



Growing United

Upgrading Europe's Convergence Machine

Overview



Cristobal Ridao-Cano
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Foreword

In 2012, even as the European Union was still struggling with the after-effects of the crisis, the World Bank's *Golden Growth* report reminded readers that "Europe has achieved economic growth and convergence that is unprecedented ... by fostering a regional economic integration unique in both depth and scope, Europe has become a 'convergence machine.' By engineering entrepreneurial dynamism while balancing market forces with social responsibility, it has made 'brand Europe' globally recognized and valued. And by striking a balance between life and work, it has made Europe the world's 'lifestyle superpower.'"

During the crisis, as a member of the European Commission I would often use this quotation — and also quote more widely from the *Golden Growth* report itself as I sought to remind colleagues that Europe's strength rests in its unity. Today, as the continent rebounds from the depths of recession, these stories resonate once again. It is a good time to recall them and, in so doing, to remind Europeans that they are stronger together.

A decade after the last wave of accession, new Member States are experiencing some of the world's highest growth rates: Poland has leapt from middle-income to high-income status faster than any other country apart from South Korea. European firms are among the world's leaders in innovation, creativity and productivity: firms like Denmark's Coloplast in medical technology and Ireland's Perrigo in pharmaceuticals rank among the global elite in their fields. And the European Union blazes a path in social and environmental issues by committing to sustainable progress and upholding the rights of individuals both within and beyond its borders.

Yet, in spite of these accomplishments, European polity and society are suffering a malaise unlike any in recent history. Income insecurity nags and gnaws at families even while the data boasts of record low unemployment rates. While magazine articles extol the innovators who have grown their companies from brainchilds to behemoths, many small businesses struggle to stay afloat. Bucharest, Lisbon and Sofia are emerging tech hubs with global reach, but some regions in Romania, Portugal, Bulgaria and elsewhere in the EU are falling behind. As bold steps are being taken to lower the EU's carbon footprint, some of its citizens across Eastern Europe cough and splutter their way through smogs caused by industrial pollution.

In *Growing United*, the World Bank returns to examine these seeming paradoxes. The European economic experience has been used as an example for reforms across the world — not least by the new member countries that joined the Union in the last decade. For the World Bank as a global economic institution, therefore, it is important to ask this question: is the convergence machine no longer capable of raising the livelihoods and lifestyles of Europeans?

The answer, elaborated over the following pages, is less dire. The convergence machine still works. But it is not working for everyone. Europe is growing, but more needs to be done to ensure that it grows united. The convergence machine requires an upgrade — to enhance its power to adapt to a world that is changing faster than its creators could imagine.

The driving force in today's world — and which powerfully affects Europe and Europeans — is accelerating technological change. New products driven by internet connectivity, vast processing powers

and artificial intelligence are altering opportunities for firms. And the changing nature of work and the skills needed to succeed are changing opportunities for people. New products and jobs are refashioning aspirations and lifestyles for all.

This is the crux of the growing divide identified by this report. Many individuals and firms in Europe can and will prosper as a result of these changing opportunities. But many also view these evolving options with despair as the old certainties crumble. The convergence machine 1.0 has worked well for those who find themselves in the first category. Version 2.0 will need to work for all.

For individuals, the changing nature of work requires higher-order cognitive skills — not just mathematics and science but also creative thinking, adaptability and problem-solving. While many students with excellent education are well-placed to fill these new roles, the reality is that many others — especially those from poorer backgrounds — still lack even basic literacy and numeracy skills. As a result, socio-economic mobility is increasingly a challenge while family and place of birth becomes more of a determinant of success than ability.

Firms, meanwhile, need to be ever more nimble, to quickly avail of opportunities and to create or develop new niches opened by technology. Firms able to do this can grow fast, add deep value globally as well as locally and create large numbers of jobs. Many European firms are doing exactly that. Others are still handicapped by bureaucratic and regulatory obstacles, insufficient connectivity and inadequate competition. For firms caught in these traps, producing growth and jobs is almost an unattainable goal: staying small but surviving looks like the best strategy.

For both firms and individuals a convergence machine that works for all will need to provide equal opportunities to succeed. That means every European worker needs to have a basic level of skills and a labor market that facilitates easy and secure transition from one job to another as demands change. For firms, it means a level playing-field in terms of regulation and competition and a supportive environment for innovation and technology adoption.

Growing United argues that these are essential prerequisites to maintain and build upon the impressive results that Europe has achieved. And there's an urgency to act, before the schisms that have begun to manifest themselves are widened by the exploding pace of technological change.

The composer Felix Mendelssohn said, “The essence of the beautiful is unity in variety.” This is so fitting for Europe. And this is why it gives me so much pleasure to introduce this report, which in many respects is a sequel to *Golden Growth* and a reaffirmation that the twin poles of Europe's strength are, and will continue to be, its diversity and unity.



