- 23. A moving average of survey data was collected over the two years. For more information on the EOS survey procedure and the calculation of country-level values, see chapter 1.3 of *The Global Competitiveness Report 2013-2014*.
- 24. Iceland is officially a candidate country, but negotiations were put on hold by the Icelandic Government in May 2013.

- These 13 countries are: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic and Slovenia.
- 26. EC, 2013c.

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Overall, progress along these initiatives and towards the Europe 2020 targets is monitored as part of the European Semester in the EC's annual cycle to align fiscal, economic and structural policy coordination. Within the framework of the European Semester that was launched in the aftermath of the financial crisis, the Commission monitors developments along the dimensions of macroeconomic factors, public finances and growth-enhancing reforms, with the Europe 2020 strategy belonging to the latter. Each year, the European Semester is initiated by the publication of the EC's Annual Growth Survey, which highlights the EU's priorities for the coming 12 months and serves as a basis for discussion on the Europe 2020 strategy at the European Council's spring meeting and the Member States' national reform programmes in April. Members set their own targets, and detailed actions to achieve

these, as part of the national reform programmes, which the Commission reviews on an annual basis.

Launched for the first time in 2011, the *Annual Growth Survey* marks the beginning of the European Semester by setting out the broad EU policy priorities for the year ahead, with the aim of coordinating economic policies across the EU. At the time of this Report's 2012 edition, the Commission had published its first preliminary assessment of progress towards the Europe 2020 agenda. Two years later, time-series data allows for better insight into progress made by the EU28 towards reaching its Europe 2020 targets.

Overall, progress has been rather mixed (Table A1). Extrapolating from current trends, the EU seems to be on track to achieve its educational, climate and energy targets. Concerning the latter, however, the current trend may be misleading, as reduced economic

Europe 2020 Indicator	2009	2010	2011	2012	2013	EU headline target	Estimated EU achievements based on current national commitments	Range of national targets	Estimated EU achievements for 2020 based on current developments
Employment rate, percent	68.9	68.5	68.5	68.4	68.3	75% of the population aged 20-64 should be employed	73.7-74	59% and 62.9% in Croatia and Malta, respectively, to 80% in Denmark, the Netherlands and Sweden	Target would not be met. Estimated to reach 71.8%, or 16 million additional people in employment needed. Performance gap within Member States is widening.
R&D, percent of GDP	2.01(e)	2.00(e)	2.04	2.07	n/a	3% of the EU's GDP should be invested in R&D	2.65-2.72	0.50% and 0.67% in Cyprus and Greece, respectively, to 4% in Finland and Sweden	Target would not be met. Average annual growth rate of R&D expenditure would need to double compared to the 2007-2012 period.
Greenhouse gas emissions (Index 1990 = 100)	83.78	85.74	83.07	n/a	n/a	Greenhouse gas emissions should be reduced by 20% compared to 1990	minus 20% (compared to 1990 levels)	20% reduction in emissions to a 20% increase	Target seems within reach, and could exceed target to reach 24% in 2020. However, large discrepancies exist: in 13 Member States, existing policies would not be sufficient to meet national targets by 2020.

#### Table A1: Europe 2020 Progress

(Cont'd.)

#### Table A1: Europe 2020 Progress (cont'd.)

Europe 2020 Indicator	2009	2010	2011	2012	2013	EU headline target	Estimated EU achievements based on current national commitments	Range of national targets	Estimated EU achievements for 2020 based on current developments
Share of renewables in gross final energy consumption, percent	11.9	12.5	12.9	14.1	n/a	Share of renewable energy sources in final energy consumption should be increased to 20%	20	10% in Malta to 49% in Sweden	Target seems within reach. Share might approach 21% in 2020 if effort of recent years is maintained. All Member States have increased use of renewable sources, and Sweden, Estonia and Bulgaria have already reached their national targets.
Primary energy consumption, million tonnes of oil equivalent (Mtoe)	1,594.7	1,653.6	1,596.4	1,583.5	n/a	Energy efficiency should improve by 20%, corresponding to a level of 1,483 Mtoe of primary energy consumption <sup>1</sup> or a reduction equalling 368 Mtoe	EU primary energy consumption could reach 1,542 Mtoe by 2020 or a reduction equalling 206.9 Mtoe	Some countries expressed targets in primary energy, others in final energy consumption <sup>3</sup>	Further efforts needed to meet target.
Early school leaving, percent	14.2	13.9	13.4	12.7	11.9	The share of early school leavers should be under 10%	10.3-10.5	4% in Croatia to 16% in Italy	Target achievable until 2020, but sustained effort needed. Most Member States are likely to meet their targets, with Spain, Portugal and Romania the exceptions. Fewer divides in Europe: the gap between highest and lowest rate has declined by more than half between 2000 and 2012.
Tertiary education, percent <sup>2</sup>	32.1	33.4	34.5	35.7	36.8	At least 40% of 30-34-year-olds should have completed a tertiary or equivalent education	37.5-38.0	26-27% in Italy to 60% in Ireland	Target within reach. Nine Member States have reached their targets.
Reduction of population at risk of poverty or social exclusion ('000 persons)	n/a	118,085	121,543	124,232(e)	n/a	Poverty should be reduced by lifting at least 20 million people out of the risk of poverty or social exclusion, corresponding to a reduction to 96.4 million by 2020 <sup>4</sup>	12 million	See targets per percentage of population <sup>5</sup>	Target seems out of reach. While Poland is very close to reaching its target, only Germany and Latvia met their targets in 2012. Large discrepancies exist within the EU, ranging from 14.9% of population at risk of poverty or social exclusion in the Netherlands to 44.8% in Bulgaria.

Source: Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/europe\_2020\_indicators/headline\_indicators; EC, 2014b

Note: (e) = estimated; (f) = forecast; (p) = provisional; n/a = not available.

<sup>1</sup> As opposed to final energy consumption, primary energy consumption refers to energy that has not been subject to any conversion or transformation process.

<sup>2</sup> Calculation does not include International Standard Classification of Education (ISCED) 4 (Germany, Austria), result with ISCED 4: 39.9-40.4%

<sup>3</sup> See: http://ec.europa.eu/energy/efficiency/eed/reporting\_en.htm.

<sup>4</sup> When referring to the number of people at risk of poverty or social exclusion, the indicator includes the number of people affected by at least one of the three types of poverty, namely income poverty (people at risk of poverty after social transfers), material poverty (severely materially deprived people) and people living in households with very low work intensity.

<sup>5</sup> See: EC, 2014b, p. 28.

activity has reduced emissions. Yet, it is likely to miss its employment, research and development, and povertyreduction targets. However, as further indicated in the table, Member State targets differ considerably, and the EC considers that some targets set by Member States are too low. This monitoring mechanism thus allows for a very high-level view of how Europe is doing in meeting its targets. As mentioned earlier, the EU can also draw on a number of scoreboards and more detailed analysis to follow progress in the seven flagship initiatives.

### Appendix B: Composition of the Europe 2020 Competitiveness Index

This appendix provides details about the construction of the Europe 2020 Competitiveness Index.

The Index is composed of seven pillars: enterprise environment, digital agenda, innovative Europe, education and training, labour market and employment, social inclusion, and environmental sustainability. Each pillar has the same weight (1/7) in the overall Index score.

The pillars are organized also across three sub-indexes:

- Smart growth: composed of the enterprise environment, digital agenda, innovative Europe, and education and training pillars
- Inclusive growth: composed of the labour market and employment, and social inclusion pillars
- Sustainable growth: composed solely of the environmental sustainability pillar

The calculation of scores for each of the three sub-indexes provides additional insight for the analysis. However, these scores are not directly used as components of the overall Index score, which is an aggregate of the pillar-level results.

The Europe 2020 Competitiveness Index is based on both survey and external quantitative data. The survey data are mainly derived from the responses to the World Economic Forum's Executive Opinion Survey, and range on a scale from 1 to 7. The external quantitative data are collected from various recognized sources, such as the World Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU) and the International Labour Organization (ILO). All datasets used are described in detail in this appendix, and technical notes and sources are in Appendix C. All of the data used in the calculation of the Europe 2020 Competitiveness Index can be found on the Report's website: www.weforum.org/Europe2020.

To aggregate survey data and other quantitative indicators, the latter are normalized to a 1-to-7 scale using a max-min methodology. Each of the pillars has been calculated as an unweighted average of the individual component variables. In the case of the enterprise environment, digital agenda, education and training, and labour market and employment pillars, the indicators are first aggregated in sub-pillars using simple averages, and in a second step, the sub-pillars are averaged to obtain the pillar scores.

The variables and the composition of pillars are shown in "The Europe 2020 Competitiveness Index" listing that follows. An asterisk (\*) identifies the indicators obtained from external sources.

#### THE EUROPE 2020 COMPETITIVENESS INDEX

#### Pillar 1: Enterprise environment ......14%

#### A.01.01 Competition......25%

- 1.01 Intensity of local competition
- 1.02 Effectiveness of antitrust policy
- 1.03 Extent of market dominance
- 1.04 Agricultural policy costs
- 1.05 Impacts of rules on FDI
- 1.06 Distortive effect on competition of taxes and subsidies
- 1.07 Burden of government regulation

#### 

- 1.08 State of cluster development
- 1.09 Value chain breadth

A.01.03 Entrepreneurship......25%

- 1.10 Number of procedures to start a business\*
- 1.11 Time required to start a business\*
- 1.12 Extent and effect of taxation on incentives to invest
- 1.13 Attitudes towards entrepreneurial failure

A.01.04 Availability of financing......25%

- 1.14 Ease of access to loans
- 1.15 Venture capital availability
- 1.16 Local equity market access

(Cont'd)

#### Appendix B

#### Pillar 2: Digital agenda ......14%

A.02.01	ICT readiness	%
2.01	Government strategy for ICT	

- 2.02 Mobile phone subscriptions\*
- 2.03 International internet bandwidth per internet user\*
- 2.04 Fixed broadband internet subscriptions\*
- 2.05 Mobile broadband subscriptions\*
- 2.06 Laws related to ICT

#### 

- 2.07 Government Online Service Index\*
- 2.08 Internet users\*
- 2.09 ICT use for business-to-business transactions
- 2.10 Internet use for business-to-consumer transactions

#### 

- 2.11 ICT and access to basic services
- 2.12 ICT and business model creations
- 2.13 E-participation index
- 2.14 Patent Cooperation Treaty (PCT) ICT patent applications\*

#### Pillar 3: Innovative Europe ......14%

- 3.01 R&D expenditure\*
- 3.02 Researchers in R&D\*
- 3.03 Availability of scientists and engineers
- 3.04 Highly cited scientific articles\*
- 3.05 PCT patent applications\*
- 3.06 Firm-level technology absorption
- 3.07 University-industry collaboration in R&D
- 3.08 Capacity for innovation
- 3.09 Government procurement of advanced technology products
- 3.10 Availability of latest technologies
- 3.11 Extent of marketing
- 3.12 Willingness to delegate authority
- 3.13 Industrial design counts in applications\*
- 3.14 Nature of competitive advantage

### Pillar 4: Education and training ......14% A.04.01 Education ...... 50%

- 4.01 Quality of the educational system
- 4.02 PISA scores on education quality\*
- 4.03 Tertiary education enrolment rate\*
- 4.04 Secondary education enrolment rate\*

#### A.04.02 Training ...... 50%

- 4.05 Availability of training services
- 4.06 Quality of management schools
- 4.07 Extent of staff training

#### Pillar 5: Labour market and employment......14%

#### B.05.01 Labour market......50%

- 5.01 Hiring and firing practices
- 5.02 Cooperation in labour-employer relations
- 5.03 Pay and productivity
- 5.04 Extent and effect of taxation on incentives to work

#### B.05.02 Labour participation ...... 50%

- 5.05 Labour participation activity rate\*
- 5.06 Female participation in labour force\*
- 5.07 Private-sector employment of women
- 5.08 Youth unemployment\*

#### Pillar 6: Social inclusion ......14%

- 6.01 Accessibility of healthcare services
- 6.02 Gini coefficient\*
- 6.03 Government effectiveness in reducing poverty and inequality
- 6.04 Social safety net protection
- 6.05 Social mobility

#### Pillar 7: Environmental sustainability ......14%

- 7.01 Share of renewable electricity production\*
- 7.02 Terrestrial biome protection\*
- 7.03 Environmental treaty ratification\*
- 7.04 Enforcement of environmental regulations
- 7.05 Quality of natural environment
- 7.06 CO2 intensity\*
- 7.07 Particulate matter (2.5) concentration\*

The composition of the three sub-indexes:

#### Smart growth

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ó
ó
ó

#### Inclusive growth

Labour market and employment	. 50%
Social inclusion	. 50%

#### Sustainable growth

Environmental sustainability ...... 100%

\* Indicators obtained from external sources Note: percentages denote rounded figures

### Appendix C: Technical Notes and Sources

The data in this Report represent the best-available estimates from various national authorities, international agencies and private sources at the time the Report was prepared. It is possible that some data will have been revised or updated by them after publication. The following notes provide sources for all the indicators listed in the Country Profiles. Throughout the Report, "n/a" denotes that the value is not available, or that the available data are unreasonably outdated or do not come from a reliable source. For each indicator, the title appears on the first line, preceded by its number to allow for quick reference. The numbering is the same as the one used in the Appendix B.

A description of each indicator follows, or, in the case of Executive Opinion Survey (EOS) data, the full question and associated answers. If necessary, additional information is provided underneath the respective description or question/associated answers.

#### Pillar 1: Enterprise environment

#### 1.01 Intensity of local competition

In your country, how intense is competition in the local markets? (1 = not intense at all; 7 = extremely intense) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

1.02 Effectiveness of antitrust policy

In your country, to what extent does anti-monopoly policy promote competition? (1 = does not promote competition; 7 = effectively promotes competition) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

1.03 Extent of market dominance

In your country, how would you characterize corporate activity? (1 = dominated by a few business groups; 7 = spread among many firms) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.04 Agricultural policy costs

In your country, how would you assess the agricultural policy? (1 = excessively burdensome for the economy; 7 = balances well the interests of taxpayers, consumers and producers) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.05 Impact of rules on FDI

In your country, to what extent do rules and regulations encourage or discourage foreign direct investment (FDI)? (1 = strongly discourage FDI; 7 = strongly encourage FDI) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.06 Distortive effect on competition of taxes and subsidies In your country, to what extent do government subsidies and/ or tax breaks distort competition? (1 = significantly distort competition; 7 = do not distort competition) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.07 Burden of government regulation

In your country, how burdensome is it for businesses to comply with governmental administrative requirements (e.g. permits, regulations, reporting)? (1 = extremely burdensome; 7 = not burdensome at all) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.08 State of cluster development

In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)? (1 = non-existent; 7 = widespread in many fields) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.09 Value chain breadth

In your country, do companies have a narrow or broad presence in the value chain? (1 = narrow, primarily involved in individual steps of the value chain [e.g. resource extraction or production]; 7 = broad, present across the entire value chain [e.g. production and marketing, distribution, design]) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.10 Number of procedures required to start a business Number of procedures required to start a business | 2013

A *procedure* is defined as any interaction of the company founders with external parties (e.g. government agencies, lawyers, auditors, notaries). For details about the methodology employed and the assumptions made to compute this indicator, visit: http:// www.doingbusiness.org/methodologysurveys/.

Source: World Bank; International Finance Corporation (IFC), 2013. *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises* 

#### 1.11 Time required to start a business

#### Number of days required to start a business | 2013

Time is recorded in calendar days. The measure captures the median duration that incorporation lawyers indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no extra payments. For more details about the methodology employed and the assumptions made to compute this indicator, visit: http://www.doingbusiness.org/methodologysurveys/.

Source: World Bank; IFC, 2013. *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises* 

#### 1.12 Extent and effect of taxation on incentives to invest

In your country, to what extent do taxes reduce the incentive to invest? (1 = significantly reduce the incentive to invest; 7 = do not reduce the incentive to invest at all) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.13 Attitudes towards entrepreneurial failure

In your country, how is a failed entrepreneurial project regarded? (1 = as an embarrassment; 7 = as a valuable learning experience) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.14 Ease of access to loans

In your country, how easy is it to obtain a bank loan with only a good business plan and no collateral? (1 = extremely difficult; 7 = extremely easy) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.15 Venture capital availability

In your country, how easy is it for entrepreneurs with innovative but risky projects to find venture capital? (1 = extremely difficult; 7 = extremely easy) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 1.16 Local equity market access

In your country, how easy is it for companies to raise money by issuing shares on the stock market? (1 = extremely difficult; 7 = extremely easy) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### Pillar 2: Digital agenda

#### 2.01 Government strategy for ICT

To what extent does the government have a clear implementation plan for utilizing ICTs to improve your country's overall competitiveness? (1 = no plan; 7 = clear plan) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.02 Mobile phone subscriptions

## Mobile telephone subscriptions (post-paid and pre-paid) per 100 population | 2012

A mobile telephone subscription refers to a subscription to a public mobile telephone service that provides access to the public switched telephone network using cellular technology, including the number of pre-paid Subscriber Identity Module (SIM) cards active during the past three months. This includes both analogue and digital cellular systems (IMT-2000, Third Generation [3G]) and 4G subscriptions, but excludes mobile broadband subscriptions via data cards or Universal Serial Bus (USB) modems. Subscriptions to public mobile data services, private trunked mobile radio, telepoint or radio paging, and telemetry services are also excluded. It includes all mobile cellular subscriptions that offer voice communications.

Source: International Telecommunication Union (ITU), December 2013. ITU World Telecommunication/ICT Indicators Database 2013

#### 2.03 International internet bandwidth per internet user

International internet bandwidth (kb/s) per internet user | 2012 International internet bandwidth is the sum of capacity of all internet exchanges offering international bandwidth measured in kb/s.

Source: ITU, December 2013. ITU World Telecommunication/ICT Indicators Database 2013

#### 2.04 Fixed broadband internet subscriptions

## Fixed broadband internet subscriptions per 100 population | 2012

This refers to total fixed (wired) broadband internet subscriptions (i.e. subscriptions to high-speed access to the public internet—a Transition Control Protocol/Internet Protocol connection—at downstream speeds equal to or greater than 256 kb/s).

Source: ITU, December 2013. ITU World Telecommunication/ICT Indicators Database 2013

#### 2.05 Mobile broadband subscriptions

Mobile broadband subscriptions per 100 population | 2012 Mobile broadband subscriptions refer to active SIM cards or, on code division multiple access networks, connections accessing the internet at consistent broadband speeds of over 512 kb/s, including cellular technologies such as High Speed Packet Access, evolution-data optimized and above. This includes connections being used in any type of device able to access mobile broadband networks, including smartphones, USB modems, mobile hotspots and other mobile-broadbandconnected devices.

Source: ITU, December 2013. ITU World Telecommunication/ICT Indicators Database 2013

#### 2.06 Laws related to ICT

How developed are your country's laws related to the use of ICTs (e.g. electronic commerce, digital signatures, consumer protection)? (1 = not developed at all; 7 = extremely well developed) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.07 Government Online Service Index

## The Government Online Service Index assesses the quality of government's delivery of online services on a 0-1 (best) scale | 2012

According to the United Nations' Public Administration Network, the Government Online Service Index captures a government's performance in delivering online services to the citizens. There are four stages of service delivery: *emerging*, *enhanced*, *transactional* and *connected*. Online services are assigned to each stage according to their degree of sophistication, from the more basic to the more sophisticated. In each country, the government's performance in each of the four stages is measured as the number of services provided as a percentage of the maximum services in the corresponding stage. Examples of services include online presence, deployment of multimedia content, governments' solicitation of citizen input, widespread data sharing, and use of social networking. For more information about the methodology, consult: www2.unpan.org/egovkb/datacenter/CountryView.aspx.

Source: United Nations, 2012. UN E-Government Survey 2012: E-Government for the People

#### 2.08 Internet users

#### Percentage of individuals using the internet | 2012

Internet users are people with access to the worldwide network.

Source: ITU, December 2013. ITU World Telecommunication/ICT Indicators Database 2013

#### 2.09 ICT use for business-to-business transactions

In your country, to what extent do businesses use ICTs for transactions with other businesses? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.10 Internet use for business-to-consumer transactions

In your country, to what extent do businesses use the internet for selling their goods and services to consumers? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.11 ICT and access to basic services

In your country, to what extent do ICTs enable access for all citizens to basic services (e.g. health, education, financial services)? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.12 ICT and business model creations

In your country, to what extent do ICTs enable new business models? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 2.13 E-participation Index

The e-participation index assesses, on a 0-to-1 (best) scale, the quality, relevance, usefulness and willingness of government websites for providing online information and participatory tools and services to their citizens. | 2012

According to the United Nations, the *e-participation index* assesses the quality and usefulness of information and services provided by a country for the purpose of engaging its citizens in public policy-making through the use of *e*-government programmes. As such, it is indicative of both the capacity and the willingness of the state to encourage citizens in promoting deliberative, participatory decision-making in public policy, and of the reach of its own socially inclusive governance programme. For more information about the methodology, consult: www2.unpan. org/egovkb/datacenter/CountryView.aspx.

Source: United Nations, 2012. UN E-Government Survey 20102: E-Government for the People

#### 2.14 Patent Cooperation Treaty (PCT) ICT patent applications Number of applications for ICT-related patents filed under the PCT, per million population | 2010-2011 average

This measures the count of applications filed under the PCT in the technology domain of ICTs by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors. For more information, consult: www.oecd.org/sti/ innovationinsciencetechnologyandindustry/oecdpatentdatabases. htm. The average count of applications filed in 2010 and 2011 is divided by population, using figures from the World Bank's *World Development Indicators Online* (retrieved 20 December 2013).

Source: Organisation for Economic Co-operation and Development (OECD), January 2014. *Patent Database*; World Bank, *World Development Indicators Online* (retrieved 20 December 2013)

#### Pillar 3: Innovative Europe

#### 3.01 R&D expenditure

## R&D expenditure, % of GDP | 2011 or most recent year available

Expenditures for R&D are current and capital expenditures (both public and private sectors) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture and society, and the use of knowledge for new applications. R&D covers basic research, applied research and experimental development.

Source: The World Bank, World Development Indicators Online (retrieved 14 February 2014)

#### 3.02 Researchers in R&D

## Researchers in R&D, per million people | 2010 or most recent year available

Researchers in R&D are professionals engaged in the conception or creation of new knowledge, products, processes, methods or systems, and in the management of the projects concerned. Postgraduate PhD students (ISCED-97 level 6) engaged in R&D are included.

Source: The World Bank, World Development Indicators Online (retrieved 14 February 2014)

#### 3.03 Availability of scientists and engineers

In your country, to what extent are scientists and engineers available? (1 = not at all; 7 = widely available) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.04 Highly cited scientific articles

## Scientific publications within the 10% most cited scientific publications worldwide, as % of total scientific publications of the country | 2009

Number of scientific publications with at least one co-author based abroad (where abroad is non-EU for the EU28) divided by the total number of scientific publications. The indicator is a proxy for the efficiency of the research system, as highly cited publications are assumed to be of higher quality. There could be a bias towards small or English-speaking countries given the coverage of Scopus' publication data. Countries such as France and Germany, where researchers publish relatively more in their own language, are more likely to underperform on this indicator compared to their real academic excellence. For more information, see: http://ec.europa.eu/enterprise/policies/innovation/policy/ innovation-scoreboard/index\_en.htm.

Source: EC, Directorate-General for Research and Innovation, 2014. *Innovation Union Scoreboard 2014* 

#### 3.05 PCT patent applications

## Number of applications for patents filed under the PCT per million population | 2010–2011 average

This measures the total count of applications filed under the PCT, by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors. The average count of applications filed in 2010 and 2011 is divided by population, using figures from the World Bank's *World Development Indicators Online* (retrieved 28 November 2012).

Source: OECD, January 2014. Patent Database; World Bank, World Development Indicators Online (retrieved 20 December 2013)

#### 3.06 Firm-level technology absorption

In your country, to what extent do businesses adopt new technology? (1 = not at all; 7 = adopt extensively) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.07 University-industry collaboration in R&D

In your country, to what extent do business and universities collaborate on R&D? (1 = do not collaborate at all; 7 = collaborate extensively) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.08 Capacity for innovation

In your country, to what extent do companies have the capacity to innovate? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.09 Government procurement of advanced technology products

In your country, to what extent do government purchasing decisions foster innovation? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.10 Availability of latest technologies

In your country, to what extent are the latest technologies available? (1 = not available at all; 7 = widely available) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.11 Extent of marketing

In your country, to what extent do companies use sophisticated marketing tools and techniques? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.12 Willingness to delegate authority

In your country, how do you assess the willingness to delegate authority to subordinates? (1 = not willing at all—senior management takes all important decisions; 7 = very willing authority is mostly delegated to business unit heads and other lower-level managers) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 3.13 Industrial design counts in applications

## Industrial design counts in applications per million population | 2012

This measures the total industrial design counts in applications by residents at domestic and foreign offices, while taking into account the multiplying effect for regional offices; for example, the EU's Office for Harmonization in the Internal Market (OHIM) and the Benelux Office for Intellectual Property. Applications received by these offices are multiplied by their respective numbers of Member States. For example, an application filed by a US resident at OHIM is multiplied by 28 to take into account that the application is equivalent to filing for protection in all 28 EU Member States. The industrial design counts are divided by population, using figures from the World Bank's *World Development Indicators Online* (retrieved 20 December 2013).

Source: World Intellectual Property Organization (WIPO), 2014. WIPO Statistics Database

#### 3.14 Nature of competitive advantage

What is the competitive advantage of your country's companies in international markets based upon? (1 = low-cost labour or natural resources; 7 = unique products and processes) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### Pillar 4: Education and training

#### 4.01 Quality of the educational system How well does the educational system in your country meet the needs of a competitive economy? (1 = not well at all; 7 = extremely well) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 4.02 PISA scores on education quality

Average performance for combined reading, mathematics and scientific literacy performance | 2012

The reported value corresponds to the average performance of pupils (aged 15) in the key competencies of reading, mathematics and science. PISA scores on education quality are scaled such that the a posteriori distribution of student competencies, with equal weight given to all OECD countries, has mean 500 and standard deviation 100.

Source: OECD, 2012 and 2013. *PISA*; World Bank, *World Development Indicators Online* (retrieved 20 December 2013)

#### 4.03 Tertiary education enrolment rate

## Gross tertiary education enrolment rate | 2012 or most recent year available

Tertiary enrolment rate is the ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the tertiary education level. Tertiary education, whether leading to an advanced research qualification or not, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.

Source: United Nations Education, Science and Culture Organization (UNESCO). UNESCO Institute for Statistics Data Centre (accessed 17 February 2014)

#### 4.04 Secondary education enrolment rate

## Gross secondary education enrolment rate | 2012 or most recent year available

The reported value corresponds to the ratio of total secondary enrolment, regardless of age, to the population of the age group that officially corresponds to the secondary education level. Secondary education (ISCED levels 2 and 3) completes the provision of basic education that began at the primary level, and aims to lay the foundations for lifelong learning and human development, by offering more subject- or skills-oriented instruction using more specialized teachers.

Source: UNESCO. UNESCO Institute for Statistics Data Centre (accessed 17 February 2014)

#### 4.05 Availability of training services

In your country, to what extent are high-quality, specialized training services available? (1 = not available at all; 7 = widely available) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 4.06 Quality of management schools

In your country, how would you assess the quality of business schools? (1 = extremely poor—among the worst in the world; 7 = excellent—among the best in the world) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 4.07 Extent of staff training

In your country, to what extent do companies invest in training and employee development? (1 = not at all; 7 = to a great extent) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### Pillar 5: Labour market and employment

#### 5.01 Hiring and firing practices

In your country, how would you characterize the hiring and firing of workers? (1 = heavily impeded by regulations; 7 = extremely flexible) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 5.02 Cooperation in labour-employer relations

In your country, how would you characterize labour-employer relations? (1 = generally confrontational; 7 = generally cooperative) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 5.03 Pay and productivity

In your country, to what extent is pay related to worker productivity? (1 = not related to worker productivity; 7 = strongly related to worker productivity) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 5.04 Extent and effect of taxation on incentives to work

In your country, to what extent do taxes reduce the incentive to work? (1 = significantly reduce the incentive to work; 7 = do not reduce the incentive to work at all) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 5.05 Labour participation activity rate

## Ratio of the population aged 15 and older to the working-age population (aged 15+) | 2012

This measures the percentage of the population aged 15 and older that is economically active, i.e. all people who supply labour for the production of goods and services during a specified period. The labour force participation rate is a measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work. It provides an indication of the relative size of the supply of labour available to engage in the production of goods and services.

Source: International Labour Organization (ILO), Key Indicators of the Labour Market (retrieved 18 February 2014)

#### 5.06 Female participation in labour force

## Ratio of female participation in the labour force (%) to male participation in the labour force (%) $\mid$ 2012

This measure is the percentage of women aged 15–64 participating in the labour force divided by the percentage of men aged 15–64 participating in the labour force.

Source: ILO. *Key Indicators of the Labour Market Net* (retrieved 18 February 2014)

#### 5.07 Private-sector employment of women

In your country, to what extent do businesses provide women the same opportunities as men to rise to positions of leadership? (1 = not at all, women have no opportunities to rise to positions of leadership; 7 = extensive, women have equal opportunities to rise to positions of leadership) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 5.08 Youth unemployment

Youth unemployment (% of total labour force aged 15-24) | 2013 or most recent year available

Youth unemployment refers to the share of the labour force aged 15-24 without work, but available for and seeking employment. Definitions of labour force and unemployment differ by country.

Source: ILO. *Key Indicators of the Labour Market Net*, national estimates (retrieved 18 February 2014); Eurostat, see: http://epp. eurostat.ec.europa.eu/portal/page/portal/eurostat/home/ (retrieved 18 February 2014)

#### Pillar 6: Social inclusion

#### 6.01 Accessibility of healthcare services

How accessible is healthcare in your country? (1 = limited only the privileged have access; 7 = universal—all citizens have access to healthcare) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 6.02 Gini coefficient

## Income inequality measure (0 = perfect equality; 1 = perfect inequality) | 2013 or most recent year available

This indicator is defined as the relationship of cumulative shares of the population arranged according to the level of equivalized disposable income, to the cumulative share of the equivalized total disposable income received by them. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus, a Gini index of 0 represents perfect equality, while an index of 1 implies perfect inequality.

Source: The World Bank. *World Development Indicators Online* (retrieved 17 February 2014); Eurostat, see: http://epp.eurostat. ec.europa.eu/portal/page/portal/eurostat/home/ (retrieved 17 February 2014)

#### 6.03 Government effectiveness in reducing poverty and inequality

In your country, how effective are the government's efforts to address income inequality? (1 = not effective at all; 7 = extremely effective) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 6.04 Social safety net protection

In your country, to what extent does a formal social safety net provide protection from economic insecurity in the event of job loss or disability? (1 = not at all; 7 = provides full protection) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 6.05 Social mobility

In your country, to what extent do individuals have the opportunity to improve their economic situation through their personal efforts regardless of the socio-economic status of their parents? (1 = little opportunity exists to improve one's economic situation; 7 = significant opportunity exists to improve one's economic situation) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### Pillar 7: Environmental sustainability

#### 7.01 Share of renewable energy production

Share of electricity produced from renewable sources (% of kilowatt hours [KWh]) | 2012 or most recent year available This indicator is the ratio of total electricity production from renewable sources (hydropower, geothermal, solar, tides, wind, biomass and biofuels) to the total electricity production from all sources (KWh). Electricity production is measured at the terminals of all alternator sets in a station. Production includes the output of electricity plants that are designed to produce electricity only as well as that of combined heat and power plants.

Source: Authors' calculation based on The World Bank, *World Development Indicators Online* (retrieved 17 February 2014)

#### 7.02 Terrestrial biome protection

## The degree to which a country achieves the target of protecting 17% of each terrestrial biome within its borders | 2012 or most recent year available

This indicator is calculated by Columbia University's Center for International Earth Science Information Network (CIESIN) by overlaying the protected area mask on terrestrial biome data developed for each country by World Wildlife Fund's Terrestrial Ecoregions of the World. A biome is defined as a major regional or global biotic community, such as a grassland or desert, characterized chiefly by the dominant forms of plant life and the prevailing climate. Scores are capped at 17% per biome. such that higher levels of protection of some biomes cannot be used to offset lower levels of protection of other biomes; hence, the maximum level of protection a country can achieve is 17%. CIESIN uses time series of the World Database on Protected Areas developed by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) in 2011, which provides a spatial time series of protected area coverage from 1990 to 2010. The WCMC considers all nationally designated protected areas whose location and extent are known. Boundaries were defined by polygons where available and, where they were not available, protected area centroids were buffered to create a circle in accordance with the protected area size. The WCMC removed all overlaps between different protected areas by dissolving the boundaries to create a protected areas mask.

Source: Yale University and Columbia University, 2014. Environmental Performance Index (EPI) 2014 edition based on International Union for Conservation of Nature (IUCN) and UNEP-WCMC (2013), The World Database on Protected Areas (WDPA) [On-line]. Cambridge, UK: UNEP-WCMC

#### 7.03 Environmental treaty ratification

#### Total number of ratified environmental treaties | 2012

This variable measures the total number of international treaties from a set of 25 for which a state is a participant. A state becomes a "participant" by ratification, formal confirmation, accession, acceptance, definitive signature, approval, simplified procedure, consent to be bound, succession and provisional application (which here are grouped under the term "ratification", for reasons of convenience). The treaties included are: the International Convention for the Regulation of Whaling, 1948 Washington; the International Convention for the Prevention of Pollution of the Sea by Oil, 1954 London, as amended in 1962 and 1969; the Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 Ramsar; the Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 Paris; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 London, Mexico City, Moscow, Washington; the Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 Washington; the International Convention for the Prevention of Pollution from Ships (MARPOL) as modified by the Protocol of 1978, 1978 London; the Convention on the Conservation of Migratory Species of Wild Animals, 1979 Bonn; the United Nations Convention on the Law of the Sea, 1982 Montego Bay; the Convention on the Protection of the Ozone Layer, 1985 Vienna; the Protocol on Substances that Deplete the Ozone Layer, 1987 Montreal; the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 Basel; the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 London; the United Nations Framework Convention on Climate Change, 1992 New York; the Convention on Biological Diversity, 1992 Rio de Janeiro; the International Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly Africa, 1994 Paris; the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, 1994 New York: the Agreement relating to the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 New York; the Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto 1997: the Botterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998 Rotterdam; the Cartagena Protocol of Biosafety to the Convention on Biological Diversity, 2000 Montreal; the Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, 2000 London; the Stockholm Convention on Persistent Organic Pollutants, 2001 Stockholm; the International Treaty on Plant Genetic Resources for Food and Agriculture, 2001 Rome; and the International Tropical Timber Agreement 206, 1994 Geneva

Source: IUCN Environmental Law Centre ELIS Treaty Database

#### 7.04 Enforcement of environmental regulations

In your country, how would you assess the enforcement of environmental regulations? (1 = very lax, among the worst in the world; 7 = among the world's most rigorous) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 7.05 Quality of natural environment

In your country, how would you assess the quality of the natural environment? (1 = extremely poor, among the worst in the world; 7 = among the world's most pristine) | 2012-2013 weighted average

Source: World Economic Forum, EOS, 2012 and 2013 editions

#### 7.06 CO2 intensity

## Kilogram (kg) of CO $_{2}$ per kg of oil-equivalent energy use $\mid$ 2012 or most recent year available

Carbon dioxide emissions from solid fuel consumption refer mainly to emissions from the use of coal as an energy source.

Source: The World Bank, 2013. World Development Indicators & Global Development Finance Catalog, December 2013 edition

#### 7.07 Particulate matter (2.5) concentration

## Population-weighted exposure to PM2.5 (micrograms per cubic metre) | 2012

PM2.5, also known as fine particulate matter, refers to particles or droplets in the air that are 2.5 microns or less in width. Although invisible to the naked human eye as individual particles, PM2.5 can reduce visibility and cause the air to appear hazy when PM2.5 levels are elevated. This indicator is based on a model that was parameterized by data on aerosol optical depth (AOD) from NASA's Moderate Resolution Imaging Spectroradiometer (MODIS), Sea-viewing Wide Field-of-view Sensor (SeaWiFS), and Multi-angle Imaging SpectroRadiometer (MISR) satellite instruments, and the Goddard Earth Observing System (GEOS)-Chem chemical transport model. The model covered all areas south of 70 degrees north latitude and north of 70 degrees south latitude. Van Donkelaar et al. estimated annual global surface PM2.5 concentrations at a 10x10 kilometre spatial resolution, and then created moving three-year averages from 2000 to 2012. Population-weighted average exposure values were calculated using population data from the Global Rural Urban Mapping Project (2011) database. For additional details, see van Donkelaar, A., January 2015 (embargoed) and http://epi.yale.edu/files/2014\_ epi\_metadata.pdf.

Source: Yale University and Columbia University, 2014. EPI 2014, based on van Donkelaar, A., 2014, http://epi.yale.edu/downloads.

# Part 2 Country Profiles

## How to Read the Country Profiles

The Country Profiles section presents a one-page profile for each of the 28 EU Member States covered in *The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2014 Edition.* 

1 THE EUROPE 2020 COMPETITIVENESS INDEX

This section details the EU Member State's performance on the various components of the Europe 2020 Competitiveness Index. The first column shows the country's rank among the 28 Member States, while the second column presents the score. On the right-hand side, a chart shows the performance of each Member State in the seven pillars of the Index (blue line) measured against the average scores across all the Member States in the same stage of development (black line). In addition, the country is also benchmarked against the best performer in Index (Finland in the 2014 Edition).

#### 2 THE EUROPE 2020 COMPETITIVENESS INDEX IN DETAIL

This section details the performance of each Member State on each of the indicators entering the composition of the Index. Indicators are organized by pillar.

- INDICATOR, UNITS: This column contains the title of each indicator and, where relevant, the units in which it is measured for example, "days" or "% GDP". Indicators that are not derived from the Executive Opinion Survey (EOS) are identified by an asterisk (\*). Indicators derived from the EOS are always expressed as scores on a 1–7 scale, with 7 being the most desirable outcome.
- VALUE: This column reports the country's score on each of the variables that compose the Global Competitiveness Index (GCI).
- RANK/28: This column reports the country's position among the 28 EU Member States covered by the 2014 edition of the Index.