Kristalina Georgieva
Chief Executive Officer,
World Bank

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European Union Countries and Regions

Northern Europe		Denmark	DK
		Finland	FI
		Ireland	IE
		Sweden	SE
		United Kingdom	UK
Continental Europe		Austria	AT
		Belgium	BE
		France	FR
		Germany	DE
		Luxembourg	LU
		Netherlands	NL
Southern Europe		Cyprus	CY
		Greece	EL
		Italy	IT
		Malta	MT
		Portugal	PT
		Spain	ES
Central and Southeast Europe (CEE)	<i>North</i>	Estonia	EE
		Latvia	LV
		Lithuania	LT
	<i>Continental</i>	Croatia	HR
		Czech Republic	CZ
		Hungary	HU
		Poland	PL
		Slovak Republic	SK
		Slovenia	SI
	<i>South</i>	Bulgaria	BG
		Romania	RO

Abbreviations

- AMECO** Annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs
- CEDETOP** European Center for the Development of Vocational Training
 - CEE** Central and Southeast Europe
 - DB** Doing Business
- DEIS** Delivering Equality of Opportunities in School
 - EPI** Economic Potential Index
 - EPL** Employment Protection Legislation
 - EQI** European Quality of Government Index
- ESCS** Economic, social and cultural status
- ESIF** European Structural and Investment Funds
 - EU** European Union
- EU LFS** European Union Labor Force Survey
- EUROMOD** Tax-benefit microsimulation model for the European Union
- EUROSTAT** European Statistics
- EU SILC** European Union Statistics on Income and Living Conditions
 - FDI** Foreign Direct Investment
 - GDP** Gross Domestic Product
 - ICT** Information and Communication Technology
- ISCED** International Standard Classification of Education
- ISCO** International Standard Classification of Occupations
 - IT** Information Technology
- LIS** Luxembourg Income Study Database
- LITS** Life in Transition Survey
- MFF** Multiannual Financial Framework
- NACE** Statistical classification of economic activities in the European Community
 - NRC** Nonroutine cognitive
 - NRCA** Nonroutine cognitive analytical
 - NRCP** Nonroutine cognitive personal
 - NRM** Nonroutine manual
- NUTS** Classification of Territorial Units for Statistics
- OECD** Organization for Economic Cooperation and Development
 - OF** Opportunities for firms
- O*NET** Occupational Information Network
 - OP** Opportunities for people
- PIAAC** Program for International Assessment of Adult Competencies
- PISA** Programme for International Student Assessment
- PPP** Private Public Partnership

- RBTC** Routine-based technological change
- RC** Routine cognitive
- RM** Routine manual
- RTI** Routine Task Intensity
- SWIID** World Income Inequality Database
- TFP** Total Factor Productivity
- UNESCO** United Nations Educational, Scientific and Cultural Organization
- US** United States
- VAT** Value-added Tax
- VET** Vocational Education and Training
- WEF** World Economic Forum
- WID** World Wealth and Income Database



Overview

Since its foundation more than 60 years ago, the European Union (EU) has become the modern world's greatest "convergence machine," propelling poorer, and newer, member states to become high-income economies, and delivering to its citizens some of the highest living standards and lowest levels of income inequality in the world.

Today, however, Europeans are increasingly recognizing that convergence is not automatic. Inequality among people has been mounting in many parts of the EU since the 1990s, as low-income Europeans have been falling behind in the labor market. And the productivity gap between Southern and Northern member states has been widening since the early 2000s. The EU is growing, but Europeans are not "growing united."

Why? Growing United argues that technological change, by revolutionizing product and labor markets, is slowing down the old convergence machine: technology offers ever-richer opportunities for well-skilled workers and frontier firms, while low-skilled workers and less productive firms risk falling behind. As a result, countries and regions that provide fewer opportunities for people to build relevant skills and a less supportive environment for firms to thrive are losing ground.

This calls for upgrading Europe's convergence machine, to seize the benefits of technological change for all Europeans. *Growing United* argues that the convergence machine, version 2.0, should focus on the convergence of opportunities for people and firms across the Union. It should support the capabilities of people (skills) and firms (innovation), and provide a level playing field for people and firms through "flexicure" labor markets and an enabling business environment.



The European Union has been a unique convergence machine

Over the past 60 years, the EU has delivered to its citizens some of the highest living standards in the world. The 2012 World Bank report *Golden Growth* (Gill and Raiser 2012) dubbed Europe a “convergence machine”: trade and financing — fueled by the largest and deepest regional integration effort in recent history — generated convergence in living standards between member states. This, together with a strong enterprise sector and innovation, drove Europe to account for about one-third of world gross domestic product (GDP) with less than one-tenth of the world’s population. Through the accession process, the convergence machine was particularly powerful for the EU’s newest members. As the living standards of poorer countries converged to those of richer ones, so did the living standards of regions and households across Europe. And with the help of fiscal policy, the EU has managed to keep net income inequality at a much lower level than in the United States, despite having roughly the same level of market income inequality.

While the global financial crisis took a toll on the convergence machine, economic growth is now strong in most parts of the Union, and employment growth is bringing down unemployment to precrisis levels. The convergence machine is back in full swing in Central and Southeast Europe (CEE), where all countries are continuing to catch up in living standards with EU averages.