## **Index of Country Profiles**

Country	Page
Austria	52
Belgium	53
Bulgaria	54
Croatia	55
Cyprus	56
Czech Republic	57
Denmark	58
Estonia	59
Finland	60
France	61

Country	Page
Germany	62
Greece	63
Hungary	64
Ireland	65
Italy	66
Latvia	67
Lithuania	68
Luxembourg	69
Malta	70
Netherlands	71

Country	Page
Poland	72
Portugal	73
Romania	74
Slovak Republic	75
Slovenia	76
Spain	77
Sweden	78
United Kingdom	79

## Austria

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	6	5.2
Europe 2020 Index (2012 edition)	5	5.3
Smart growth	8	5.0
Enterprise environment	9	4.3
Digital Agenda	10	5.1
Innovative Europe	6	5.3
Education and training	7	5.4
Inclusive growth	6	5.3
Labour market and employment	8	4.7
Social inclusion	7	5.8
Sustainable growth	4	5.4
Environmental sustainability	4	5.4



#### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.6
1.01	Intensity of local competition	6	5.8
1.02	Effectiveness of antitrust policy		4.7
1.03	Extent of market dominance	2	5.5
1.04	Agricultural policy costs	9	4.2
1.05	Impact of rules on FDI		4.7
1.06	Distortive effect on tax and subsidy competitie	on 11	4.2
1.07	Burden of government regulation		3.4
	Clusters	2	5.3
1.08	State of cluster development	6	4.8
1.09	Value chain breadth		
	Entrepreneurship		
1.10	No. procedures to start a business*		8
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest	11	3.9
1.13	Attitudes towards entrepreneurial failure		2.9
	Availability of finance		3.2
1.14	Ease of access to loans		3.0
1.15	Venture capital availability		2.8
1.16	Local equity market access	9	3.9
	Pillar 2: Digital Agenda		
	ICT readiness	8	5.4

#### 2.03 Int'l Internet bandwidth, kb/s per user\* ...... 11...... 108.1 2.04 Fixed broadband Internet subscriptions/100 pop.\*..12.......25.0 2.07 Government Online Service Index, 0-1 (best)\*....... 10......0.7 Pillar 3: Innovative Europe

	INDICATOR, UNITS RANK/28 SCORE
	Pillar 3: Innovative Europe (cont'd.)
3.07	University-industry collaboration in R&D
3.08	Capacity for innovation
3.09	Gov't procurement of advanced tech products
3.10	Availability of latest technologies6.1
3.11	Extent of marketing5.5
3.12	Willingness to delegate authority
3.13	No. industrial designs/million pop.*2
3.14	Nature of competitive advantage6.0
	Pillar 4: Education and training
	Education
4.01	Quality of the educational system
4.02	PISA scores*
4.03	Tertiary education enrolment, gross %*
4.04	Secondary education enrolment, gross %*
	Training
4.05	Availability of training services
4.06	Quality of management schools
4.07	Extent of staff training4.9
	Pillar 5: Labour market and employment
	Labour market efficiency4.0
5.01	Hiring and firing practices
5.02	Cooperation in labour-employer relations
5.03	Pay and productivity
5.04	Extent of taxation on incentives to work
	Labour participation
5.05	Activity rate, %*
5.06	Women in labour force, ratio to men*13
5.07	Private sector employment of women
5.08	Youth unemployment, %*
	Pillar 6: Social inclusion
6.01	Accessibility of healthcare services
6.02	Gini coefficient (0-100 best)*

Gini coefficient (0-100 best)*	10	27.6
Gov't effectiveness in reducing poverty & inequality		4.2
Social safety net protection		6.1
Social mobility		5.8
	Gini coefficient (0-100 best)* Gov't effectiveness in reducing poverty & inequality Social safety net protection	Gini coefficient (0-100 best)*

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	1	73.0
7.02	Terrestrial biome protection, %*	15	14.7
7.03	Environmental treaty ratification*		21.0
7.04	Enforcement of environmental regulations	5	5.9
7.05	Quality of natural environment	2	6.7
7.06	CO2 emission per energy use, %*	7	2.0
7.07	Particulate matter (2.5) concentration*		14.0

#### 2: Country Profiles

## Belgium

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	9	4.9
Europe 2020 Index (2012 edition)	9	5.0
Smart growth	9	5.0
Enterprise environment	7	4.5
Digital Agenda	11	4.7
Innovative Europe		
Education and training	3	5.7
Inclusive growth	9	4.9
Labour market and employment	19	3.9
Social inclusion	5	6.0
Sustainable growth Environmental sustainability		



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.6
1.01	Intensity of local competition		6.0
1.02	Effectiveness of antitrust policy		5.1
1.03	Extent of market dominance		5.3
1.04	Agricultural policy costs	8	4.2
1.05	Impact of rules on FDI	7	5.1
1.06	Distortive effect on tax and subsidy competition	on 14	4.0
1.07	Burden of government regulation		2.6
	Clusters	9	4.9
1.08	State of cluster development		4.8
1.09	Value chain breadth		
	Entrepreneurship		4.7
1.10	No. procedures to start a business*		3
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.3
1.13	Attitudes towards entrepreneurial failure		2.5
	Availability of finance	7	3.6
1.14	Ease of access to loans		3.5
1.15	Venture capital availability	6	3.3
1.16	Local equity market access		

#### Pillar 2: Digital Agenda

	ICT readiness	13	4.9
2.01	Government strategy for ICT	13	4.1
2.02	Mobile phone subscriptions/100 pop.*	22	.111.3
2.03	Int'l Internet bandwidth, kb/s per user*	6	.180.4
2.04	Fixed broadband Internet subscriptions/100 po	p.*6	33.3
2.05	Mobile broadband subscriptions/100 pop.*	24	33.0
2.06	Laws relating to ICT	14	4.9
	ICT usage	11	5.4
2.07	Government Online Service Index, 0-1 (best)*		
2.08	Individuals using Internet, %*	9	82.0
2.09	Business-to-business Internet use	13	5.6
2.10	Business-to-consumer Internet use	16	5.1
	ICT impact	13	3.8
2.11	ICT and access to basic services	7	5.4
2.12	ICT and business model creations	13	5.0
2.13	E-Participation Index, 0-1 (best)*	25	0.1
2.14	ICT PCT patents, applications/million pop	9	25.4
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*	9	2.0

3.01	R&D expenditure, % GDP*	9	2.0
3.02	No. researchers in R&D/million pop.*	11	3,563.1
3.03	Availability of scientists and engineers	11	4.6
3.04	Highly cited scientific articles, % of tot.*		13.4
3.05	PCT patents, applications/million pop.*	9	110.7
3.06	Firm-level technology absorption	10	5.6

	INDICATOR, UNITS RAI	NK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	3	5.5
3.08	Capacity for innovation	6	5.1
3.09	Gov't procurement of advanced tech products	8	3.7
3.10	Availability of latest technologies	6	6.3
3.11	Extent of marketing	9	5.3
3.12	Willingness to delegate authority		
3.13	No. industrial designs/million pop.*	10	.3,394.9
3.14	Nature of competitive advantage	7	5.9
	Pillar 4: Education and training		
	Education	5	5.8
4.01	Quality of the educational system	3	5.3
4.02	PISA scores*		
4.03	Tertiary education enrolment, gross %*	13	69.3
4.04	Secondary education enrolment, gross %*	11	106.5
	Training	3	5.6
4.05	Availability of training services	4	5.9
4.06	Quality of management schools	1	6.0
4.07	Extent of staff training	8	4.9
	Pillar 5: Labour market and employment		
	Labour market efficiency	24	32

		Labour market efficiency	24	3.2
Ę	5.01	Hiring and firing practices	25	2.8
Ę	5.02	Cooperation in labour-employer relations	16	4.2
5	5.03	Pay and productivity	22	3.7
5	5.04	Extent of taxation on incentives to work	25	2.3
		Labour participation	14	4.5
E	5.05	Labour participation		
			23	66.6
5	5.06	Activity rate, %*	23 15	66.6 0.85
5	5.06 5.07	Activity rate, %* Women in labour force, ratio to men*	23 15 12	66.6 0.85 4.9

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	1	6.8
6.02	Gini coefficient (0-100 best)*		26.5
6.03	Gov't effectiveness in reducing poverty & inequality	6	4.5
6.04	Social safety net protection	1	6.3
6.05	Social mobility	6	5.8

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		12.3
7.02	Terrestrial biome protection, %*		14.7
7.03	Environmental treaty ratification*		22.0
7.04	Enforcement of environmental regulations	8	5.6
7.05	Quality of natural environment		4.7
7.06	CO2 emission per energy use, %*	5	1.8
7.07	Particulate matter (2.5) concentration*		15.6

## Bulgaria

	Rank (out of 28)	
Europe 2020 Index (2014 edition)		3.7
Europe 2020 Index (2012 edition)	27	3.8
Smart growth	27	3.6
Enterprise environment	24	3.6
Digital Agenda	25	3.8
Innovative Europe	27	3.1
Education and training	27	4.0
Inclusive growth	24	3.9
Labour market and employment	16	4.1
Social inclusion	28	3.6
Sustainable growth		3.9
Environmental sustainability		3.9

-



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.5
1.01	Intensity of local competition		4.6
1.02	Effectiveness of antitrust policy		3.3
1.03	Extent of market dominance		3.2
1.04	Agricultural policy costs		3.4
1.05	Impact of rules on FDI		3.7
1.06	Distortive effect on tax and subsidy competiti	on 20	3.6
1.07	Burden of government regulation		3.1
	Clusters		3.3
1.08	State of cluster development		3.3
1.09	Value chain breadth		
	Entrepreneurship		4.6
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.4
1.13	Attitudes towards entrepreneurial failure		3.3
	Availability of finance		3.0
1.14	Ease of access to loans	6	3.3
1.15	Venture capital availability		2.7
1.16	Local equity market access		
	Pillar 2: Digital Agenda		

	ICT readiness		4.8
2.01	Government strategy for ICT	23	3.4
2.02	Mobile phone subscriptions/100 pop.*	614	8.1
2.03	Int'l Internet bandwidth, kb/s per user*	158	5.4
2.04	Fixed broadband Internet subscriptions/100 pop.*		7.9
2.05	Mobile broadband subscriptions/100 pop.*	174	8.5
2.06	Laws relating to ICT	23	4.0
	ICT usage		4.3
2.07	Government Online Service Index, 0–1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use		
2.10	Business-to-consumer Internet use		
	ICT impact		2.5
2.11	ICT and access to basic services		
2.12	ICT and business model creations	25	3.9
2.13	E-Participation Index, 0-1 (best)*		0.0
2.14	ICT PCT patents, applications/million pop	25	1.1
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*		
3.02	No. researchers in R&D/million pop.*	25 1,45	3.7
3.03	Availability of scientists and engineers	26	3.7

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.0
3.08	Capacity for innovation		3.2
3.09	Gov't procurement of advanced tech product	ts 16	3.3
3.10	Availability of latest technologies		4.4
3.11	Extent of marketing		3.7
3.12	Willingness to delegate authority		3.2
3.13	No. industrial designs/million pop.*		.2,287.6
3.14	Nature of competitive advantage		3.0
	Pillar 4: Education and training		
	Education		4.5
4.01	Quality of the educational system		3.4
4.02	PISA scores*		440.4
4.03	Tertiary education enrolment, gross %*		59.6
4.04	Secondary education enrolment, gross %*		93.2
	Training		3.5
4.05	Availability of training services		3.6
4.06	Quality of management schools		
4.07	Extent of staff training		3.2
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.9
5.01	Hiring and firing practices		
5.02	Cooperation in labour-employer relations		4.1
5.03	Pay and productivity		
E 04	Fortune of the section of the section of the second	10	0.0

5.04	Extent of taxation on incentives to work	12	3.3
	Labour participation	17	4.3
5.05	Activity rate, %*	21	67.2
5.06	Women in labour force, ratio to men*	9	0.89
5.07	Private sector employment of women	16	4.6
5.08	Youth unemployment, %*		28.6

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	. 27	3.8
6.02	Gini coefficient (0-100 best)*	.24	33.6
6.03	Gov't effectiveness in reducing poverty & inequality	28	2.2
6.04	Social safety net protection	. 25	3.2
6.05	Social mobility	. 27	3.4

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	25	7.9
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	15	23.0
7.04	Enforcement of environmental regulations	27	3.3
7.05	Quality of natural environment	28	3.4
7.06	CO2 emission per energy use, %*	20	2.5
7.07	Particulate matter (2.5) concentration*	19	13.6

#### 2: Country Profiles

## Croatia

RANK/28 SCORE

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	24	3.9
Europe 2020 Index (2012 edition)	n/a	4.0
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	27 22 26	3.3 4.0 3.2
Inclusive growth Labour market and employment Social inclusion	27	3.4
Sustainable growth Environmental sustainability		



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.3
1.01	Intensity of local competition		4.5
1.02	Effectiveness of antitrust policy		3.8
1.03	Extent of market dominance		3.3
1.04	Agricultural policy costs		2.5
1.05	Impact of rules on FDI		3.0
1.06	Distortive effect on tax and subsidy competition	on 23	3.5
1.07	Burden of government regulation		2.3
	Clusters		3.3
1.08	State of cluster development		3.2
1.09	Value chain breadth		3.5
	Entrepreneurship		4.2
1.10	No. procedures to start a business*		6
1.11	No. days to start a business*		8
1.12	Extent of taxation on incentives to invest		2.3
1.13	Attitudes towards entrepreneurial failure		3.0
	Availability of finance		2.5
1.14	Ease of access to loans		2.4
1.15	Venture capital availability		2.2
1.16	Local equity market access		2.8

#### Pillar 2: Digital Agenda

		06	4.0
0.01	ICT readiness		
2.01	Government strategy for ICT		
2.02	Mobile phone subscriptions/100 pop.*		
2.03	Int'l Internet bandwidth, kb/s per user*	.25	28.7
2.04	Fixed broadband Internet subscriptions/100 pop.*.	. 22	20.7
2.05	Mobile broadband subscriptions/100 pop.*	. 12	53.9
2.06	Laws relating to ICT	.24	4.0
	ICT usage	. 22	4.8
2.07	Government Online Service Index, 0–1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use	. 22	5.2
2.10	Business-to-consumer Internet use	.26	4.6
	ICT impact	.19	3.1
2.11	ICT and access to basic services	.21	4.2
2.12	ICT and business model creations	. 17	4.5
2.13	E-Participation Index, 0-1 (best)*	. 16	0.3
2.14	ICT PCT patents, applications/million pop	. 21	1.4
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*	.21	0.7
3.02	No. researchers in R&D/million pop.*		

 3.03
 Availability of scientists and engineers
 22
 4.0

 3.04
 Highly cited scientific articles, % of tot.\*
 27
 3.2

 3.05
 PCT patents, applications/million pop.\*
 20
 9.8

		naivr/20	JUUNE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.5
3.08	Capacity for innovation		3.1
3.09	Gov't procurement of advanced tech product	ts27	2.6
3.10	Availability of latest technologies		5.1
3.11	Extent of marketing		3.9
3.12	Willingness to delegate authority		3.4
3.13	No. industrial designs/million pop.*		760.7
3.14	Nature of competitive advantage		3.8
	Pillar 4: Education and training		
	Education		4.9
4.01	Quality of the educational system		3.4
4.02	PISA scores*	21	482.4
4.03	Tertiary education enrolment, gross %*	21	58.8
4.04	Secondary education enrolment, gross %*		98.0
	Training		3.9
4.05	Availability of training services		4.2
4.06	Quality of management schools		4.2
4.07	Extent of staff training		3.3
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.2
5.01	Hiring and firing practices		3.0
5.02	Cooperation in labour-employer relations		3.5
5.03	Pay and productivity		3.8
5.04	Extent of taxation on incentives to work		2.3
	Labour participation		3.6

5.05	Activity rate, %*	26	63.8
5.06	Women in labour force, ratio to men*	17	0.84
5.07	Private sector employment of women	23	4.1
5.08	Youth unemployment, %*	26	49.9

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	. 19	5.3
6.02	Gini coefficient (0-100 best)*	. 16	30.5
6.03	Gov't effectiveness in reducing poverty & inequality	23	2.8
6.04	Social safety net protection	. 26	3.2
6.05	Social mobility	. 25	3.6

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		44.4
7.02	Terrestrial biome protection, %*		12.2
7.03	Environmental treaty ratification*		21.0
7.04	Enforcement of environmental regulations		3.8
7.05	Quality of natural environment	9	5.6
7.06	CO <sub>2</sub> emission per energy use, %*	18	2.4
7.07	Particulate matter (2.5) concentration*		13.5

## Cyprus

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	20	4.2
Europe 2020 Index (2012 edition)		4.4
Smart growth		4.2
Enterprise environment	14	4.1
Digital Agenda		
Innovative Europe		3.8
Education and training	14	5.0
Inclusive growth		4.4
Labour market and employment		4.1
Social inclusion		
Sustainable growth		4.0
Environmental sustainability	24	4.0



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.4
1.01	Intensity of local competition		5.2
1.02	Effectiveness of antitrust policy		4.7
1.03	Extent of market dominance		4.1
1.04	Agricultural policy costs		3.8
1.05	Impact of rules on FDI		4.7
1.06	Distortive effect on tax and subsidy competitie	on 9	4.3
1.07	Burden of government regulation	5	4.1
	Clusters		4.1
1.08	State of cluster development		4.1
1.09	Value chain breadth		4.2
	Entrepreneurship	7	4.9
1.10	No. procedures to start a business*		6
1.11	No. days to start a business*		8
1.12	Extent of taxation on incentives to invest	7	4.2
1.13	Attitudes towards entrepreneurial failure		3.8
	Availability of finance		2.8
1.14	Ease of access to loans		2.7
1.15	Venture capital availability		2.8
1.16	Local equity market access		2.8
	Pillar 2: Digital Agenda		
	ICT readiness		4.2
2.01	Government strategy for ICT		3.9

	2.01	Government strategy for for		0.0
	2.02	Mobile phone subscriptions/100 pop.*	27	98.4
	2.03	Int'l Internet bandwidth, kb/s per user*	22	69.7
	2.04	Fixed broadband Internet subscriptions/100 pop.*	23	19.2
	2.05	Mobile broadband subscriptions/100 pop.*	23	34.1
	2.06	Laws relating to ICT	21	4.1
		ICT usage	23	4.6
	2.07	Government Online Service Index, 0-1 (best)*	22	0.6
	2.08	Individuals using Internet, %*		
	2.09	Business-to-business Internet use	23	4.8
	2.10	Business-to-consumer Internet use	24	4.9
		ICT impact	23	2.9
	2.11	ICT impact ICT and access to basic services		
	2.11 2.12		17	4.6
		ICT and access to basic services	17 21	4.6 4.3
	2.12	ICT and access to basic services ICT and business model creations	17 21 27	4.6 4.3 0.1
-	2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)*	17 21 27	4.6 4.3 0.1
-	2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	17 21 27 28	4.6 0.1 0.1
-	2.12 2.13 2.14	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	17 21 27 28	4.6 0.1 0.1
-	2.12 2.13 2.14 3.01	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	17 21 27 28 27	4.6 0.1 0.1 0.1
	2.12 2.13 2.14 3.01 3.02	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop <b>Pillar 3: Innovative Europe</b> R&D expenditure, % GDP* No. researchers in R&D/million pop.*	17 21 27 28 27 28 15	4.6 0.1 0.1 0.1 0.5 810.9 4.5

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.8
3.08	Capacity for innovation		3.3
3.09	Gov't procurement of advanced tech product	s14	3.5
3.10	Availability of latest technologies		5.5
3.11	Extent of marketing		4.5
3.12	Willingness to delegate authority		3.9
3.13	No. industrial designs/million pop.*		3,108.1
3.14	Nature of competitive advantage		4.5
	Pillar 4: Education and training		
	Education		5.2
4.01	Quality of the educational system	5	5.3
4.02	PISA scores*	n/a	n/a
4.03	Tertiary education enrolment, gross %*		46.5
4.04	Secondary education enrolment, gross %*		92.8
	Training		4.7
4.05	Availability of training services		4.9
4.06	Quality of management schools		
4.07	Extent of staff training		4.0
	Pillar 5: Labour market and employment		
	Labour market efficiency	8	4.2
5.01	Hiring and firing practices		
5.02	Cooperation in labour-employer relations		
5.03	Pay and productivity		
5.04	Extent of taxation on incentives to work	4	4.2

	Labour participation	22	4.0
5.05	Activity rate, %*	13	72.6
5.06	Women in labour force, ratio to men*	18	0.83
5.07	Private sector employment of women	14	4.7
5.08	Youth unemployment, %*		38.7

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	. 17	5.3
6.02	Gini coefficient (0-100 best)*	. 18	31.0
6.03	Gov't effectiveness in reducing poverty & inequality	/ 12	3.8
6.04	Social safety net protection	. 17	4.3
6.05	Social mobility	. 19	4.5

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	27	3.6
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	22	22.0
7.04	Enforcement of environmental regulations	20	4.1
7.05	Quality of natural environment	20	4.6
7.06	CO2 emission per energy use, %*	27	3.2
7.07	Particulate matter (2.5) concentration*	12	11.1

RANK/28 SCORE

## Czech Republic

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)		4.3
Europe 2020 Index (2012 edition)	16	4.5
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	16 17 17	3.8 4.3 4.0
Inclusive growth Labour market and employment Social inclusion	14	4.2
Sustainable growth Environmental sustainability		



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.0
1.01	Intensity of local competition	7	5.8
1.02	Effectiveness of antitrust policy		4.1
1.03	Extent of market dominance		4.2
1.04	Agricultural policy costs		3.6
1.05	Impact of rules on FDI		4.7
1.06	Distortive effect on tax and subsidy competiti	on 25	3.2
1.07	Burden of government regulation		2.6
	Clusters		4.4
1.08	State of cluster development		4.1
1.09	Value chain breadth		4.6
	Entrepreneurship		4.0
1.10	No. procedures to start a business*		9
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		2.7
1.13	Attitudes towards entrepreneurial failure		3.4
	Availability of finance		2.9
1.14	Ease of access to loans		3.0
1.15	Venture capital availability		2.6
1.16	Local equity market access		3.0

#### Pillar 2: Digital Agenda

	ICT readiness	20	4.6
2.01	Government strategy for ICT	24	3.3
2.02	Mobile phone subscriptions/100 pop.*	11	126.9
2.03	Int'l Internet bandwidth, kb/s per user*	12	100.1
2.04	Fixed broadband Internet subscriptions/100 pop.	*25	16.4
2.05	Mobile broadband subscriptions/100 pop.*	15	52.1
2.06	Laws relating to ICT	18	4.4
	ICT usage	14	5.2
2.07	Government Online Service Index, 0-1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use		
2.10	Business-to-consumer Internet use		
	ICT impact	20	31
2.11	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop.		
2.111			2.0
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*	11	1.8

3.01 R&D expenditure, % GDP*11.	1.8
3.02 No. researchers in R&D/million pop.*	2,785.5
3.03 Availability of scientists and engineers	4.2
3.04 Highly cited scientific articles, % of tot.*	5.6
3.05 PCT patents, applications/million pop.*17.	15.3
3.06 Firm-level technology absorption	4.9