But there are signs of a growing divide across the EU

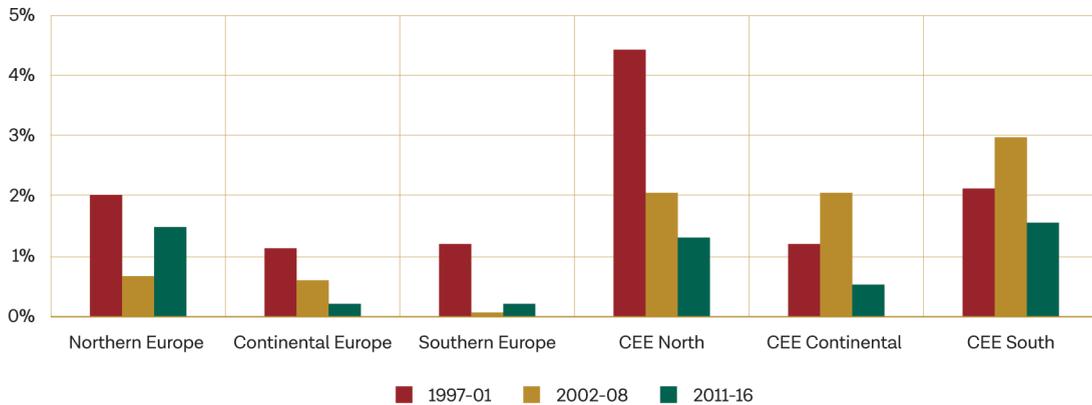
But 60 years on, the convergence machine is not working for everyone, as signs of growing divides are emerging across the EU. Two divides are increasingly evident and risk interfering with the workings of the convergence machine: first, there is a growing productivity divide between countries and regions; and second, household income inequality is increasing.

Europe has been experiencing a growing productivity divide between member states. In line with global trends, total factor productivity (TFP) growth has been slowing down everywhere in the EU. But the slowdown has been most pronounced in the Southern European countries, the previous convergence “stars” (figure O.1), while countries in CEE have been catching up, and productivity has been growing in Continental and Northern Europe. This matters because productivity levels in Southern European countries already lag behind their neighbors to the north. This has important implications for convergence in the EU, where the shrinking of the labor force and low levels of investment, more pronounced than in other advanced economies, are making long-term growth even more reliant on TFP growth.

Within countries, regional divides are widening. There are two types of lagging regions in Europe: low-income regions, with GDP per capita under 50 percent of the EU average (Bulgaria, Hungary, Poland, and Romania), and low-growth regions, where GDP per capita has not converged toward the EU average over the past decade (Italy, Greece, Portugal, and Spain). Recent World Bank research shows that these regions are lagging because of their low economic potential: their institutions are of poorer quality, they have a lower share of skilled workers, and they have limited access to markets (Farole et al., 2018). They also often have large and growing shares of elderly populations. Low-growth regions in Southern Europe are of greatest concern, as they are already diverging, but low-income regions in CEE run the risk of also becoming low-growth regions.

Figure O.1 Total factor productivity growth has been declining everywhere, but it has declined the most in Southern European countries

Total factor productivity growth, country group averages, 1997–2016



Source: Based on data from the AMECO database of the European Commission.

Household income inequality has been rising in most EU member states since the 1990s. Within-country household income inequality increased in most of today’s EU member states between 1989 and 2013. The increase was most notable between 1989 and 1995, particularly in CEE countries, as a result of their transition from socialist economic systems. Inequality picked up somewhat after 2008, particularly in Southern Europe and CEE. The postcrisis recovery has not brought inequality down – in fact, it continues to grow in many countries. Average inequality in the EU is on par with the average in the Organisation for Economic Co-operation and Development (OECD), but most countries in Southern Europe and CEE already have inequality levels above the OECD average.

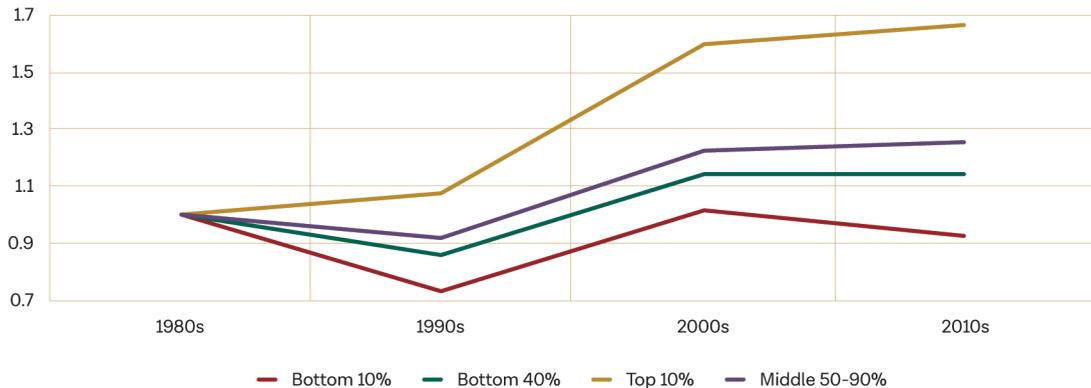
Low-income Europeans are being left behind in the labor market. The contribution of labor income to total inequality exceeds 70 percent in all countries. Per capita labor income has become more unequally distributed since the 1990s in most EU countries – a trend that intensified after 2008, particularly among countries in the south, where labor income inequality is already the highest. The increase in labor income inequality has been driven by the growing inequality between top and bottom individual earnings (figure O.2). In fact, low-pay workers saw their earnings decline during the 2000s, while middle-pay and high-pay workers saw increases. Earnings declined across the distribution between 2008 and 2014, but the drop was larger for the bottom 10 percent. The share of employed adults and earners, which are significantly lower at the bottom of the household income distribution, also dropped more for the bottom 10 percent between 2008 and 2014.