Pillar 3: Innovative Europe (cont'd.)	
University-industry collaboration in R&D	144.4
Capacity for innovation	12 4.3
Gov't procurement of advanced tech products	242.8
Availability of latest technologies	205.2
Extent of marketing	154.5
Willingness to delegate authority	16 3.9
No. industrial designs/million pop.*	15 2,821.0
Nature of competitive advantage	174.1
Pillar 4: Education and training	
Education	20 5.2
Quality of the educational system	18
PISA scores*	10 500.0
Tertiary education enrolment, gross %*	1664.6
Secondary education enrolment, gross %*	
Training	184.3
Availability of training services	12 5.0
Quality of management schools	244.0
	Capacity for innovation Gov't procurement of advanced tech products Availability of latest technologies Extent of marketing Willingness to delegate authority No. industrial designs/million pop.* Nature of competitive advantage Pillar 4: Education and training Education Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %* Training

#### Pillar 5: Labour market and employment

	Labour market efficiency	17	3.7
5.01	Hiring and firing practices	18	3.3
5.02	Cooperation in labour-employer relations	15	4.2
5.03	Pay and productivity		4.6
5.04	Extent of taxation on incentives to work	21	2.7
	Labour participation	13	4.6
5.05	Activity rate, %*	14	71.4
	Women in labour force, ratio to men*		
5.06	Women in labour force, ratio to men* Private sector employment of women	24	0.80
5.04	Extent of taxation on incentives to work	21 <b>13</b> .	2.7

#### Pillar 6: Social inclusion

INDICATOR, UNITS

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6.01	Accessibility of healthcare services	13	6.2
6.02	Gini coefficient (0-100 best)*		24.9
6.03	Gov't effectiveness in reducing poverty & inequality	19	3.0
6.04	Social safety net protection	16	4.4
6.05	Social mobility	14	4.7

#### Pillar 7: Environmental sustainability

	······································		
7.01	Renewable electricity production, %*	24	9.4
7.02	Terrestrial biome protection, %*	12	16.7
7.03	Environmental treaty ratification*	27	21.0
7.04	Enforcement of environmental regulations	14	4.7
7.05	Quality of natural environment	21	4.6
7.06	CO2 emission per energy use, %*	21	2.5
7.07	Particulate matter (2.5) concentration*	24	15.1

## Denmark

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	4	5.3
Europe 2020 Index (2012 edition)	3	5.6
Smart growth	6	5.2
Enterprise environment	11	4.2
Digital Agenda	5	5.6
Innovative Europe	3	5.7
Education and training	8	5.4
Inclusive growth	1	5.5
Labour market and employment	1	5.1
Social inclusion	4	6.0
Sustainable growth	5	5.3
Environmental sustainability		



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.5
1.01	Intensity of local competition		5.5
1.02	Effectiveness of antitrust policy		4.9
1.03	Extent of market dominance	6	5.2
1.04	Agricultural policy costs		3.9
1.05	Impact of rules on FDI		4.6
1.06	Distortive effect on tax and subsidy competition	on 12	4.2
1.07	Burden of government regulation		3.2
	Clusters		4.7
1.08	State of cluster development		4.3
1.09	Value chain breadth	9	5.0
	Entrepreneurship	9	4.9
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		6
1.12	Extent of taxation on incentives to invest		3.2
1.13	Attitudes towards entrepreneurial failure	6	3.7
	Availability of finance		2.9
1.14	Ease of access to loans		2.9
1.15	Venture capital availability		2.4
1.16	Local equity market access		3.5
	Pillar 2: Digital Agenda		
	ICT readiness	4	5.9
2.01	Government strategy for ICT		4.3
2.02	Mobile phone subscriptions/100 pop.*		

2.01	Government strategy for ICT	11	4.3
2.02	Mobile phone subscriptions/100 pop.*	15.	117.6
2.03	Int'l Internet bandwidth, kb/s per user*	7	174.8
2.04	Fixed broadband Internet subscriptions/100 pop.*		
2.05	Mobile broadband subscriptions/100 pop.*		
2.06	Laws relating to ICT		
	ICT usage	5	6.2
2.07	Government Online Service Index, 0-1 (best)*	5.	0.9
2.08	Individuals using Internet, %*	3	93.0
2.09	Business-to-business Internet use	11	5.7
	Durchannes the second second second second	10	FC
2.10	Business-to-consumer Internet use	10.	
2.10			
2.10	ICT impact ICT and access to basic services	7.	4.7
	ICT impact	<b>7</b> 12	<b>4.7</b> 5.2
2.11	ICT impact ICT and access to basic services ICT and business model creations	<b>7</b> 12 15	<b>4.7</b> 5.2 4.9
2.11 2.12	ICT impact ICT and access to basic services	<b>7.</b> 12 15	<b>4.7</b> 5.2 4.9 0.6
2.11 2.12 2.13	ICT impact ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop	<b>7.</b> 12 15	<b>4.7</b> 5.2 4.9 0.6
2.11 2.12 2.13	ICT impact ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	<b>7</b> 12 15 8 5	<b>4.7</b> 5.2 4.9 0.6 38.0
2.11 2.12 2.13 2.14	ICT impact ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop. Pillar 3: Innovative Europe R&D expenditure, % GDP*	<b>7.</b> 12 	<b>4.7</b> 
2.11 2.12 2.13 2.14 3.01 3.02	ICT impact ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop. Pillar 3: Innovative Europe R&D expenditure, % GDP* No. researchers in R&D/million pop.*	<b>7</b> 12 8 5 5	<b>4.7</b> 5.2 4.9 
2.11 2.12 2.13 2.14 3.01	ICT impact ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop. Pillar 3: Innovative Europe R&D expenditure, % GDP*	<b>7</b> 12 8 5  	4.7 5.2 4.9 

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	9	4.8
3.08	Capacity for innovation		
3.09	Gov't procurement of advanced tech product	ts 15	3.4
3.10	Availability of latest technologies		
3.11	Extent of marketing		
3.12	Willingness to delegate authority		
3.13	No. industrial designs/million pop.*		
3.14	Nature of competitive advantage	3	6.0
	Pillar 4: Education and training		
	Education	7	5.7
4.01	Quality of the educational system	9	4.9
4.02	PISA scores*		498.2
4.03	Tertiary education enrolment, gross %*	8	73.6
4.04	Secondary education enrolment, gross %*		119.5
	Training	9	5.1
4.05	Availability of training services		5.2
4.06	Quality of management schools		5.2
4.07	Extent of staff training	6	5.0
	Pillar 5: Labour market and employment		
	Labour market efficiency	4	4.5
5.01	Hiring and firing practices	1	5.0
5.02	Cooperation in labour-employer relations	1	5.8
5.03	Pay and productivity		4.1
5.04	Extent of taxation on incentives to work		2.8
	Labour participation	1	5.7
5.05	Activity rate, %*	3	78.5
5.06	Women in labour force, ratio to men*	5	0.93
5.07	Private sector employment of women	1	5.5
5.08	Youth unemployment, %*		12.9

#### Pillar 6: Social inclusion

Accessibility of healthcare services	. 11	6.3
Gini coefficient (0-100 best)*	. 12	28.1
Gov't effectiveness in reducing poverty & inequality	5	5.0
Social safety net protection	4	6.1
Social mobility	2	6.1
	Gini coefficient (0-100 best)* Gov't effectiveness in reducing poverty & inequality Social safety net protection	Accessibility of healthcare services       11         Gini coefficient (0-100 best)*       12         Gov't effectiveness in reducing poverty & inequality       5         Social safety net protection       4         Social mobility       2

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	4	47.7
7.02	Terrestrial biome protection, %*	19	12.7
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	3	6.1
7.05	Quality of natural environment	11	5.4
7.06	CO2 emission per energy use, %*	17	2.4
7.07	Particulate matter (2.5) concentration*	10	9.9

#### 2: Country Profiles

## Estonia

RANK/28 SCORE

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	12	4.7
Europe 2020 Index (2012 edition)	11	4.7
Smart growth	12	4.7
Enterprise environment		
Digital Agenda	8	5.3
Innovative Europe		
Education and training	12	5.1
Inclusive growth	12	4.8
Labour market and employment		
Social inclusion	17	4.7
Sustainable growth		
Environmental sustainability	16	4.7



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	8	4.7
1.01	Intensity of local competition	8	5.6
1.02	Effectiveness of antitrust policy		4.6
1.03	Extent of market dominance		3.9
1.04	Agricultural policy costs	5	4.5
1.05	Impact of rules on FDI	6	5.3
1.06	Distortive effect on tax and subsidy competition	on7	4.5
1.07	Burden of government regulation		4.3
	Clusters		3.6
1.08	State of cluster development		3.7
1.09	Value chain breadth		3.6
	Entrepreneurship	3	5.2
1.10	No. procedures to start a business*		5
1.11	No. days to start a business*	10	7
1.12	Extent of taxation on incentives to invest		5.0
1.13	Attitudes towards entrepreneurial failure	9	3.6
	Availability of finance		3.3
1.14	Ease of access to loans		3.1
1.15	Venture capital availability	7	3.3
1.16	Local equity market access		3.6

#### Pillar 2: Digital Agenda

	ICT readiness	95.3
2.01	Government strategy for ICT	5
2.02	Mobile phone subscriptions/100 pop.*	4 160.4
2.03	Int'l Internet bandwidth, kb/s per user*	26
2.04	Fixed broadband Internet subscriptions/100 po	p.*1125.5
2.05	Mobile broadband subscriptions/100 pop.*	576.9
2.06	Laws relating to ICT	
	ICT usage	
2.07	Government Online Service Index, 0-1 (best)*	
2.08	Individuals using Internet, %*	
2.09	Business-to-business Internet use	
2.10	Business-to-consumer Internet use	6
	ICT impact	
2.11	ICT and access to basic services	
2.12	ICT and business model creations	6
2.13	E-Participation Index, 0-1 (best)*	
2.14	ICT PCT patents, applications/million pop	12 11.8
	Pillar 3: Innovative Europe	
3.01	R&D expenditure, % GDP*	72.4

3.01	R&D expenditure, % GDP*	7	2.4
3.02	No. researchers in R&D/million pop.*	.14	3,034.0
3.03	Availability of scientists and engineers	.25	3.7
3.04	Highly cited scientific articles, % of tot.*	.16	8.5
3.05	PCT patents, applications/million pop.*	.15	31.1
3.06	Firm-level technology absorption	.14	5.4

	Pillar 3: Innovative Europe (cont'd.)
3.07	University-industry collaboration in R&D
3.08	Capacity for innovation
3.09	Gov't procurement of advanced tech products
3.10	Availability of latest technologies
3.11	Extent of marketing
3.12	Willingness to delegate authority
3.13	No. industrial designs/million pop.*
3.14	Nature of competitive advantage
	Pillar 4: Education and training
	Education
4.01	Education         6         5.7           Quality of the educational system         14         4.1
4.01 4.02	
	Quality of the educational system
4.02	Quality of the educational system
4.02 4.03	Quality of the educational system
4.02 4.03	Quality of the educational system
4.02 4.03 4.04	Quality of the educational system
4.02 4.03 4.04 4.05	Quality of the educational system.       14       4.1         PISA scores*       2       526.1         Tertiary education enrolment, gross %*       11       71.7         Secondary education enrolment, gross %*       8       109.1         Training       16       4.5         Availability of training services       18       4.7

	Labour market efficiency	1	4.7
5.01	Hiring and firing practices	2	4.6
5.02	Cooperation in labour-employer relations	11	4.9
5.03	Pay and productivity	1	4.9
5.04	Extent of taxation on incentives to work	3	4.3
	Labour participation	7	5.1
5.05	Labour participation Activity rate, %*		
		8	75.0
5.06	Activity rate, %*	8 6	75.0 0.91

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	3
6.02	Gini coefficient (0-100 best)*	ō
6.03	Gov't effectiveness in reducing poverty & inequality 143.8	ō
6.04	Social safety net protection	1
6.05	Social mobility	ō

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		2.3
7.02	Terrestrial biome protection, %*		7.0
7.03	Environmental treaty ratification*		3.0
7.04	Enforcement of environmental regulations		5.2
7.05	Quality of natural environment		5.7
7.06	CO <sub>2</sub> emission per energy use, %*		3.3
7.07	Particulate matter (2.5) concentration*	6	7.0

#### 2: Country Profiles

## Finland

	(out of 28)	(1-7)
Europe 2020 Index (2014 edition)	1	5.7
Europe 2020 Index (2012 edition)	2	5.7
Smart growth	1	5.8
Enterprise environment		
Digital Agenda	1	6.2
Innovative Europe	1	6.1
Education and training	1	6.1
Inclusive growth	2	5.5
Labour market and employment	6	4.7
Social inclusion	1	6.3
Sustainable growth	2	5.8
Environmental sustainability	2	5.8

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RANK/28 SCORE

### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	6	4.8
1.01	Intensity of local competition		4.8
1.02	Effectiveness of antitrust policy	1	5.6
1.03	Extent of market dominance		4.6
1.04	Agricultural policy costs		4.1
1.05	Impact of rules on FDI	9	5.0
1.06	Distortive effect on tax and subsidy competition	on 4	4.8
1.07	Burden of government regulation	1	5.0
	Clusters	3	5.3
1.08	State of cluster development		5.1
1.09	Value chain breadth		
	Entrepreneurship	8	4.9
1.10	No. procedures to start a business*		
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		4.0
1.13	Attitudes towards entrepreneurial failure		3.2
	Availability of finance	2	4.3
1.14	Ease of access to loans		4.2
1.15	Venture capital availability	2	4.0
1.16	Local equity market access	3	4.7
	Pillar 2: Digital Agenda		
	ICT readiness	2.	6.2
2.01	Government strategy for ICT		

2.01	Government strategy for ICT	4	5.1
2.02	Mobile phone subscriptions/100 pop.*	1	172.3
2.03	Int'l Internet bandwidth, kb/s per user*	9	159.3
2.04	Fixed broadband Internet subscriptions/100 pop.*.	. 10	30.3
2.05	Mobile broadband subscriptions/100 pop.*	1	106.6
2.06	Laws relating to ICT	3	5.6
	ICT usage	4	6.3
2.07	Government Online Service Index, 0-1 (best)*	3	0.9
2.08	Individuals using Internet, %*	5	91.0
2.09	Business-to-business Internet use	1	6.2
2.10	Business-to-consumer Internet use	8	5.6
	ICT impact	2	6.0
2.11	ICT impact ICT and access to basic services		
2.11 2.12		5	5.7
	ICT and access to basic services	5 1	5.7 5.8
2.12	ICT and access to basic services ICT and business model creations	5 1 5	5.7 5.8 0.7
2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)*	5 1 5	5.7 5.8 0.7
2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop	5 1 5 1	5.7 5.8 0.7 110.1
2.12 2.13 2.14	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	5 1 5 1	5.7 5.8 0.7 110.1
2.12 2.13 2.14 3.01	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	5 1 1 1	5.7 5.8 0.7 110.1 3.8 .7,722.0

		TIANIV 20	OOOTIL
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	1	5.8
3.08	Capacity for innovation	1	5.7
3.09	Gov't procurement of advanced tech product	ts3	4.2
3.10	Availability of latest technologies	1	6.5
3.11	Extent of marketing	7	5.4
3.12	Willingness to delegate authority		5.7
3.13	No. industrial designs/million pop.*	7	.4,772.7
3.14	Nature of competitive advantage	1	6.2
	Pillar 4: Education and training		
	Education	1	6.5
4.01	Quality of the educational system		
4.02	PISA scores*	1	529.4
4.03	Tertiary education enrolment, gross %*	1	95.5
4.04	Secondary education enrolment, gross %*	9	107.5
	Training	1	5.7
4.05	Availability of training services		5.9
4.06	Quality of management schools	6	5.6
4.07	Extent of staff training	1	5.5
	Pillar 5: Labour market and employment		
	Labour market efficiency	9	4.2
5.01	Hiring and firing practices		
5.02	Cooperation in labour-employer relations	7	5.2

5.02	Cooperation in labour-employer relations	7	5.2
5.03	Pay and productivity	14	4.1
5.04	Extent of taxation on incentives to work	7	3.8
	Labour participation	5	5.3
5.05	Activity rate, %*	7	75.2
5.06	Women in labour force, ratio to men*	1	0.95
5.07	Private sector employment of women	2	5.5
5.08	Youth unemployment, %*	8	19.9

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	. 2	6.7
6.02	Gini coefficient (0-100 best)*	. 6	25.9
6.03	Gov't effectiveness in reducing poverty & inequality .	. 1	5.7
6.04	Social safety net protection	. 3	6.2
6.05	Social mobility	. 1	6.4

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	7	39.9
7.02	Terrestrial biome protection, %*	24	8.5
7.03	Environmental treaty ratification*	15	23.0
7.04	Enforcement of environmental regulations	1	6.3
7.05	Quality of natural environment	1	6.7
7.06	CO2 emission per energy use, %*	4	1.7
7.07	Particulate matter (2.5) concentration*	2	5.5

## France

RANK/28 SCORE

	Rank (out of 28)	
Europe 2020 Index (2014 edition)		4.8
Europe 2020 Index (2012 edition)	10	5.0
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	10 9 10	4.3 5.2 4.9
Inclusive growth Labour market and employment Social inclusion	21	3.7
Sustainable growth Environmental sustainability		



### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.2
1.01	Intensity of local competition		5.5
1.02	Effectiveness of antitrust policy		4.7
1.03	Extent of market dominance		4.4
1.04	Agricultural policy costs		3.8
1.05	Impact of rules on FDI		4.5
1.06	Distortive effect on tax and subsidy competitie	on 15	4.0
1.07	Burden of government regulation		2.7
	Clusters	8	5.0
1.08	State of cluster development		4.4
1.09	Value chain breadth		5.5
	Entrepreneurship		4.3
1.10	No. procedures to start a business*		5
1.11	No. days to start a business*		7
1.12	Extent of taxation on incentives to invest		2.6
1.13	Attitudes towards entrepreneurial failure		2.5
	Availability of finance	9	3.5
1.14	Ease of access to loans	7	3.2
1.15	Venture capital availability		2.9
1.16	Local equity market access	6	4.4

#### Pillar 2: Digital Agenda

	ICT readiness	10	5.2
2.01	Government strategy for ICT	12	4.2
2.02	Mobile phone subscriptions/100 pop.*	28	97.4
2.03	Int'l Internet bandwidth, kb/s per user*	16	83.9
2.04	Fixed broadband Internet subscriptions/100 pop	.*3	37.5
2.05	Mobile broadband subscriptions/100 pop.*	16	51.8
2.06	Laws relating to ICT	13	4.9
	ICT usage	6	5.9
2.07	Government Online Service Index, 0-1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use	18	5.5
2.10	Business-to-consumer Internet use	13	5.3
	ICT impact	8	4.6
2.11	ICT and access to basic services		
2.12	ICT and business model creations	9	5.2
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop		
	Pillar 3: Innovative Europe	-	
3.01	R&D expenditure, % GDP*	8	2.2

3.01	R&D expenditure, % GDP*	8	2.2
3.02	No. researchers in R&D/million pop.*	10	3,750.5
3.03	Availability of scientists and engineers	9	4.8
3.04	Highly cited scientific articles, % of tot.*	12	10.4
3.05	PCT patents, applications/million pop.*	8	111.3
3.06	Firm-level technology absorption	13	5.5

	INDICATOR, UNITS NANK/20 SCORE
	Pillar 3: Innovative Europe (cont'd.)
3.07	University-industry collaboration in R&D
3.08	Capacity for innovation
3.09	Gov't procurement of advanced tech products 12
3.10	Availability of latest technologies
3.11	Extent of marketing
3.12	Willingness to delegate authority
3.13	No. industrial designs/million pop.*9999
3.14	Nature of competitive advantage
	Pillar 4: Education and training
	Education
4.01	Quality of the educational system
4.02	PISA scores*
4.03	Tertiary education enrolment, gross %*
4.04	Secondary education enrolment, gross %*7109.7
	Training
4.05	Availability of training services
4.00	Availability of training services
4.05	Quality of management schools

#### Pillar 5: Labour market and employment

	Labour market efficiency	26	3.1
5.01	Hiring and firing practices	27	2.5
5.02	Cooperation in labour-employer relations	26	3.4
5.03	Pay and productivity	18	3.8
5.04	Extent of taxation on incentives to work	17	2.8
	Labour participation	18	4.2
5.05	Labour participation		
	and the second	16	70.7
5.06	Activity rate, %*	16 10	70.7 0.88