Growing inequality poses long-term consequences for economic growth because children from low-income households have fewer opportunities to thrive than do their more affluent peers. Checchi, Peragine, and Serlenga (2016) find that, on average across EU countries, two-fifths of the inequality in individual disposable labor income is explained by factors beyond the control of individuals. In some countries (such as Germany, Luxembourg, the Netherlands, and the United Kingdom), the ratio is as high as 50 percent. They also find that differences cross EU countries in inequality of opportunity are most strongly associated with how much countries spend on education relative to GDP, particularly at the preprimary level. Recent evidence shows that the relationship between inequality and economic growth is largely negative (for example, Grigoli and Robles 2017). This negative relationship works primarily through unequal opportunities for building human capital (OECD 2015). Indeed, many countries in the EU suffer from a skill divide: significant

shares of young people, mostly from poorer socioeconomic backgrounds, fail to achieve basic proficiency in reading, mathematics, or science.

Figure O.2 Low earners in the European Union have been falling behind

Trends in individual earnings by segment of the household income distribution, 1980s–2010s, index (1980s = 1), EU average



Source: Estimates using the Luxembourg Income Study (LIS) data.

Note: Figure plots individual earnings (indexed to the 1980s) in the median year of the 1980s and 1990s, and the most recent year of the 2010s, for different segments of the distribution of household disposable income per capita. EU averages include today's EU countries.

The convergence machine is due for upgrading

Accelerating technological change risks further widening Europe's divides — future convergence is not automatic. Europe's convergence machine is about the convergence of countries, regions, and households. Strong convergence between countries in the past drove convergence of household incomes and regions across the EU. However, Europe will not be able to sustain convergence with growing productivity gaps among countries and regions and increasing within-country household income inequality. *Growing United* argues that these growing divides are explained by the interplay between technological change and low opportunities for people and firms to thrive in some parts of Europe. Accelerating technological change offers ever-richer opportunities for well-skilled workers and frontier firms, while low-skilled workers and less productive firms risk falling behind. Technological change is thus boosting inclusive growth in countries and regions that provide many opportunities for people and firms to thrive, but it can be disruptive in places where there are few opportunities, thus generating divergence.

This calls for upgrading the convergence machine, to seize the benefits of technological change for all Europeans. How? By refocusing the convergence machine on promoting convergence of opportunity for people and firms.

Technological change stands out amid other “megatrends” as an increasingly potent source of opportunity and disruption. Technological change is neither a new phenomenon nor the only major force driving shifts in Europe's economies. Declining working-age populations are making productivity gains the main driver of growth (Bussolo, Koettl, and Sinnott 2015) and are inducing firms to adopt automation technology more intensively (Acemoglu and Restrepo 2017). Globalization has come with offshoring of production processes and associated jobs (including within the EU, from older to newer member states), leaving countries in the EU focused on increasingly more

sophisticated, higher-value-added activities. But the increasing adoption of automation technology will reduce the need to offshore some jobs. Looking ahead, technological change is likely to increasingly stand out as the most important, and least predictable, driver of economic development in the EU. EU countries need to prepare themselves for a significant acceleration of technological change because workplace automation and the increasingly cheap use of artificial intelligence and 3D printing stand to revolutionize activities in all economic sectors.

Technological change is not exogenous to national policies. Policies that shape opportunities for people and firms to thrive also influence the adoption of new technology by firms, including competition and labor policies, support for firms' technology adoption, and the skills of the workforce. And by creating more opportunities for self-employment, technological change is blurring the lines between people and firms. This generates greater complementarity between opportunities for firms and opportunities for people. But it also creates new tensions because, for example, social insurance institutions are built on the standard employment relationship between firms and employees.

Growing United proposes a simple framework for looking at the growing divides based on the **principle of equality of opportunity for people and firms.** Under this framework, the potential of countries to grow inclusively is jointly determined by the opportunities for people and enterprises to thrive and contribute productively to the economy. The equality-of-opportunity principle is well established for people, and this report extends it to firms as well. Ultimately, it is about fairness: it implies the prosperity of people and firms should be determined by talent, effort, and entrepreneurship, not by circumstances at birth for individuals (for example, birthplace, parental education) or the enabling environment for firms, which are outside their control. Policies should therefore focus on equalizing opportunities and compensating for unequal circumstances. The equality-of-opportunity principle also involves allowing firms and people to move to places where opportunities are higher, be it in the same country or across the Union.