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	
6.02	Gini coefficient (0-100 best)*	
6.03	Gov't effectiveness in reducing poverty & inequality 113.8	
6.04	Social safety net protection	
6.05	Social mobility	

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	17	14.6
7.02	Terrestrial biome protection, %*	18	13.7
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	12	4.8
7.05	Quality of natural environment	16	5.1
7.06	CO2 emission per energy use, %*	2	1.4
7.07	Particulate matter (2.5) concentration*	11	10.7

## Germany

	(out of 28)	(1-7)
Europe 2020 Index (2014 edition)	5	5.3
Europe 2020 Index (2012 edition)	6	5.3
Smart growth	4	5.3
Enterprise environment	6	4.6
Digital Agenda	7	5.4
Innovative Europe	4	5.6
Education and training	4	5.7
Inclusive growth	7	5.2
Labour market and employment	4	4.8
Social inclusion	8	5.7
Sustainable growth	6	5.2
Environmental sustainability	6	5.2

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### The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	7	4.7
1.01	Intensity of local competition		5.9
1.02	Effectiveness of antitrust policy		5.1
1.03	Extent of market dominance	1	5.8
1.04	Agricultural policy costs		4.0
1.05	Impact of rules on FDI		4.7
1.06	Distortive effect on tax and subsidy competiti	on 13	4.1
1.07	Burden of government regulation	9	3.6
	Clusters	1	5.7
1.08	State of cluster development	2	5.4
1.09	Value chain breadth	1	6.1
	Entrepreneurship		4.4
1.10	No. procedures to start a business*		9
1.11	No. days to start a business*		15
1.12	Extent of taxation on incentives to invest	9	4.1
1.13	Attitudes towards entrepreneurial failure	13	3.4
	Availability of finance	8	3.6
1.14	Ease of access to loans		3.2
1.15	Venture capital availability		3.2
1.16	Local equity market access	8	4.2
	Pillar 2: Digital Agenda		
	ICT readiness		5.1
2.01	Government strategy for ICT	6	4.5
2.02	Mobile phone subscriptions/100 pop.*		

~		dovernment strategy for for		
2	2.02	Mobile phone subscriptions/100 pop.*		
2	2.03	Int'l Internet bandwidth, kb/s per user*	20	74.8
2	2.04	Fixed broadband Internet subscriptions/100 pop."	*5	33.7
2	2.05	Mobile broadband subscriptions/100 pop.*	19	40.8
2	2.06	Laws relating to ICT	12	5.0
		ICT usage	9	5.8
2	2.07	Government Online Service Index, 0-1 (best)*	9	
2	2.08	Individuals using Internet, %*	7	84.0
2	2.09	Business-to-business Internet use	10	5.7
2	2.10	Business-to-consumer Internet use	7	5.8
		ICT impact	4	5.3
2	2.11	ICT impact ICT and access to basic services		
	2.11 2.12		10	5.2
2		ICT and access to basic services	10 8	5.2 5.3
2	2.12	ICT and access to basic services ICT and business model creations	10 8 4	5.2 5.3 0.8
2	2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)*	10 8 4	5.2 5.3 0.8
2	2.12 2.13	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop	10 8 4	5.2 5.3 0.8 46.0
2 2 2	2.12 2.13 2.14	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	10 8 4 4	5.2 5.3 0.8 46.0
	2.12 2.13 2.14 3.01	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	10 8 4 4 4	5.2 5.3 0.8 46.0 2.8 .3,979.2
	2.12 2.13 2.14 3.01 3.02	ICT and access to basic services ICT and business model creations E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop <b>Pillar 3: Innovative Europe</b> R&D expenditure, % GDP* No. researchers in R&D/million pop.*	10 8 4 4 4 7 6	5.2 5.3 0.8 46.0 2.8 .3,979.2 4.9

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		5.4
3.08	Capacity for innovation		5.6
3.09	Gov't procurement of advanced tech produc	ts2	4.3
3.10	Availability of latest technologies	7	6.3
3.11	Extent of marketing		5.7
3.12	Willingness to delegate authority	7	4.9
3.13	No. industrial designs/million pop.*		.8,004.6
3.14	Nature of competitive advantage		6.0
	Pillar 4: Education and training		
	Education	4	5.9
4.01	Quality of the educational system	7	5.1
4.02	PISA scores*	6	515.1
4.03	Tertiary education enrolment, gross %*	n/a	n/a
4.04	Secondary education enrolment, gross %*		101.7
	Training	4	5.4
4.05	Availability of training services	1	6.1
4.06	Quality of management schools		5.1
4.07	Extent of staff training	5	5.1
	Pillar 5: Labour market and employment		
	Labour market efficiency		4.1
5.01	Hiring and firing practices		3.3
5.02	Cooperation in labour-employer relations	6	5.2
5.03	Pay and productivity	8	4.3
5.04	Extent of taxation on incentives to work		
	Labour participation	3	5.5
5.05	Activity rate, %*		
5.06	Women in labour force, ratio to men*		
5.07	Private sector employment of women		
5.08	Youth unemployment, %*	1	7.9

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	9	6.4
6.02	Gini coefficient (0-100 best)*	13	28.3
6.03	Gov't effectiveness in reducing poverty & inequality	y9	4.2
6.04	Social safety net protection	7	5.8
6.05	Social mobility	8	5.6

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	13	22.4
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations		6.1
7.05	Quality of natural environment	7	5.9
7.06	CO2 emission per energy use, %*	15	2.3
7.07	Particulate matter (2.5) concentration*	16	13.3
#### 2: Country Profiles

# Greece

BANK/28 SCORE

	Rank (out of 28)	
Europe 2020 Index (2014 edition)		3.8
Europe 2020 Index (2012 edition)	25	3.9
Smart growth	25	3.7
Enterprise environment		
Digital Agenda		3.8
Innovative Europe		
Education and training	23	4.5
Inclusive growth	27	3.7
Labour market and employment		
Social inclusion	25	4.0
Sustainable growth	21	4.3
Environmental sustainability	21	4.3



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	27	3.4
1.01	Intensity of local competition		4.8
1.02	Effectiveness of antitrust policy		3.8
1.03	Extent of market dominance		3.8
1.04	Agricultural policy costs		2.8
1.05	Impact of rules on FDI		3.0
1.06	Distortive effect on tax and subsidy competition	on 26	3.2
1.07	Burden of government regulation		2.2
	Clusters	27	3.3
1.08	State of cluster development		3.0
1.09	Value chain breadth		3.6
	Entrepreneurship	21	4.3
1.10	No. procedures to start a business*		5
1.11	No. days to start a business*		14
1.12	Extent of taxation on incentives to invest		2.4
1.13	Attitudes towards entrepreneurial failure		3.1
	Availability of finance		1.8
1.14	Ease of access to loans		1.6
1.15	Venture capital availability		1.7
1.16	Local equity market access		2.2

## Pillar 2: Digital Agenda

		ICT readiness	23	
	2.01	Government strategy for ICT	. 28	
	2.02	Mobile phone subscriptions/100 pop.*	. 13 120.0	)
	2.03	Int'l Internet bandwidth, kb/s per user*	. 2364.2	
	2.04	Fixed broadband Internet subscriptions/100 pop.*.	. 1524.1	
	2.05	Mobile broadband subscriptions/100 pop.*	. 18	
	2.06	Laws relating to ICT	. 28	
		ICT usage	. 26 4.3	
	2.07	Government Online Service Index, 0-1 (best)*	. 210.6	;
	2.08	Individuals using Internet, %*	. 26	)
	2.09	Business-to-business Internet use	. 27 4.4	
	2.10	Business-to-consumer Internet use	. 28 4.2	
		ICT impact		
	2.11	ICT and access to basic services	. 27 3.6	;
	2.12	ICT and business model creations	. 28	
	2.13	E-Participation Index, 0-1 (best)*	. 150.3	
	2.13 2.14	E-Participation Index, 0-1 (best)* ICT PCT patents, applications/million pop		
_				
_		ICT PCT patents, applications/million pop	221.4	
_	2.14	ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	221.4	
_	2.14 3.01	ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	. 22 1.4 . 25 0.6 . 20 1,866.9	;

	INDIGATON, UNITS	nANN/20	JUONE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.0
3.08	Capacity for innovation		3.0
3.09	Gov't procurement of advanced tech products	s 28	2.4
3.10	Availability of latest technologies		5.0
3.11	Extent of marketing		4.1
3.12	Willingness to delegate authority		3.4
3.13	No. industrial designs/million pop.*		367.4
3.14	Nature of competitive advantage		3.8
	Pillar 4: Education and training		
	Education		5.3
4.01	Quality of the educational system		3.1
4.02	PISA scores*		465.6
4.03	Tertiary education enrolment, gross %*		91.4
4.04	Secondary education enrolment, gross %*		110.8
	Training		3.7
4.05	Availability of training services		3.8
4.06	Quality of management schools		3.8
4.07	Extent of staff training		3.5
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.2
5.01	Hiring and firing practices		

	Labour market emclency	22	
5.01	Hiring and firing practices	12	3.5
5.02	Cooperation in labour-employer relations	24	3.7
5.03	Pay and productivity	26	3.2
5.04	Extent of taxation on incentives to work	23	2.5
	Labour participation	27	3.5
5.05	Labour participation		
	and the second	20	68.0
5.06	Activity rate, %*	20 26	68.0 0.76
5.06 5.07	Activity rate, %* Women in labour force, ratio to men*	20 26 20	68.0 0.76 4.2

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	.24	4.7
6.02	Gini coefficient (0-100 best)*	. 25	34.3
6.03	Gov't effectiveness in reducing poverty & inequality	26	2.5
6.04	Social safety net protection	. 22	3.7
6.05	Social mobility	. 23	3.8

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	 6.6
7.02	Terrestrial biome protection, %*	 ö.3
7.03	Environmental treaty ratification*	 H.O
7.04	Enforcement of environmental regulations	 3.2
7.05	Quality of natural environment	 5.3
7.06	CO2 emission per energy use, %*	 3.1
7.07	Particulate matter (2.5) concentration*	 .6

# Hungary

	(out of 28)	
Europe 2020 Index (2014 edition)	25.	3.8
Europe 2020 Index (2012 edition)	24 .	4.1
Smart growth	23 .	3.8
Enterprise environment		3.5
Digital Agenda	21 .	4.0
Innovative Europe		3.4
Education and training	24 .	4.5
Inclusive growth	22 .	3.9
Labour market and employment		3.8
Social inclusion		
Sustainable growth		3.6
Environmental sustainability		3.6

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# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.7
1.01	Intensity of local competition		5.3
1.02	Effectiveness of antitrust policy		3.9
1.03	Extent of market dominance		3.3
1.04	Agricultural policy costs		3.7
1.05	Impact of rules on FDI		4.2
1.06	Distortive effect on tax and subsidy competition	on 27	3.1
1.07	Burden of government regulation		2.4
	Clusters		3.4
1.08	State of cluster development		3.3
1.09	Value chain breadth		
	Entrepreneurship		4.7
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		
1.13	Attitudes towards entrepreneurial failure		3.3
	Availability of finance		2.3
1.14	Ease of access to loans		2.1
1.15	Venture capital availability		2.1
1.16	Local equity market access		
	Pillar 2: Digital Agenda		
	ICT readiness		3.5

	ICT readiness	27	3.5
2.01	Government strategy for ICT	22	3.4
2.02	Mobile phone subscriptions/100 pop.*	17	116.1
2.03	Int'l Internet bandwidth, kb/s per user*		
2.04	Fixed broadband Internet subscriptions/100 pop		
2.05	Mobile broadband subscriptions/100 pop.*	27	24.2
2.06	Laws relating to ICT	20	4.2
	ICT usage	15	5.2
2.07	Government Online Service Index, 0–1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use		
2.10	Business-to-consumer Internet use		
	ICT impact		
0.11	the second se		
2.11	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*	11	0.4
2.14	ICT PCT patents, applications/million pop	16	4.8
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*		
3.02	No. researchers in R&D/million pop.*	19	2,137.7
3.03	Availability of scientists and engineers	17	4.3
3.04	Highly cited scientific articles, % of tot.*		

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		4.3
3.08	Capacity for innovation		3.2
3.09	Gov't procurement of advanced tech produc	ts22	3.0
3.10	Availability of latest technologies		5.2
3.11	Extent of marketing		4.2
3.12	Willingness to delegate authority		2.9
3.13	No. industrial designs/million pop.*		479.6
3.14	Nature of competitive advantage		3.3
	Pillar 4: Education and training		
	Education		5.0
4.01	Quality of the educational system		3.4
4.02	PISA scores*		486.6
4.03	Tertiary education enrolment, gross %*		59.5
4.04	Secondary education enrolment, gross %*		
	Training		4.0
4.05	Availability of training services		
4.06	Quality of management schools		
4.07	Extent of staff training		
	Pillar 5: Labour market and employment		
	Labour market efficiency	18	37
5.01	Hiring and firing practices		
5.02	Cooperation in labour-employer relations		
5.03	Pay and productivity		
5.04	Extent of taxation on incentives to work		
	Labour participation		
5.05	Activity rate, %*		
5.06	Women in labour force, ratio to men*		
5.00			0.00

## Pillar 6: Social inclusion

Accessibility of healthcare services	. 20	5.1
Gini coefficient (0-100 best)*	8	26.9
Gov't effectiveness in reducing poverty & inequality	27	2.4
Social safety net protection	. 27	2.9
Social mobility	.26	3.5
	Gini coefficient (0-100 best)* Gov't effectiveness in reducing poverty & inequality Social safety net protection	Accessibility of healthcare services

 5.07
 Private sector employment of women
 26

 5.08
 Youth unemployment, %\*
 19

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	
7.02	Terrestrial biome protection, %*	
7.03	Environmental treaty ratification*	
7.04	Enforcement of environmental regulations	
7.05	Quality of natural environment	
7.06	CO2 emission per energy use, %*	
7.07	Particulate matter (2.5) concentration*	

## 2: Country Profiles

# Ireland

RANK/28 SCORE

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)		4.7
Europe 2020 Index (2012 edition)	12	4.7
Smart growth	11	4.8
Enterprise environment		
Digital Agenda	14	4.7
Innovative Europe		
Education and training	5	5.5
Inclusive growth	11	4.8
Labour market and employment	12	4.3
Social inclusion	12	5.3
Sustainable growth		4.4
Environmental sustainability	18	4.4



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	3	5.0
1.01	Intensity of local competition		5.3
1.02	Effectiveness of antitrust policy		4.8
1.03	Extent of market dominance	9	4.7
1.04	Agricultural policy costs		4.7
1.05	Impact of rules on FDI	1	6.7
1.06	Distortive effect on tax and subsidy competiti	on 5	4.6
1.07	Burden of government regulation	7	3.9
	Clusters		4.8
1.08	State of cluster development	9	4.8
1.09	Value chain breadth		4.9
	Entrepreneurship		5.1
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		4.6
1.13	Attitudes towards entrepreneurial failure	7	3.6
	Availability of finance		2.6
1.14	Ease of access to loans		1.9
1.15	Venture capital availability		2.7
1.16	Local equity market access		3.1

## Pillar 2: Digital Agenda

	ICT readiness	12	5.1
2.01	Government strategy for ICT	10	4.4
2.02	Mobile phone subscriptions/100 pop.*	25	107.2
2.03	Int'l Internet bandwidth, kb/s per user*	13	97.1
2.04	Fixed broadband Internet subscriptions/100 pop.*		22.7
2.05	Mobile broadband subscriptions/100 pop.*	7	65.9
2.06	Laws relating to ICT	10	5.1
	ICT usage		5.1
2.07	Government Online Service Index, 0-1 (best)*	25	0.5
2.08	Individuals using Internet, %*	13	79.0
2.09	Business-to-business Internet use	15	5.5
2.10	Business-to-consumer Internet use	15	5.1
	ICT impact	12	3.9
2.11	ICT and access to basic services		
2.12	ICT and business model creations	7	5.4
2.13	E-Participation Index, 0-1 (best)*	25	0.1
2.14	ICT PCT patents, applications/million pop	8	29.9
	Pillar 3: Innovative Europe		
3.01	B&D expenditure % GDP*	13	18

3.01	R&D expenditure, % GDP*		1.8
3.02	No. researchers in R&D/million pop.*		3,229.8
3.03	Availability of scientists and engineers	7	4.9
3.04	Highly cited scientific articles, % of tot.*		11.5
3.05	PCT patents, applications/million pop.*	11	79.1
3.06	Firm-level technology absorption	9	5.6

	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	7	.5.2
3.08	Capacity for innovation	11	.4.6
3.09	Gov't procurement of advanced tech products.	13	.3.5
3.10	Availability of latest technologies	13	.5.9
3.11	Extent of marketing	10	.5.3
3.12	Willingness to delegate authority		.5.0
3.13	No. industrial designs/million pop.*		06.1
3.14	Nature of competitive advantage		
	Pillar 4: Education and training		
	Education		.6.0
4.01	Education		
4.01 4.02		2	.5.5
	Quality of the educational system	2	.5.5 15.6
4.02	Quality of the educational system PISA scores* Tertiary education enrolment, gross %*	2	.5.5 15.6 73.5
4.02 4.03	Quality of the educational system PISA scores*	2	.5.5 15.6 73.5 17.8
4.02 4.03	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %*	25 <sup>-</sup> 9	.5.5 15.6 73.5 17.8 <b>.5.0</b>
4.02 4.03 4.04	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %* Training	2	.5.5 15.6 73.5 17.8 <b>.5.0</b> .5.0
4.02 4.03 4.04 4.05	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %* <b>Training</b> Availability of training services	2	.5.5 15.6 73.5 17.8 <b>.5.0</b> .5.0 .5.3

#### Pillar 5: Labour market and employment

	Labour market efficiency	5	4.3
5.01	Hiring and firing practices	4	4.2
5.02	Cooperation in labour-employer relations		5.4
5.03	Pay and productivity	7	4.3
5.04	Extent of taxation on incentives to work	10	3.5
	Labour participation	15	4.3
5.05	Labour participation Activity rate, %*		
		18	69.2
5.06	Activity rate, %*	18 22	69.2 0.81

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	. 18	5.3
6.02	Gini coefficient (0-100 best)*	. 14	29.8
6.03	Gov't effectiveness in reducing poverty & inequality	/ 10	4.1
6.04	Social safety net protection	. 10	5.4
6.05	Social mobility	9	5.5

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		19.1
7.02	Terrestrial biome protection, %*		1.8
7.03	Environmental treaty ratification*		24.0
7.04	Enforcement of environmental regulations		5.1
7.05	Quality of natural environment		6.1
7.06	CO2 emission per energy use, %*	23	2.8
7.07	Particulate matter (2.5) concentration*	1	5.0

# Italy

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	21	4.0
Europe 2020 Index (2012 edition)	21	4.3
Smart growth	20	4.2
Enterprise environment	18	3.8
Digital Agenda		
Innovative Europe	16	4.1
Education and training	22	4.7
Inclusive growth		3.6
Labour market and employment		2.9
Social inclusion		
Sustainable growth	19	4.4
Environmental sustainability	19	4.4



## The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.7
1.01	Intensity of local competition		5.0
1.02	Effectiveness of antitrust policy		3.7
1.03	Extent of market dominance	7	5.0
1.04	Agricultural policy costs		3.5
1.05	Impact of rules on FDI		3.2
1.06	Distortive effect on tax and subsidy competition	on 19	3.6
1.07	Burden of government regulation		2.2
	Clusters		5.2
1.08	State of cluster development		5.5
1.09	Value chain breadth		4.9
	Entrepreneurship		4.1
1.10	No. procedures to start a business*		6
1.11	No. days to start a business*	7	6
1.12	Extent of taxation on incentives to invest		2.1
1.13	Attitudes towards entrepreneurial failure		2.5
	Availability of finance		2.2
1.14	Ease of access to loans		1.6
1.15	Venture capital availability		1.8
1.16	Local equity market access		3.1
	Pillar 2: Digital Agenda		
	ICT readiness		4.8

## 2.04 Fixed broadband Internet subscriptions/100 pop.\*..20.......22.1 2.07 Government Online Service Index, 0-1 (best)\*.........21.......0.6 Pillar 3: Innovative Europe 3.01 R&D expenditure, % GDP\*.....1.3

3.05 PCT patents, applications/million pop.\*......13........13.

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.7
3.08	Capacity for innovation		4.2
3.09	Gov't procurement of advanced tech produc	ts25	2.7
3.10	Availability of latest technologies		5.0
3.11	Extent of marketing		
3.12	Willingness to delegate authority		3.1
3.13	No. industrial designs/million pop.*	6	.4,780.0
3.14	Nature of competitive advantage	8	5.8
	Pillar 4: Education and training		
	Education		5.1
4.01	Quality of the educational system		3.6
4.02	PISA scores*		489.5
4.03	Tertiary education enrolment, gross %*		
4.04	Secondary education enrolment, gross %*		100.7
	Training		4.3
4.05	Availability of training services		4.8
4.06	Quality of management schools		5.0
4.07	Extent of staff training		3.2
	Pillar 5: Labour market and employment		
	Labour market efficiency		2.7
5.01	Hiring and firing practices		2.6
5.02	Cooperation in labour-employer relations		3.4
5.03	Pay and productivity		2.8
5.04	Extent of taxation on incentives to work		2.0
	Labour participation		3.1
5.05	Activity rate, %*		63.6
5.06	Women in labour force, ratio to men*		
5.07	Private sector employment of women		3.3
5.08	Youth unemployment, %*		35.3

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	. 14	5.9
6.02	Gini coefficient (0-100 best)*	. 19	31.9
6.03	Gov't effectiveness in reducing poverty & inequality	25	2.6
6.04	Social safety net protection	. 19	3.9
6.05	Social mobility	. 24	3.6

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	8	30.5
7.02	Terrestrial biome protection, %*	21	10.7
7.03	Environmental treaty ratification*	22	22.0
7.04	Enforcement of environmental regulations	24	3.6
7.05	Quality of natural environment	22	4.4
7.06	CO2 emission per energy use, %*	16	2.4
7.07	Particulate matter (2.5) concentration*	17	13.3

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	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	19	4.3
Europe 2020 Index (2012 edition)	19	4.4
Smart growth	21	4.0
Enterprise environment	15	3.8
Digital Agenda	19	4.2
Innovative Europe		
Education and training	20	4.8
Inclusive growth	18	4.3
Labour market and employment		
Social inclusion	22	4.3
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.2
1.01	Intensity of local competition		5.4
1.02	Effectiveness of antitrust policy		4.1
1.03	Extent of market dominance		3.9
1.04	Agricultural policy costs		3.8
1.05	Impact of rules on FDI		4.6
1.06	Distortive effect on tax and subsidy competition	on 10	4.2
1.07	Burden of government regulation		3.4
	Clusters		3.6
1.08	State of cluster development		3.4
1.09	Value chain breadth		3.7
	Entrepreneurship		4.8
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.7
1.13	Attitudes towards entrepreneurial failure		3.5
	Availability of finance		2.7
1.14	Ease of access to loans		2.5
1.15	Venture capital availability		2.8
1.16	Local equity market access		2.9

## Pillar 2: Digital Agenda

	ICT readiness	214.6
2.01	Government strategy for ICT	213.4
2.02	Mobile phone subscriptions/100 pop.*	19 112.1
2.03	Int'l Internet bandwidth, kb/s per user*	2459.0
2.04	Fixed broadband Internet subscriptions/100 pop.*	1623.4
2.05	Mobile broadband subscriptions/100 pop.*	1058.2
2.06	Laws relating to ICT	194.2
	ICT usage	195.1
2.07	Government Online Service Index, 0-1 (best)*	190.6
2.08	Individuals using Internet, %*	
2.09	Business-to-business Internet use	215.2
2.10	Business-to-consumer Internet use	115.4
	ICT impact	21 3.1
2.11	ICT and access to basic services	
2.12	ICT and business model creations	194.4
2.13	E-Participation Index, 0-1 (best)*	210.2
2.14	ICT PCT patents, applications/million pop	261.0
	Pillar 3: Innovative Europe	
3.01	R&D expenditure, % GDP*	230.7
3.02	No. researchers in R&D/million pop.*	22 1,690.5

 3.03
 Availability of scientists and engineers
 28
 3.5

 3.04
 Highly cited scientific articles, % of tot.\*
 28
 3.0

 3.05
 PCT patents, applications/million pop.\*
 22
 8.8

 3.06
 Firm-level technology absorption
 20
 4.7

Pillar 3: Innovative Europe (cont'd.)         3.07       University-industry collaboration in R&D	
3.07       University-industry collaboration in R&D	ORE
3.08       Capacity for innovation	
3.09       Gov't procurement of advanced tech products       18         3.10       Availability of latest technologies       19         3.11       Extent of marketing       22         3.12       Willingness to delegate authority       12         3.13       No. industrial designs/million pop.*       24       61         3.14       Nature of competitive advantage       23         Pillar 4: Education and training         Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       66         4.04       Secondary education enrolment, gross %*       16       9         Training       20       40       40       40         4.05       Availability of training services       23       40       9         4.05       Availability of training services       23       40       9         4.06       Extent of staff training       14       49         4.07       Extent of staff training       14       40         4.07       Extent of firing practices       5       5         5.02	.3.6
3.10       Availability of latest technologies       19         3.11       Extent of marketing       22         3.12       Willingness to delegate authority       12         3.13       No. industrial designs/million pop.*       24       61         3.14       Nature of competitive advantage       23         Pillar 4: Education and training         Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       64         4.04       Secondary education enrolment, gross %*       16       9         Training       20       40       40       9         4.05       Availability of training services       23       23         4.06       Quality of management schools       18       40         4.07       Extent of staff training       14       14         Pillar 5: Labour market and employment       Labour market efficiency       12         5.01       Hiring and firing practices       5       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productiv	.3.5
3.11       Extent of marketing       22         3.12       Willingness to delegate authority       12         3.13       No. industrial designs/million pop.*       24       61         3.14       Nature of competitive advantage       23         Pillar 4: Education and training         Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       66         4.04       Secondary education enrolment, gross %*       16       9         Training       20       40       40       9         4.05       Availability of training services       23       23         4.06       Quality of management schools       18       40         4.07       Extent of staff training       14       44         4.07       Extent of staff training       14       14         Pillar 5: Labour market and employment       12       50       50       50       50       50       50       50       50       50       50       50       50       50       50       50       50       50       50	.3.2
3.12       Willingness to delegate authority       12         3.13       No. industrial designs/million pop.*       24       .61         3.14       Nature of competitive advantage       23         Pillar 4: Education and training         Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       .49         4.03       Tertiary education enrolment, gross %*       14       .61         4.04       Secondary education enrolment, gross %*       16       .9         Training       20	.5.3
3.13       No. industrial designs/million pop.*	.4.3
3.14       Nature of competitive advantage       23         Pillar 4: Education and training         Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       49         4.04       Secondary education enrolment, gross %*       16       9         Training       20       40       40         4.05       Availability of training services       23       40         4.06       Quality of management schools       18       40         4.07       Extent of staff training       14       14         4.07       Extent of staff training       14       14         5.01       Hiring and firing practices       5       5       5         5.02       Cooperation in labour-employer relations       13       5       3         5.03       Pay and productivity       5       5       5       5       5         5.04       Extent of taxation on incentives to work       14       14       14	.4.0
Pillar 4: Education and training         Education         4.01       Quality of the educational system.       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       49         4.04       Secondary education enrolment, gross %*       14       69         Training       20       40       400       90         4.05       Availability of training services       23       400       90         4.06       Quality of management schools       18       400       14         4.07       Extent of staff training       14       14         9       Pillar 5: Labour market and employment       12       500         5.01       Hiring and firing practices       5       5       5         5.02       Cooperation in labour-employer relations       13       5       5         5.04       Extent of taxation on incentives to work       14       14	6.6
Education       18         4.01       Quality of the educational system       19         4.02       PISA scores*       14       49         4.03       Tertiary education enrolment, gross %*       14       69         4.04       Secondary education enrolment, gross %*       16       99         Training       20       40       400       90         4.05       Availability of training services       23       40         4.06       Quality of management schools       18       40         4.07       Extent of staff training       14       40         Pillar 5: Labour market and employment       14       14         5.01       Hiring and firing practices       5       5         5.02       Cooperation in labour-employer relations       13       5         5.03       Pay and productivity       5       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10       10	.3.6
4.01       Quality of the educational system	
4.02       PISA scores*       14	.5.2
4.02       PISA scores*       14	.3.7
4.04       Secondary education enrolment, gross %*	
Training       20         4.05       Availability of training services       23         4.06       Quality of management schools       18         4.07       Extent of staff training       14         Pillar 5: Labour market and employment         Labour market efficiency         5.01       Hiring and firing practices       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10	37.3
4.05       Availability of training services       23         4.06       Quality of management schools       18         4.07       Extent of staff training       14         Pillar 5: Labour market and employment         Labour market efficiency         5.01       Hiring and firing practices       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10	98.7
4.06       Quality of management schools       18         4.07       Extent of staff training       14 <b>Pillar 5: Labour market and employment Labour market efficiency</b> 5.01       Hiring and firing practices       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10	.4.3
4.07       Extent of staff training       14         Pillar 5: Labour market and employment         Labour market efficiency       12         5.01       Hiring and firing practices       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation	.4.3
Pillar 5: Labour market and employment         Labour market efficiency	.4.4
Labour market efficiency       12         5.01       Hiring and firing practices       5         5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10	.4.3
5.01       Hiring and firing practices	
5.02       Cooperation in labour-employer relations       13         5.03       Pay and productivity       5         5.04       Extent of taxation on incentives to work       14         Labour participation       10	.4.1
5.03 Pay and productivity	.4.2
5.04 Extent of taxation on incentives to work	.4.5
Labour participation10	.4.6
	.3.1
5 05 A 11 11 A 0/4	.4.7
5.05 Activity rate, %*	74.6
5.06 Women in labour force, ratio to men*	).93
5.07 Private sector employment of women 3	.5.3
5.08 Youth unemployment, %*20	28.5

## Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	. 25	4.4
6.02	Gini coefficient (0-100 best)*	28	.35.3
6.03	Gov't effectiveness in reducing poverty & inequality	20	2.9
6.04	Social safety net protection	20	3.8
6.05	Social mobility	13	4.8

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		50.5
7.02	Terrestrial biome protection, %*		17.0
7.03	Environmental treaty ratification*		21.0
7.04	Enforcement of environmental regulations		4.3
7.05	Quality of natural environment		5.5
7.06	CO2 emission per energy use, %*		1.6
7.07	Particulate matter (2.5) concentration*	9	8.9

# Lithuania

	Rank (out of 28)	
Europe 2020 Index (2014 edition)		4.4
Europe 2020 Index (2012 edition)	20	4.3
Smart growth	16	4.2
Enterprise environment	17	3.8
Digital Agenda	15	4.6
Innovative Europe	20	3.6
Education and training	16	4.9
Inclusive growth	17	4.4
Labour market and employment	11	4.4
Social inclusion	20	4.4
Sustainable growth	10	4.9
Environmental sustainability	10	4.9

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# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.9
1.01	Intensity of local competition		5.4
1.02	Effectiveness of antitrust policy		3.8
1.03	Extent of market dominance		3.4
1.04	Agricultural policy costs		3.9
1.05	Impact of rules on FDI		4.0
1.06	Distortive effect on tax and subsidy competition	on 18.	3.7
1.07	Burden of government regulation		3.0
	Clusters		3.8
1.08	State of cluster development		3.3
1.09	Value chain breadth		4.2
	Entrepreneurship		4.9
1.10	No. procedures to start a business*		
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.2
1.13	Attitudes towards entrepreneurial failure	5.	3.8
	Availability of finance		2.8
1.14	Ease of access to loans		2.4
1.15	Venture capital availability		2.5
1.16	Local equity market access	14.	3.4
	Pillar 2: Digital Agenda		
	ICT readiness		4.7
2.01	Government strategy for ICT		3.9
2.02	Mobile phone subscriptions/100 pop.*		
2.03	Int'l Internet bandwidth, kb/s per user*		
2.04	Fixed broadband Internet subscriptions/100 p		
2.05	Mobile broadband subscriptions/100 pop.*		
2.06	Laws relating to ICT		4.7

	Pillar 3: Innovative Europe		
2.14	ICT PCT patents, applications/million pop	20	1.5
2.13	E-Participation Index, 0-1 (best)*	9	0.5
2.12	ICT and business model creations	14	5.0
2.11	ICT and access to basic services	15	5.0
	ICT impact	14	3.8
2.10	Business-to-consumer Internet use	5	5.8
2.09	Business-to-business Internet use	3	6.1
2.08	Individuals using Internet, %*	20	68.0
2.07	Government Online Service Index, 0-1 (best)*	12	0.7
	ICT usage	12	5.4
2.00	Laws relating to 101		4.7

3.01	R&D expenditure, % GDP*	19	0.9
3.02	No. researchers in R&D/million pop.*	18	.2,523.5
3.03	Availability of scientists and engineers	18	4.3
3.04	Highly cited scientific articles, % of tot.*	19	6.2
3.05	PCT patents, applications/million pop.*	25	5.8
3.06	Firm-level technology absorption	16	5.2

	Pillar 3: Innovative Europe (cont'd.)	
3.07	University-industry collaboration in R&D	124.6
3.08	Capacity for innovation	154.0
3.09	Gov't procurement of advanced tech products2	213.0
3.10	Availability of latest technologies	165.7
3.11	Extent of marketing	134.7
3.12	Willingness to delegate authority	143.9
3.13	No. industrial designs/million pop.*	25586.2
3.14	Nature of competitive advantage	213.7
	Pillar 4: Education and training	
	Pillar 4: Education and training Education	135.4
4.01	5	
4.01 4.02	Education	174.0
	Education	174.0 20483.9
4.02	Education	174.0 20483.9 .576.6
4.02 4.03	Education	174.0 20483.9 .576.6 10106.9
4.02 4.03	Education	174.0 20483.9 .576.6 10106.9 <b>174.4</b>
4.02 4.03 4.04	Education	174.0 20483.9 .576.6 10106.9 <b>174.4</b> 204.7

RANK/28 SCORE

#### Pillar 5: Labour market and employment

	Labour market efficiency	16	3.7
5.01	Hiring and firing practices	23	3.1
5.02	Cooperation in labour-employer relations	14	4.3
5.03	Pay and productivity	3	4.7
5.04	Extent of taxation on incentives to work	15	3.0
	Labour participation	8	5.0
5.05	Labour participation		
	and the second	12	72.9
5.06	Activity rate, %*	12 2	72.9 0.95

#### Pillar 6: Social inclusion

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## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	12	26.2
7.02	Terrestrial biome protection, %*	14	14.9
7.03	Environmental treaty ratification*	22	22.0
7.04	Enforcement of environmental regulations	17	4.4
7.05	Quality of natural environment	14	5.2
7.06	CO2 emission per energy use, %*	6	1.9
7.07	Particulate matter (2.5) concentration*	14	11.8

RANK/28 SCORE

# Luxembourg

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	8	5.1
Europe 2020 Index (2012 edition)	8	5.1
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	4 6 8	4.8 5.5 5.2
Inclusive growth	5	5.3
Labour market and employment Social inclusion		
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	2	5.0
1.01	Intensity of local competition		5.1
1.02	Effectiveness of antitrust policy	6	5.0
1.03	Extent of market dominance		4.5
1.04	Agricultural policy costs	1	4.9
1.05	Impact of rules on FDI		5.8
1.06	Distortive effect on tax and subsidy competition	on 1	5.2
1.07	Burden of government regulation		4.2
	Clusters		4.9
1.08	State of cluster development		4.7
1.09	Value chain breadth		
	Entrepreneurship	5	5.0
1.10	No. procedures to start a business*		6
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest	1	5.3
1.13	Attitudes towards entrepreneurial failure		3.5
	Availability of finance	3	4.2
1.14	Ease of access to loans		4.2
1.15	Venture capital availability		4.0
1.16	Local equity market access		

## Pillar 2: Digital Agenda

	ICT readiness
2.01	Government strategy for ICT
2.02	Mobile phone subscriptions/100 pop.*7
2.03	Int'l Internet bandwidth, kb/s per user* 14,088.5
2.04	Fixed broadband Internet subscriptions/100 pop.*7
2.05	Mobile broadband subscriptions/100 pop.*4
2.06	Laws relating to ICT
	ICT usage
2.07	Government Online Service Index, 0–1 (best)*
2.08	Individuals using Internet, %*
2.09	Business-to-business Internet use
2.10	Business-to-consumer Internet use
	ICT impact9
2.11	ICT and access to basic services
2.12	ICT and business model creations
2.13	E-Participation Index, 0-1 (best)*
2.14	ICT PCT patents, applications/million pop1123.0
	Pillar 3: Innovative Europe
3.01	R&D expenditure, % GDP*1.4

3.01	R&D expenditure, % GDP*	
3.02	No. researchers in R&D/million pop.*	
3.03	Availability of scientists and engineers	
3.04	Highly cited scientific articles, % of tot.*	612.4
3.05	PCT patents, applications/million pop.*	7112.6
3.06	Firm-level technology absorption	

	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	8	4.9
3.08	Capacity for innovation	7	5.1
3.09	Gov't procurement of advanced tech products	1	4.4
3.10	Availability of latest technologies	5	6.3
3.11	Extent of marketing	8	5.3
3.12	Willingness to delegate authority	9	4.7
3.13	No. industrial designs/million pop.*	12	9,049.3
3.14	Nature of competitive advantage	10	5.6
	Pillar 4: Education and training		
	Education	25	4.5
4.01	Education		
4.01 4.02		12	4.4
	Quality of the educational system	12 15	4.4
4.02	Quality of the educational system PISA scores*	12 15 27	4.4 489.6 18.2
4.02 4.03	Quality of the educational system PISA scores* Tertiary education enrolment, gross %*	12 15 27 13	4.4 489.6 18.2 101.0
4.02 4.03	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %*	12 15 27 13 <b> 11</b>	4.4 489.6 18.2 101.0
4.02 4.03 4.04	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %* Training	12 15 27 13 <b>11</b> 9	4.4 489.6 18.2 101.0 <b>5.0</b>
4.02 4.03 4.04 4.05	Quality of the educational system PISA scores* Tertiary education enrolment, gross %* Secondary education enrolment, gross %* <b>Training</b> Availability of training services	12 15 27 13 <b>11</b> 9 17	4.4 489.6 18.2 101.0 <b>5.0</b> 5.3 4.5

#### Pillar 5: Labour market and employment

	Labour market efficiency	3	4.5
5.01	Hiring and firing practices	16	3.3
5.02	Cooperation in labour-employer relations	8	5.1
5.03	Pay and productivity	11	4.2
5.04	Extent of taxation on incentives to work	1	5.2
	Labour participation	12	4.7
5.05	Labour participation		
	and the second	19	68.9
5.06	Activity rate, %*	19 20	68.9 0.83

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	8	6.4
6.02	Gini coefficient (0-100 best)*	11	28.0
	Gov't effectiveness in reducing poverty & inequalit		
6.04	Social safety net protection	2	6.2
6.05	Social mobility	4	5.9

#### Pillar 7: Environmental sustainability

	,		
7.01	Renewable electricity production, %*		10.7
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*		22.0
7.04	Enforcement of environmental regulations	6	5.8
7.05	Quality of natural environment	5	5.9
7.06	CO2 emission per energy use, %*		2.6
7.07	Particulate matter (2.5) concentration*		12.6

# Malta

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	14	4.4
Europe 2020 Index (2012 edition)	18	4.4
Smart growth	15	4.4
Enterprise environment	13	4.1
Digital Agenda	13	4.7
Innovative Europe	19	3.8
Education and training	15	4.9
Inclusive growth	10	4.8
Labour market and employment	13	4.3
Social inclusion		
Sustainable growth	27	3.9
Environmental sustainability	27	3.9



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	9.	4.7
1.01	Intensity of local competition	2.	6.0
1.02	Effectiveness of antitrust policy	9.	4.8
1.03	Extent of market dominance		
1.04	Agricultural policy costs		
1.05	Impact of rules on FDI		
1.06	Distortive effect on tax and subsidy competition		
1.07	Burden of government regulation		3.4
	Clusters		4.1
1.08	State of cluster development		3.9
1.09	Value chain breadth		4.3
	Entrepreneurship		3.8
1.10	No. procedures to start a business*		11
1.11	No. days to start a business*		40
1.12	Extent of taxation on incentives to invest	8.	4.2
1.13	Attitudes towards entrepreneurial failure		3.3
	Availability of finance	4.	3.8
1.14	Ease of access to loans	4.	3.9
1.15	Venture capital availability		
1.16	Local equity market access	4.	4.4
	Pillar 2: Digital Agenda		
	ICT readiness	7.	5.4
2.01	Government strategy for ICT	1.	5.7
2.02	Mobile phone subscriptions/100 pop.*		127.0
2.03	Int'l Internet bandwidth, kb/s per user*	2.	625.8
2.04	Fixed broadband Internet subscriptions/100 p	op.*9.	32.0
2.05	Mobile broadband subscriptions/100 pop.*		35.3
2.06	Laws relating to ICT	8.	5.1
	ICT usage		5.1
2.07	Government Online Service Index, 0-1 (best)*.		0.6
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use	8.	5.9
2.10	Business-to-consumer Internet use		5.0
	ICT impact	16	3.6

	ICT Impact	 э.
2.11	ICT and access to basic services	
	ICT and business model creations	
2.13	E-Participation Index, 0-1 (best)*	 3
	ICT PCT patents, applications/million pop.	