Using equality of opportunity as a policy principle would generate unbalanced growth, but that growth would be based on a level playing field — and complementary policies are needed to make growth more inclusive. Removing barriers to thrive for productive firms is good for economic growth, but not all firms will do equally well. The provision of equal opportunities for people to build relevant skills is good for growth and makes it more inclusive, but not all individuals will succeed equally. At the nexus, more productive firms will be able to generate more jobs and pay higher salaries, but the benefits would tend to accrue to high-skill workers while others could fall behind. Labor and social protection policies can reduce inequalities by supporting the employment of low-skill workers, and by providing a safety net to those who fall behind. The application of this principle shifts the policy focus of the convergence machine toward equalizing opportunities rather than leveling incomes and profits, maximizing the economic potential of regions and countries rather than convergence of GDP per capita, and supporting those who fall behind.

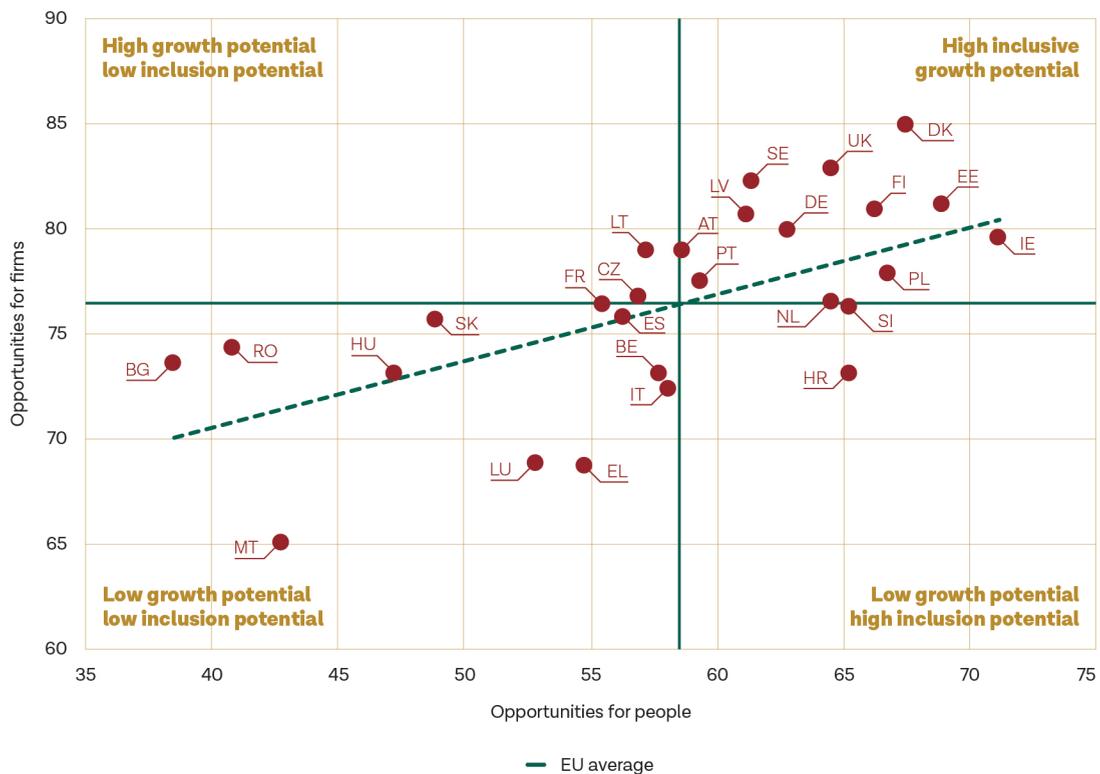
The framework can be illustrated by a two-dimensional space that maps opportunities for firms and people to thrive in each country or region and the resulting potential for inclusive growth.

- *Opportunities for firms* are determined by the business environment, supporting infrastructure, and the supporting environment for upgrading firms' capabilities through innovation and technology adoption. These opportunities result in a distribution of firms by TFP levels. A better business and innovation environment leads to a higher share of firms at the top of the TFP distribution. Burdensome business regulations lead to a high share of lagging firms.

- *Opportunities for people* include opportunities to build relevant skills and find good jobs, and second chances for people who fall behind. These opportunities mainly result in a distribution of workers by skill level. If there are many opportunities, it leads to a high share of high-skill workers, but few opportunities result in a high share of low-skill workers.
- Opportunities for firms and people are complementary and jointly determine the potential to grow inclusively. Over the long term, countries cannot sustainably emphasize one set of opportunities over the other. Having many opportunities for firms unmatched by opportunities for people would be neither economically nor politically sustainable. And having many opportunities for people unmatched by opportunities for firms would make people and firms move to places where they can thrive.

Figure O.3 maps EU countries into the opportunity space. It focuses on core and widely accepted measures of opportunities for firms and people: the business environment and skills. The quality of the business environment is measured by the Doing Business 2017 distance to frontier index.¹ Opportunities for people are measured by the percentage of students with basic competencies in the reading portion of the Programme for International Student Assessment (PISA) in 2015, corrected for inequality of opportunity (variation in student basic reading competency explained by socioeconomic status) and the proportion of early school leavers (people age 18–24 who only have lower secondary education or less and are no longer in education or training).