#### Pillar 3: Innovative Europe

3.01	R&D expenditure, % GDP*	22	0.7
3.02	No. researchers in R&D/million pop.*	26	1,411.7
3.03	Availability of scientists and engineers	14	4.5
3.04	Highly cited scientific articles, % of tot.*	22	4.8
3.05	PCT patents, applications/million pop.*	19	10.2
3.06	Firm-level technology absorption	12	5.5

	Pillar 3: Innovative Europe (cont'd.)	
3.07	University-industry collaboration in R&D	
3.08	Capacity for innovation	
3.09	Gov't procurement of advanced tech products	s
3.10	Availability of latest technologies	106.1
3.11	Extent of marketing	
3.12	Willingness to delegate authority	
3.13	No. industrial designs/million pop.*	
3.14	Nature of competitive advantage	
	Pillar 4: Education and training	
	Education	
4.01	Quality of the educational system	
4.02	PISA scores*	n/an/a
4.03	Tertiary education enrolment, gross %*	
4.04	Secondary education enrolment, gross %*	
	Training	
4.05		
4.00	Availability of training services	
4.06	Availability of training services Quality of management schools	
		11

RANK/28 SCORE

	Labour market efficiency	7	4.3
5.01	Hiring and firing practices	9	3.9
5.02	Cooperation in labour-employer relations	10	5.0
5.03	Pay and productivity	9	4.3
5.04	Extent of taxation on incentives to work	6	4.0
	Labour participation	16	4.3
5.05	Labour participation		
	and the second	28	63.1
5.06	Activity rate, %*	28 28	63.1 0.61

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	7	6.6
6.02	Gini coefficient (0-100 best)*	9	27.1
6.03	Gov't effectiveness in reducing poverty & inequality		4.3
6.04	Social safety net protection	. 13	4.8
6.05	Social mobility	. 12	4.9

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		0.5
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*		19.0
7.04	Enforcement of environmental regulations		4.1
7.05	Quality of natural environment		4.0
7.06	CO <sub>2</sub> emission per energy use, %*		3.1
7.07	Particulate matter (2.5) concentration*		6.4

# Netherlands

RANK/28

SCORE

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	3	5.4
Europe 2020 Index (2012 edition)	4	5.5
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	3 3 5	4.8 6.1 5.5
Inclusive growth Labour market and employment Social inclusion	3	4.8
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	1	5.1
1.01	Intensity of local competition		6.0
1.02	Effectiveness of antitrust policy		5.4
1.03	Extent of market dominance		5.4
1.04	Agricultural policy costs		4.7
1.05	Impact of rules on FDI	5	5.3
1.06	Distortive effect on tax and subsidy competition	n 3	4.8
1.07	Burden of government regulation	6	4.0
	Clusters		5.2
1.08	State of cluster development		5.2
1.09	Value chain breadth		
	Entrepreneurship	2	5.2
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		4.6
1.13	Attitudes towards entrepreneurial failure	8	3.6
	Availability of finance	6	3.7
1.14	Ease of access to loans		
1.15	Venture capital availability		3.5
1.16	Local equity market access		

#### Pillar 2: Digital Agenda

	ICT readiness	6	5.6
2.01	Government strategy for ICT	9	4.4
2.02	Mobile phone subscriptions/100 pop.*	14 1	18.0
2.03	Int'l Internet bandwidth, kb/s per user*		72.9
2.04	Fixed broadband Internet subscriptions/100 pc		
2.05	Mobile broadband subscriptions/100 pop.*	9	61.3
2.06	Laws relating to ICT	6	5.1
	ICT usage		6.5
2.07	Government Online Service Index, 0-1 (best)*	2	1.0
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use		
2.10	Business-to-consumer Internet use		6.0
	ICT impact	1	6.0
2.11	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop		
	Pillar 3: Innovative Europe		
0.01	DPD averaged to use 0/ CDD*	10	0.0

3.01	R&D expenditure, % GDP*10	2.0
3.02	No. researchers in R&D/million pop.*	3,134.1
3.03	Availability of scientists and engineers	4.5
3.04	Highly cited scientific articles, % of tot.*1	15.6
3.05	PCT patents, applications/million pop.*5.	189.0
3.06	Firm-level technology absorption	5.7

	INDICATOR, ONITO	TIANITY 20	JUUIL
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	6	5.3
3.08	Capacity for innovation	5	5.1
3.09	Gov't procurement of advanced tech products	s5	4.1
3.10	Availability of latest technologies		6.4
3.11	Extent of marketing		5.8
3.12	Willingness to delegate authority		5.6
3.13	No. industrial designs/million pop.*	8	4,459.6
3.14	Nature of competitive advantage	6	5.9
	Pillar 4: Education and training		
	Education	2	6.0
4.01	Quality of the educational system	6	5.2
4.02	PISA scores*		518.8
4.03	Tertiary education enrolment, gross %*	6	76.4
4.04	Secondary education enrolment, gross %*	2	128.4
	Training	2	5.6
4.05	Availability of training services		
4.06	Quality of management schools		
4.07	Extent of staff training		
	Pillar 5: Labour market and employment		

## 

5.06	Women in labour force, ratio to men*	. 11	0.88
5.07	Private sector employment of women	8	5.0
5.08	Youth unemployment, %*	3	11.0

## Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	. 6	6.6
6.02	Gini coefficient (0-100 best)*	. 5	25.4
	Gov't effectiveness in reducing poverty & inequality.		
6.04	Social safety net protection	. 6	5.9
6.05	Social mobility	. 3	5.9

#### Pillar 7: Environmental sustainability

	······,		
7.01	Renewable electricity production, %*		12.1
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	7	5.7
7.05	Quality of natural environment	17	5.0
7.06	CO2 emission per energy use, %*	12	2.2
7.07	Particulate matter (2.5) concentration*		14.1

# Poland

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	22	4.0
Europe 2020 Index (2012 edition)	23	4.1
Smart growth	22	4.0
Enterprise environment	19	3.7
Digital Agenda	23	4.0
Innovative Europe	21	3.4
Education and training	18	4.9
Inclusive growth	23	3.9
Labour market and employment	18	3.9
Social inclusion		3.9
Sustainable growth	23	4.1
Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.1
1.01	Intensity of local competition		5.3
1.02	Effectiveness of antitrust policy		4.1
1.03	Extent of market dominance	8	4.8
1.04	Agricultural policy costs		3.6
1.05	Impact of rules on FDI		4.2
1.06	Distortive effect on tax and subsidy competition	n 16	3.9
1.07	Burden of government regulation		2.7
	Clusters		3.7
1.08	State of cluster development		3.4
1.09	Value chain breadth		
	Entrepreneurship		4.3
1.10	No. procedures to start a business*		4
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.1
1.13	Attitudes towards entrepreneurial failure		3.1
	Availability of finance		2.8
1.14	Ease of access to loans		2.5
1.15	Venture capital availability		2.3
1.16	Local equity market access		3.6

## Pillar 2: Digital Agenda

	ICT readiness	19	4.7
2.01	Government strategy for ICT	26	3.1
2.02	Mobile phone subscriptions/100 pop.*	8	140.3
2.03	Int'l Internet bandwidth, kb/s per user*	21	70.6
2.04	Fixed broadband Internet subscriptions/100 pop	*27	15.5
2.05	Mobile broadband subscriptions/100 pop.*	8	63.5
2.06	Laws relating to ICT	26	3.8
	ICT usage	24	4.6
2.07	Government Online Service Index, 0-1 (best)*	25	0.5
2.08	Individuals using Internet, %*	21	65.0
2.09	Business-to-business Internet use	26	4.4
2.10	Business-to-consumer Internet use	22	4.9
	ICT impact	26	2.7
2.11	ICT and access to basic services	26	3.6
2.12	ICT and business model creations	26	3.9
2.13			
	E-Participation Index, 0-1 (best)*	22	0.2
2.14	E-Participation Index, 0-1 (best)*		
2.14			
3.01	ICT PCT patents, applications/million pop	23	1.3
	ICT PCT patents, applications/million pop Pillar 3: Innovative Europe	23	1.3
3.01	ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP*	23 20	1.3 0.8 1,685.4
3.01 3.02	ICT PCT patents, applications/million pop Pillar 3: Innovative Europe R&D expenditure, % GDP* No. researchers in R&D/million pop.*	23 20 23 21	1.3 0.8 1,685.4 4.2

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.5
3.08	Capacity for innovation		3.6
3.09	Gov't procurement of advanced tech produc	ts20	3.1
3.10	Availability of latest technologies		4.4
3.11	Extent of marketing		4.5
3.12	Willingness to delegate authority		3.8
3.13	No. industrial designs/million pop.*		.2,440.3
3.14	Nature of competitive advantage		3.2
	Pillar 4: Education and training		
	Education		5.5
4.01	Quality of the educational system		3.4
4.02	PISA scores*		520.5
4.03	Tertiary education enrolment, gross %*		73.2
4.04	Secondary education enrolment, gross %*		97.7
	Training		4.2
4.05	Availability of training services		
4.06	Quality of management schools		4.0
4.07	Extent of staff training		
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.8
5.01	Hiring and firing practices		
5.02	Cooperation in labour-employer relations		

5.01	Hiring and firing practices	13	3.4
5.02	Cooperation in labour-employer relations	18	4.1
5.03	Pay and productivity	10	4.2
5.04	Extent of taxation on incentives to work	11	3.3
	Labour participation	21	4.0
5.05	Activity rate, %*	22	66.7
5.06	Women in labour force, ratio to men*	21	0.82
5.07	Private sector employment of women	21	4.1
5.08	Youth unemployment, %*	18	27.4

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	28	3.7
6.02	Gini coefficient (0-100 best)*	. 17	30.9
6.03	Gov't effectiveness in reducing poverty & inequality	22	2.9
6.04	Social safety net protection	28	2.8
6.05	Social mobility	. 22	4.0

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		10.4
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	19	4.2
7.05	Quality of natural environment		4.4
7.06	CO2 emission per energy use, %*	25	3.1
7.07	Particulate matter (2.5) concentration*		15.7

Note: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (\*), which identifies those indicators not derived from the Executive Opinion Survey.

## 2: Country Profiles

RANK/28 SCORE

# Portugal

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	15	4.4
Europe 2020 Index (2012 edition)	14	4.6
Smart growth	14	4.4
Enterprise environment	20	3.7
Digital Agenda	16	4.5
Innovative Europe	12	4.4
Education and training	13	5.0
Inclusive growth	20	4.2
Labour market and employment	24	3.7
Social inclusion	18	4.7
Sustainable growth	8	5.1
Environmental sustainability	8	5.1



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	20	3.8
1.01	Intensity of local competition		4.9
1.02	Effectiveness of antitrust policy		4.1
1.03	Extent of market dominance		3.5
1.04	Agricultural policy costs		3.4
1.05	Impact of rules on FDI		4.2
1.06	Distortive effect on tax and subsidy competition	on 22	3.5
1.07	Burden of government regulation		2.7
	Clusters		4.1
1.08	State of cluster development		4.2
1.09	Value chain breadth		
	Entrepreneurship		4.6
1.10	No. procedures to start a business*		3
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		2.6
1.13	Attitudes towards entrepreneurial failure		2.7
	Availability of finance		2.4
1.14	Ease of access to loans		2.1
1.15	Venture capital availability		2.2
1.16	Local equity market access		

## Pillar 2: Digital Agenda

	ICT readiness	1
2.01	Government strategy for ICT	,
2.02	Mobile phone subscriptions/100 pop.*	
2.03	Int'l Internet bandwidth, kb/s per user* 4 195.5	,
2.04	Fixed broadband Internet subscriptions/100 pop.* 19	,
2.05	Mobile broadband subscriptions/100 pop.*25	1
2.06	Laws relating to ICT	1
	ICT usage	
2.07	Government Online Service Index, 0-1 (best)*150.7	
2.08	Individuals using Internet, %*	
2.09	Business-to-business Internet use	;
2.10	Business-to-consumer Internet use	
	ICT impact	,
2.11	ICT and access to basic services	
2.12	ICT and business model creations	
2.13	E-Participation Index, 0-1 (best)*	
2.14	ICT PCT patents, applications/million pop	
	Pillar 3: Innovative Europe	
2.01	P&D ovponditure % CDP* 14 15	

R&D expenditure, % GDP*	
No. researchers in R&D/million pop.*	
Availability of scientists and engineers	5
Highly cited scientific articles, % of tot.*	
PCT patents, applications/million pop.*	
Firm-level technology absorption	
	No. researchers in R&D/million pop.* Availability of scientists and engineers Highly cited scientific articles, % of tot.* PCT patents, applications/million pop.*

		Thursday Lo	OUUIIL
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		4.6
3.08	Capacity for innovation		3.9
3.09	Gov't procurement of advanced tech product	ts10	3.7
3.10	Availability of latest technologies	8	6.2
3.11	Extent of marketing		4.4
3.12	Willingness to delegate authority		3.4
3.13	No. industrial designs/million pop.*		.3,178.7
3.14	Nature of competitive advantage		3.7
	Pillar 4: Education and training		
	Education		5.3
4.01	Quality of the educational system		4.0
4.02	PISA scores*		488.0
4.03	Tertiary education enrolment, gross %*		65.9
4.04	Secondary education enrolment, gross %*	6	109.7
4.04	Secondary education enrolment, gross %* Training		
4.04 4.05	Training		4.8
	,	<b> 12</b> 13	<b>4.8</b> 5.0
4.05	Training Availability of training services	<b>12</b> 13 7	<b>4.8</b> 5.0 5.5

#### Pillar 5: Labour market and employment

	Labour market efficiency	21	3.3
5.01	Hiring and firing practices	20	3.2
5.02	Cooperation in labour-employer relations	19	4.1
5.03	Pay and productivity	25	3.4
5.04	Extent of taxation on incentives to work	24	2.4
	Labour participation	20	4.0
5.05	Labour participation		
	and the second	11	74.0
5.06	Activity rate, %*	11 8	74.0 0.90

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services	5.9
6.02	Gini coefficient (0-100 best)*	34.5
6.03	Gov't effectiveness in reducing poverty & inequality 16	3.2
6.04	Social safety net protection 15	4.5
6.05	Social mobility21	4.3

#### Pillar 7: Environmental sustainability

	··· ··· ··· ··· ··· ··· ··· ··· ··· ··	
7.01	Renewable electricity production, %*	
7.02	Terrestrial biome protection, %*	
7.03	Environmental treaty ratification*	
7.04	Enforcement of environmental regulations	
7.05	Quality of natural environment	
7.06	CO <sub>2</sub> emission per energy use, %*	
7.07	Particulate matter (2.5) concentration*	

# Romania

	(out of 28)	
Europe 2020 Index (2014 edition)		3.6
Europe 2020 Index (2012 edition)	26 .	3.8
Smart growth		3.5
Enterprise environment	23 .	3.6
Digital Agenda		3.6
Innovative Europe		2.9
Education and training		4.0
Inclusive growth		3.7
Labour market and employment	22 .	3.7
Social inclusion	27 .	3.8
Sustainable growth		3.9
Environmental sustainability		3.9

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# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.6
1.01	Intensity of local competition		4.4
1.02	Effectiveness of antitrust policy		3.6
1.03	Extent of market dominance		3.6
1.04	Agricultural policy costs		3.5
1.05	Impact of rules on FDI		3.7
1.06	Distortive effect on tax and subsidy competition	n 21	3.5
1.07	Burden of government regulation		2.8
	Clusters		3.5
1.08	State of cluster development		3.5
1.09	Value chain breadth		3.5
	Entrepreneurship	14	4.7
1.10	No. procedures to start a business*		5
1.11	No. days to start a business*		9
1.12	Extent of taxation on incentives to invest		2.6
1.13	Attitudes towards entrepreneurial failure		4.0
	Availability of finance		2.7
1.14	Ease of access to loans		2.7
1.15	Venture capital availability		2.4
1.16	Local equity market access		3.0
	Diller 0: Digital Agende		

## Pillar 2: Digital Agenda

	ICT readiness	25	4.1
2.01	Government strategy for ICT	19	3.5
2.02	Mobile phone subscriptions/100 pop.*	26	105.0
2.03	Int'l Internet bandwidth, kb/s per user*		
2.04	Fixed broadband Internet subscriptions/100 pop.*	26	16.2
2.05	Mobile broadband subscriptions/100 pop.*	26	27.0
2.06	Laws relating to ICT	22	4.1
	ICT usage	28	4.3
2.07	Government Online Service Index, 0-1 (best)*	26	0.5
2.08	Individuals using Internet, %*	28	50.0
2.09	Business-to-business Internet use	25	4.7
2.10	Business-to-consumer Internet use	19	5.0
	ICT impact	27	2.5
2.11	ICT and access to basic services	28	3.6
2.12	ICT and business model creations	24	3.9
2.13	E-Participation Index, 0-1 (best)*	27	0.1
2.14	ICT PCT patents, applications/million pop	27	0.7
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*	28	0.5
3.02	No. researchers in R&D/million pop.*		
3.03	Availability of scientists and engineers		
3.04	Highly cited scientific articles, % of tot.*	25	3.5

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.3
3.08	Capacity for innovation		3.4
3.09	Gov't procurement of advanced tech produc	ts 17	3.2
3.10	Availability of latest technologies		4.3
3.11	Extent of marketing		3.9
3.12	Willingness to delegate authority		3.4
3.13	No. industrial designs/million pop.*		281.7
3.14	Nature of competitive advantage		3.1
	Pillar 4: Education and training		
	Education		4.3
4.01	Quality of the educational system		3.3
4.02	PISA scores*		440.3
4.03	Tertiary education enrolment, gross %*		51.6
4.04	Secondary education enrolment, gross %*		96.0
	Training		3.6
4.05	Availability of training services		
4.06	Quality of management schools		3.7
4.07	Extent of staff training		3.1
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.2
5.01	Hiring and firing practices		3.9

	Labour market efficiency	23	3.2
5.01	Hiring and firing practices	10	3.9
5.02	Cooperation in labour-employer relations	28	3.3
5.03	Pay and productivity	23	3.7
5.04	Extent of taxation on incentives to work	27	2.1
	Labour participation	19	4.1
5.05	Labour participation Activity rate, %*		
		24	64.5
5.06	Activity rate, %*	24 25	64.5 0.78

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	. 26	4.0
6.02	Gini coefficient (0-100 best)*	. 23	33.2
6.03	Gov't effectiveness in reducing poverty & inequality	24	2.6
6.04	Social safety net protection	. 23	3.7
6.05	Social mobility	. 28	2.9

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	11	26.3
7.02	Terrestrial biome protection, %*	26	6.8
7.03	Environmental treaty ratification*	22	22.0
7.04	Enforcement of environmental regulations	26	3.4
7.05	Quality of natural environment	27	3.8
7.06	CO2 emission per energy use, %*	14	2.2
7.07	Particulate matter (2.5) concentration*	23	14.9

BANK/28 SCORE

# Slovak Republic

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	23	3.9
Europe 2020 Index (2012 edition)	22	4.1
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training	22 27 25	3.6 3.7 3.2
Inclusive growth Labour market and employment Social inclusion	23 19	3.7
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.7
1.01	Intensity of local competition		5.5
1.02	Effectiveness of antitrust policy		3.8
1.03	Extent of market dominance	25	3.4
1.04	Agricultural policy costs		3.3
1.05	Impact of rules on FDI	10	4.9
1.06	Distortive effect on tax and subsidy competition	on 28	2.6
1.07	Burden of government regulation	24	2.5
	Clusters		3.8
1.08	State of cluster development		3.8
1.09	Value chain breadth	21	3.7
	Entrepreneurship		4.2
1.10	No. procedures to start a business*		7
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.1
1.13	Attitudes towards entrepreneurial failure		3.3
	Availability of finance	15	2.8
1.14	Ease of access to loans		3.1
1.15	Venture capital availability		2.7
1.16	Local equity market access		2.7