Figure O.3 The opportunities for firms and people to thrive determine the potential of countries to grow inclusively: countries in the North do well on opportunities, countries in the South do less well



Source: Calculations based on Programme for International Student Assessment (PISA) and Doing Business data.
 Note: Cross-lines are European Union averages. Opportunity for people is measured by PISA reading scores in 2015, corrected for inequality of opportunities (variation in PISA scores explain by socioeconomic status of students) and the proportion of young people that leave school with at most lower secondary. Opportunity for firms is measures by the 2017 Doing Business distance to frontier index. See "European Union Countries and Regions" table for country abbreviations. Cyprus is not included as some key data were not available.

Opportunities for people and firms are indeed complementary. First, there are more complementarities than trade-offs between opportunities for people and firms, given that most countries are along the bottom-left or top-right space of figure O.3. Second, it is notable that the top-left space is virtually empty. This suggests that countries in the EU do not emphasize opportunities for firms over opportunities for people. Third, Croatia is the only country where good opportunities for youth to acquire foundational cognitive skills are not matched by good opportunities for firms.

Most Northern European countries, and Germany, Estonia, Latvia, and Poland are among the top opportunity performers: the vast majority of their youth — including those from disadvantaged backgrounds — attain basic competency in PISA reading, and their firms enjoy considerable economic freedom. Firms in Northern European countries and Germany also enjoy a supportive environment for innovation, making these economies productivity leaders.² These countries are characterized by a high share of technological frontier firms.

At the other extreme, many Southern and Central European countries are below the EU opportunity average. They are characterized by a high share of students below basic competency in reading, mostly from low socioeconomic backgrounds. They also tend to be characterized by more burdensome regulations and lower support for firm innovation, which generate too few top-performing firms and too many lagging firms.

Accelerating technological change is generating growing divergence

Technological change is driving a wedge in product and labor markets by providing immense opportunities for some firms and workers while leaving others behind. The “future of work,” in which technology takes over tasks once performed by humans, is already a reality in the EU. And Europe’s frontier firms are among the global leaders in successfully driving, and taking advantage of, technological change.

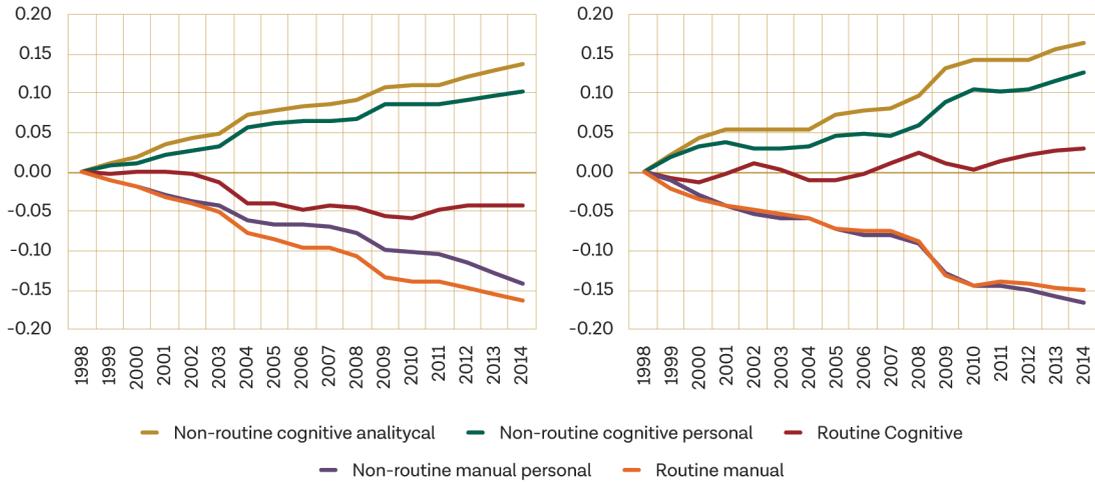
Jobs across the EU are increasingly about cognitive and interpersonal tasks, while manual and routine tasks are declining (figure O.4). These trends have, for now, been less marked in Central and Eastern European countries, where routine cognitive tasks are still growing slightly, reflecting a less advanced stage of structural change. Technological change, offshoring and the skills upgrading of the workforce are big drivers of the changes in the task content of jobs. As a result of these changes, jobs are increasingly intensive in skills that complement technology (cognitive and social-emotional skills, see box O.1). Workers well equipped with these skills (high-skill workers) are benefiting from these changes, while low-skill workers are losing the most: the employment share of (mostly high-skill) workers in nonroutine cognitive jobs is increasing the most, and the share of (mostly low-skill) workers in manual jobs is declining (figure O.5). Thus, low-income Europeans are being left behind in the labor market because of their low skills, at a time when technological change and globalization are making jobs more skill intensive.

Figure O.4 Jobs are becoming more intensive in nonroutine cognitive tasks and less intensive in manual tasks

Occupation-specific task intensities, aggregated for each country and standardized over time, regional averages, 1998–2014

Northern, Southern and Continental EU

Central and Southeastern EU

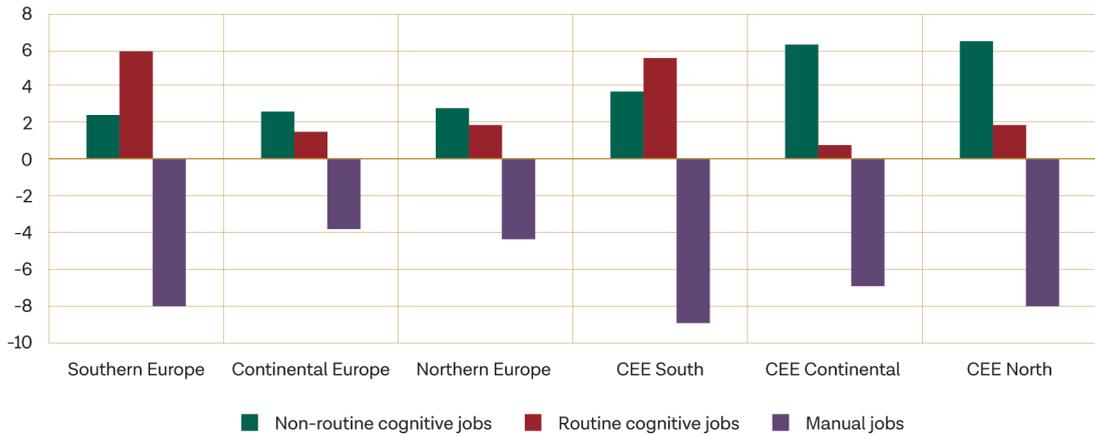


Source: Gorika et al. (2017a), commissioned for this report, using EU-LFS and O*NET data.

Note: Malta, Cyprus, and Luxembourg are excluded due to small samples. The intensity of each task is measured for each occupation, aggregated for each country and standardized over time (see chapter 2).

Figure O.5 Workers in nonroutine cognitive jobs are gaining and workers in manual jobs are losing everywhere

Percentage point changes in share of workers by job type, 1998–2014



Source: Gorika et al. (2017a), commissioned for this report.

Note: Jobs are classified by their most intensive task into nonroutine cognitive, routine cognitive, and manual.

Box O.1 What skills are needed for the age of automation?

Digitalization, workplace automation and increasing use of artificial intelligence in production have triggered a wide-ranging, and often alarmist debate about the future of work and increasing anxiety among workers in advanced economies, including in the EU about whether “robots will take away our jobs.” While technological change may make certain types of jobs obsolete (Frey and Osborne 2017), they have not necessarily led to less demand for work on aggregate (Autor 2015).

Rather, the most important impact of technological change on jobs, is through shifts in the nature of tasks that workers will handle as part of their jobs – with increasing prominence of nonroutine and cognitive over routine and manual tasks (Autor et al. 2003; Gorka et al. 2017a). In other words, while the profession of electrician will likely persist, the nature of tasks an electrician does is evolving: today’s electrician needs to use and adapt to fast-changing technology, solve problems and be client oriented.

As machines increasingly take over routine tasks previously performed by humans, today’s (and tomorrow’s) jobs are becoming ever more about nonroutine, cognitive analytical and interpersonal tasks. Success in this fast-changing labor market requires advanced *cognitive* skills (such as critical thinking and problem-solving), *social-emotional* skills (such as conscientiousness, goal orientation and ability to work in teams) and up-to-date job-specific *technical* skills (such as skills that enable an electrician to work as an electrician, but also digital skills). Strong cognitive and social-emotional skills make workers more complementary to technology and resilient to change by increasing their ability to learn and adjust, solve problems and interact well with people.

Cognitive and social-emotional skills are formed from a very early age. This means early childhood education, primary and secondary education provide the critical foundation for the subsequent continuous adaptation and upgrading of job-specific technical skills in subsequent vocational education, higher education and lifelong learning, in line with technological change. For this purpose, this report focuses mostly on cognitive skills.

As Europe’s frontier firms thrive and take advantage of technological change, productivity differentials are widening. Research using firm-level micro data from OECD countries show that frontier firms are benefiting the most from technological change and globalization: productivity dispersion between firms is large and rising, as the most productive firms are pulling away and bottom firms are falling behind. This is also generating increased wage dispersion between firms (Berlingieri et al. 2017).

The impact of technological change on inclusive growth ultimately depends on the opportunities that countries provide to their people and firms. The impact of technological change on growth and inequality over the long term depends on the extent to which opportunities are provided today to all young people to acquire relevant skills for the labor market, as those will shape the distribution of skills in the future workforce. Low opportunities for people would therefore tend to reduce the positive impact of technological change on growth, as fewer people can benefit and contribute, and amplify its impact on inequality. The impact of technological change on productivity growth and job creation at the country and regional levels depends on the extent to which firms can benefit from it. A more burdensome and less competitive business environment tends to generate a larger share of small, low-productivity, firms (as well as less nimble and more protected “legacy” firms, including those that are state-owned). These firms are less able to benefit from new technologies, and have less incentives to do so.

Technological change is boosting inclusive growth in places where opportunities are high, but it is disrupting it in places where opportunities are low, generating divergence. The good news: opportunities for people and firms (as measured by PISA and Doing Business) have improved in most EU countries over the last decade, particularly in those with lower initial levels. Inclusive

growth and convergence happened despite the low opportunity levels in some parts of Europe. The bad news: the acceleration of technological change is making it increasingly hard for countries and regions with high shares of low-skill workers and lagging firms to continue to grow inclusively. Technological change is boosting inclusive growth in countries with advanced opportunities to take advantage of it. But it can hold inclusive growth back in countries with low opportunities. The same is true for regions within a country: while technological change benefits urban centers, it may leave “lagging” regions further behind. This divergence can be accentuated if higher skilled workers and more productive firms move to places with higher opportunities.