#### Pillar 2: Digital Agenda

	ICT readiness	28	3.3
2.01	Government strategy for ICT	25	3.3
2.02	Mobile phone subscriptions/100 pop.*	20	111.9
2.03	Int'l Internet bandwidth, kb/s per user*	28	11.5
2.04	Fixed broadband Internet subscriptions/100 pop.*	28	14.7
2.05	Mobile broadband subscriptions/100 pop.*	20	39.7
2.06	Laws relating to ICT	25	3.8
	ICT usage	20	5.1
2.07	Government Online Service Index, 0–1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use	16	5.5
2.10	Business-to-consumer Internet use	17	5.1
	ICT impact	25	2.7
2.11	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop	19	1.5
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*	24	0.7
3.02	No. researchers in R&D/million pop.*	17	2,779.7

 3.03
 Availability of scientists and engineers
 23
 3.9

 3.04
 Highly cited scientific articles, % of tot.\*
 23
 4.0

 3.05
 PCT patents, applications/million pop.\*
 21
 8.8

 3.06
 Firm-level technology absorption
 21
 4.7

Pillar 3: Innovative Europe (cont'd.)		
University-industry collaboration in R&D		3.3
Capacity for innovation		3.2
Gov't procurement of advanced tech product	s 26	2.6
Availability of latest technologies		5.0
Extent of marketing		4.5
Willingness to delegate authority		3.5
No. industrial designs/million pop.*		841.4
Nature of competitive advantage		2.8
Pillar 4: Education and training		
Education		4.5
Quality of the educational system		2.7
PISA scores*		471.9
Tertiary education enrolment, gross %*		55.1
Iertiary education enrolment, gross %* Secondary education enrolment, gross %*		
,		93.9
Secondary education enrolment, gross %*		93.9 <b>3.9</b>
Secondary education enrolment, gross %* Training		93.9 <b>3.9</b> 4.4
Secondary education enrolment, gross %* Training Availability of training services	26 24 22 27	93.9 <b>3.9</b> 4.4 3.7
	Capacity for innovation Gov't procurement of advanced tech product Availability of latest technologies Extent of marketing Willingness to delegate authority No. industrial designs/million pop.* Nature of competitive advantage Pillar 4: Education and training Education Quality of the educational system	University-industry collaboration in R&D       26         Capacity for innovation.       24         Gov't procurement of advanced tech products       26         Availability of latest technologies       25         Extent of marketing       16         Willingness to delegate authority       21         No. industrial designs/million pop.*       22         Nature of competitive advantage       28         Pillar 4: Education and training       26         Quality of the educational system.       28         PISA scores*       23

	Labour market efficiency	
5.01	Hiring and firing practices	
5.02	Cooperation in labour-employer relations	
5.03	Pay and productivity	64.6
5.04	Extent of taxation on incentives to work	
	Labour participation	
5.05	Activity rate, %*	
5.06	Women in labour force, ratio to men*	
5.07	Private sector employment of women	

#### Pillar 6: Social inclusion

INDICATOR, UNITS

6.01	Accessibility of healthcare services		5.0
6.02	Gini coefficient (0-100 best)*	4	25.3
6.03	Gov't effectiveness in reducing poverty & inequality	/ 18	3.0
6.04	Social safety net protection	21	3.8
6.05	Social mobility	20	4.4

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*		.3
7.02	Terrestrial biome protection, %*		.3
7.03	Environmental treaty ratification*		.0
7.04	Enforcement of environmental regulations		.9
7.05	Quality of natural environment		.3
7.06	CO2 emission per energy use, %*	92	.0
7.07	Particulate matter (2.5) concentration*		.1

# Slovenia

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	16	4.4
Europe 2020 Index (2012 edition)	13	4.6
Smart growth	17	4.2
Enterprise environment	25	3.5
Digital Agenda		4.3
Innovative Europe	15	4.3
Education and training	17	4.9
Inclusive growth	15	4.4
Labour market and employment	17	3.9
Social inclusion	15	5.0
Sustainable growth	7	5.2
Environmental sustainability	7	5.2

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# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		3.7
1.01	Intensity of local competition		5.2
1.02	Effectiveness of antitrust policy		4.0
1.03	Extent of market dominance		3.7
1.04	Agricultural policy costs		3.5
1.05	Impact of rules on FDI		2.9
1.06	Distortive effect on tax and subsidy competition	on 17	3.9
1.07	Burden of government regulation		2.6
	Clusters		3.6
1.08	State of cluster development		3.5
1.09	Value chain breadth		
	Entrepreneurship		4.7
1.10	No. procedures to start a business*	1	2
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		2.9
1.13	Attitudes towards entrepreneurial failure		2.8
	Availability of finance		2.1
1.14	Ease of access to loans		1.8
1.15	Venture capital availability		2.0
1.16	Local equity market access		2.4
	Pillar 2: Digital Agonda		

## Pillar 2: Digital Agenda

	ICT readiness	
2.01	Government strategy for ICT	
2.02	Mobile phone subscriptions/100 pop.*	23108.6
2.03	Int'l Internet bandwidth, kb/s per user*	1494.7
2.04	Fixed broadband Internet subscriptions/100 po	p.*1424.3
2.05	Mobile broadband subscriptions/100 pop.*	21
2.06	Laws relating to ICT	174.6
	ICT usage	
2.07	Government Online Service Index, 0-1 (best)*	140.7
2.08	Individuals using Internet, %*	1970.0
2.09	Business-to-business Internet use	175.5
2.10	Business-to-consumer Internet use	
	ICT impact	
2.11	ICT and access to basic services	18
2.12	ICT and business model creations	
2.13	E-Participation Index, 0-1 (best)*	210.2
2.14	ICT PCT patents, applications/million pop	138.7
	Pillar 3: Innovative Europe	
3.01	R&D expenditure, % GDP*	6
3.02	No. researchers in R&D/million pop.*	
3.03		
0.00	Availability of scientists and engineers	
3.03	Availability of scientists and engineers Highly cited scientific articles, % of tot.*	

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		3.8
3.08	Capacity for innovation		3.7
3.09	Gov't procurement of advanced tech product	s 23	2.9
3.10	Availability of latest technologies	17	5.6
3.11	Extent of marketing		4.1
3.12	Willingness to delegate authority		3.9
3.13	No. industrial designs/million pop.*		.3,327.7
3.14	Nature of competitive advantage		4.2
	Pillar 4: Education and training		
	Education	8	5.7
4.01	Quality of the educational system		4.0
4.02	PISA scores*		498.9
4.03	Tertiary education enrolment, gross %*		86.0
4.04	Secondary education enrolment, gross %*		97.6
	Training		4.1
4.05	Availability of training services		4.4
4.06	Quality of management schools		
4.07	Extent of staff training		3.6
	Pillar 5: Labour market and employment		
	Labour market efficiency		3.1

	Labour market efficiency	27	3.1
5.01	Hiring and firing practices	28	2.4
5.02	Cooperation in labour-employer relations	23	3.8
5.03	Pay and productivity	24	3.5
5.04	Extent of taxation on incentives to work	22	2.7
	Labour participation	11	4.7
5.05	Labour participation Activity rate, %*		
		15	70.9
5.06	Activity rate, %*	15 7	70.9 0.90

#### Pillar 6: Social inclusion

6.01 Accessibility of healthcare services	5.5
6.02 Gini coefficient (0-100 best)* 1	.23.7
6.03 Gov't effectiveness in reducing poverty & inequality 15	3.4
6.04 Social safety net protection 14	4.6
6.05 Social mobility 18	4.6

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	10	27.7
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	13	4.7
7.05	Quality of natural environment	6	5.9
7.06	CO2 emission per energy use, %*	11	2.1
7.07	Particulate matter (2.5) concentration*		13.7

# Spain

RANK/28

SCORE

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	13	4.5
Europe 2020 Index (2012 edition)	15	4.5
Smart growth	13	4.4
Enterprise environment		
Digital Agenda	12	4.7
Innovative Europe		
Education and training	11	5.1
Inclusive growth	19	4.3
Labour market and employment		3.6
Social inclusion	14	5.0
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.1
1.01	Intensity of local competition		5.5
1.02	Effectiveness of antitrust policy		4.4
1.03	Extent of market dominance		4.4
1.04	Agricultural policy costs		3.6
1.05	Impact of rules on FDI		4.3
1.06	Distortive effect on tax and subsidy competition	on 24	3.4
1.07	Burden of government regulation		2.8
	Clusters		4.4
1.08	State of cluster development		4.2
1.09	Value chain breadth		4.7
	Entrepreneurship		3.8
1.10	No. procedures to start a business*		10
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest		3.1
1.13	Attitudes towards entrepreneurial failure		3.0
	Availability of finance		2.3
1.14	Ease of access to loans		1.8
1.15	Venture capital availability		2.3
1.16	Local equity market access		2.9

## Pillar 2: Digital Agenda

	ICT readiness	14	4.9
2.01	Government strategy for ICT	17	3.8
2.02	Mobile phone subscriptions/100 pop.*	24	108.4
2.03	Int'l Internet bandwidth, kb/s per user*	17	81.4
2.04	Fixed broadband Internet subscriptions/100 pop.	* 13	24.4
2.05	Mobile broadband subscriptions/100 pop.*	13	53.6
2.06	Laws relating to ICT	15	4.8
	ICT usage	13	5.3
2.07	Government Online Service Index, 0-1 (best)*		
2.08	Individuals using Internet, %*	17	72.0
2.09	Business-to-business Internet use	19	5.3
2.10	Business-to-consumer Internet use	18	5.1
	ICT impact	11	4.0
2.11	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop		
	Pillar 3: Innovative Europe		
3.01	R&D expenditure % GDP*	16	1.3

3.01	R&D expenditure, % GDP*	16	1.3
3.02	No. researchers in R&D/million pop.*	15	2,922.3
3.03	Availability of scientists and engineers	4	5.2
3.04	Highly cited scientific articles, % of tot.*	11	10.4
3.05	PCT patents, applications/million pop.*	14	39.2
3.06	Firm-level technology absorption	17	5.0

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	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D		4.0
3.08	Capacity for innovation		3.7
3.09	Gov't procurement of advanced tech produc	ts 19	3.2
3.10	Availability of latest technologies		5.8
3.11	Extent of marketing		4.7
3.12	Willingness to delegate authority		3.8
3.13	No. industrial designs/million pop.*		.2,922.8
3.14	Nature of competitive advantage		4.2
	Pillar 4: Education and training		
	Education		5.5
4.01	Quality of the educational system		3.6
4.02	PISA scores*		489.6
4.03	Tertiary education enrolment, gross %*		82.6
4.04	Secondary education enrolment, gross %*	1	130.8
	Training		4.8
4.05	Availability of training services		4.8
4.06	Quality of management schools		
4.07	Extent of staff training		
	Pillar 5: Labour market and employment		

# Labour market efficiency205.01Hiring and firing practices195.02Cooperation in labour-employer relations224.0

5.03	Pay and productivity	27	3.1
5.04	Extent of taxation on incentives to work	16	3.0
	Labour participation	23	3.9
5.05	Activity rate, %*	10	74.4
5.06	Women in labour force, ratio to men*	16	0.85
5.07	Private sector employment of women	25	3.9
5.08	Youth unemployment, %*	28	55.7

#### Pillar 6: Social inclusion

INDICATOR LINITS

6.01	Accessibility of healthcare services	3	6.7
6.02	Gini coefficient (0-100 best)*	27	35.0
6.03	Gov't effectiveness in reducing poverty & inequality	17	3.2
6.04	Social safety net protection	12	5.1
6.05	Social mobility	15	4.7

#### Pillar 7: Environmental sustainability

	· · · · · · · · · · · · · · · · · · ·		
7.01	Renewable electricity production, %*	9	29.5
7.02	Terrestrial biome protection, %*	22	8.6
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations	16	4.6
7.05	Quality of natural environment	18	5.0
7.06	CO2 emission per energy use, %*	10	2.1
7.07	Particulate matter (2.5) concentration*	7	7.9

# Sweden

	Rank (out of 28)	
Europe 2020 Index (2014 edition)	2	5.5
Europe 2020 Index (2012 edition)	1	5.8
Smart growth	2	5.6
Enterprise environment	1	4.9
Digital Agenda	2	6.1
Innovative Europe	2	5.9
Education and training	6	5.5
Inclusive growth	4	5.3
Labour market and employment	7	4.7
Social inclusion	6	5.9
Sustainable growth	1	5.8
Environmental sustainability	1	5.8



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition		4.9
1.01	Intensity of local competition		5.6
1.02	Effectiveness of antitrust policy		5.5
1.03	Extent of market dominance		4.7
1.04	Agricultural policy costs		4.7
1.05	Impact of rules on FDI		5.0
1.06	Distortive effect on tax and subsidy competiti	on 2	4.8
1.07	Burden of government regulation		4.1
	Clusters	6	5.2
1.08	State of cluster development	7	4.8
1.09	Value chain breadth		5.5
	Entrepreneurship	1	5.3
1.10	No. procedures to start a business*	5	3
1.11	No. days to start a business*		16
1.12	Extent of taxation on incentives to invest	5	4.5
1.13	Attitudes towards entrepreneurial failure	1	4.2
	Availability of finance		4.5
1.14	Ease of access to loans		4.2
1.15	Venture capital availability		4.3
1.16	Local equity market access	1	4.8

## Pillar 2: Digital Agenda

	ICT readiness		
2.01	Government strategy for ICT		
2.02	Mobile phone subscriptions/100 pop.*		
2.03	Int'l Internet bandwidth, kb/s per user*		
2.04	Fixed broadband Internet subscriptions/100 pop.*.		
2.05	Mobile broadband subscriptions/100 pop.*		
2.06	Laws relating to ICT		
	ICT usage	3 6.3	
2.07	Government Online Service Index, 0–1 (best)*		
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use		
2.10	Business-to-consumer Internet use		
	ICT impact		
2 1 1	ICT and access to basic services		
2.12	ICT and business model creations		
2.13	E-Participation Index, 0-1 (best)*		
2.14	ICT PCT patents, applications/million pop.		
	Pillar 3: Innovative Europe		
3.01	R&D expenditure, % GDP*		
3.02	No. researchers in R&D/million pop.*	35,257.3	
3.03	Availability of scientists and engineers	35.2	

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	5	5.3
3.08	Capacity for innovation		5.5
3.09	Gov't procurement of advanced tech produc	ts4	4.2
3.10	Availability of latest technologies	2	6.5
3.11	Extent of marketing		5.7
3.12	Willingness to delegate authority		5.9
3.13	No. industrial designs/million pop.*	5	.4,958.6
3.14	Nature of competitive advantage	9	5.7
	Pillar 4: Education and training		
	Education		5.5
4.01	Quality of the educational system	8	5.0
4.02	PISA scores*		482.1
4.03	Tertiary education enrolment, gross %*	7	73.9
4.04	Secondary education enrolment, gross %*		96.9
	Training	5	5.4
4.05	Availability of training services	6	5.7
4.06	Quality of management schools	8	5.4
4.07	Extent of staff training	3	5.2
	Pillar 5: Labour market and employment		
	Labour market efficiency	6	4.3
5.01	Hiring and firing practices		3.3
5.02	Cooperation in labour-employer relations	3	5.7
5.03	Pay and productivity		3.9

5.03	Pay and productivity	16	3.9
5.04	Extent of taxation on incentives to work	2	4.4
	Labour participation	6	5.1
5.05	Activity rate, %*	1	80.0
5.06	Women in labour force, ratio to men*	3	0.94
5.07	Private sector employment of women	11	5.0
5.08	Youth unemployment, %*	14	23.4

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	12	6.3
6.02	Gini coefficient (0-100 best)*	2	24.8
6.03	Gov't effectiveness in reducing poverty & inequality	/3	5.2
6.04	Social safety net protection	9	5.6
6.05	Social mobility	7	5.6

## Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	2	58.3
7.02	Terrestrial biome protection, %*	25	8.0
7.03	Environmental treaty ratification*	11	24.0
7.04	Enforcement of environmental regulations		6.0
7.05	Quality of natural environment		6.3
7.06	CO2 emission per energy use, %*	1	1.0
7.07	Particulate matter (2.5) concentration*	4	6.5

# United Kingdom

	Rank (out of 28)	Score (1-7)
Europe 2020 Index (2014 edition)	7	5.1
Europe 2020 Index (2012 edition)	7	5.2
Smart growth Enterprise environment Digital Agenda Innovative Europe Education and training.	5 4 9	4.7 5.8 5.1
Inclusive growth Labour market and employment Social inclusion	5	4.7
Sustainable growth Environmental sustainability		



# The Europe 2020 Index in detail

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 1: Enterprise environment		
	Competition	5	4.9
1.01	Intensity of local competition	1	6.0
1.02	Effectiveness of antitrust policy	7	5.0
1.03	Extent of market dominance	5	5.2
1.04	Agricultural policy costs	7	4.2
1.05	Impact of rules on FDI		5.5
1.06	Distortive effect on tax and subsidy competition	on 6	4.5
1.07	Burden of government regulation		3.7
	Clusters	7	5.1
1.08	State of cluster development		5.1
1.09	Value chain breadth		
	Entrepreneurship	6	4.9
1.10	No. procedures to start a business*		6
1.11	No. days to start a business*		
1.12	Extent of taxation on incentives to invest	6	4.3
1.13	Attitudes towards entrepreneurial failure	2	4.0
	Availability of finance	5	3.7
1.14	Ease of access to loans		2.7
1.15	Venture capital availability		3.5
1.16	Local equity market access		

## Pillar 2: Digital Agenda

	ICT readiness	5	5.9
2.01	Government strategy for ICT	8	4.5
2.02	Mobile phone subscriptions/100 pop.*	9	135.3
2.03	Int'l Internet bandwidth, kb/s per user*	5	188.9
2.04	Fixed broadband Internet subscriptions/100 pop.*.		
2.05	Mobile broadband subscriptions/100 pop.*	6	72.1
2.06	Laws relating to ICT	4	5.5
	ICT usage	2	6.5
2.07	Government Online Service Index, 0-1 (best)*	1	1.0
2.08	Individuals using Internet, %*		
2.09	Business-to-business Internet use	4	6.1
2.10	Business-to-consumer Internet use	1	6.3
	ICT impact	5	5.1
2.11	ICT and access to basic services	8	5.3
2.12	ICT and business model creations	4	5.6
2.13	E-Participation Index, 0-1 (best)*	2	0.9
2.14	ICT PCT patents, applications/million pop		
	Pillar 3: Innovative Europe		
0.01	RPD expanditure 0/ CDD*	10	10

3.01	R&D expenditure, % GDP*	
3.02	No. researchers in R&D/million pop.*	93,794.2
3.03	Availability of scientists and engineers	
3.04	Highly cited scientific articles, % of tot.*	
3.05	PCT patents, applications/million pop.*	
3.06	Firm-level technology absorption	

	INDICATOR, UNITS	RANK/28	SCORE
	Pillar 3: Innovative Europe (cont'd.)		
3.07	University-industry collaboration in R&D	2	5.6
3.08	Capacity for innovation		5.2
3.09	Gov't procurement of advanced tech produc	ts11	3.6
3.10	Availability of latest technologies		
3.11	Extent of marketing	1	6.0
3.12	Willingness to delegate authority	6	4.9
3.13	No. industrial designs/million pop.*		2,423.7
3.14	Nature of competitive advantage	5	5.9
	Pillar 4: Education and training		
	Education		5.4
4.01	Quality of the educational system		4.6
4.02	PISA scores*		502.5
4.03	Tertiary education enrolment, gross %*		61.2
4.04	Secondary education enrolment, gross %*		97.4
		•	

	Training	6	5.4
4.05	Availability of training services		
4.06	Quality of management schools	2	5.9
4.07	Extent of staff training	10	4.7

#### Pillar 5: Labour market and employment

	Labour market efficiency	2	4.6
5.01	Hiring and firing practices		4.5
5.02	Cooperation in labour-employer relations	9	5.0
5.03	Pay and productivity	2	4.8
5.04	Extent of taxation on incentives to work	5	4.0
	Labour participation	9	4.9
5.05	Labour participation Activity rate, %*		
		6	76.0
5.06	Activity rate, %*	6 14	76.0 0.85

#### Pillar 6: Social inclusion

6.01	Accessibility of healthcare services	4	6.7
	Gini coefficient (0-100 best)*2		
	Gov't effectiveness in reducing poverty & inequality 1		
6.04	Social safety net protection1	1	5.2
6.05	Social mobility	1	5.5

#### Pillar 7: Environmental sustainability

7.01	Renewable electricity production, %*	21	11.4
7.02	Terrestrial biome protection, %*	11	17.0
7.03	Environmental treaty ratification*	15	23.0
7.04	Enforcement of environmental regulations	9	5.4
7.05	Quality of natural environment	15	5.2
7.06	CO2 emission per energy use, %*	19	2.4
7.07	Particulate matter (2.5) concentration*	8	8.7



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