How do poor opportunities for firms and people manifest themselves in lagging countries and regions and what can be done about it to help Europe grow united?

Low-skill Europeans lack opportunities to thrive in the labor market

Europe is suffering from a skill divide that is interrupting the workings of the convergence machine. Low-income European youth in many member states are significantly less likely to acquire basic proficiency in reading, mathematics and science and risk being squeezed out of the labor market as machines take over the tasks once handled by low-skilled workers. At the same time, social and labor policies in many member states are increasingly out of sync with changing needs, neglecting protection of those who fall behind, while offering little flexibility and ample security for some and not for others.

The skill divide: Education is not providing equal opportunities to build relevant skills

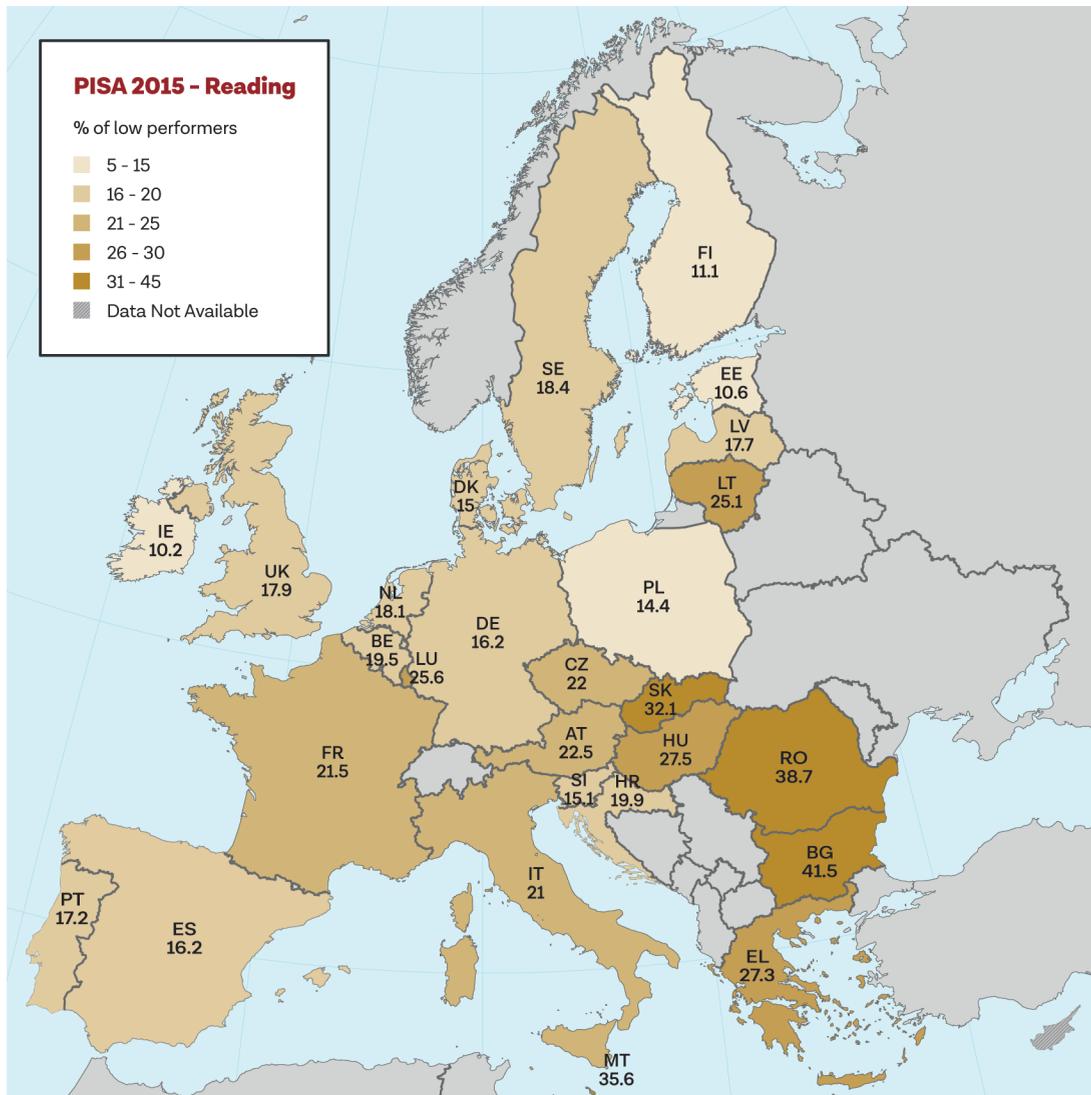
The impact of changes in the task content of jobs on inequality and growth depends on the level and distribution of skills in the workforce of today and, more important, tomorrow. The skill divide in the workforce of tomorrow will be shaped by the extent to which opportunities are provided to all young people to acquire relevant skills for the labor market — starting with foundational cognitive and social-emotional skills and complementing with up-to-date, job-specific technical skills. Unequal opportunities to build relevant skills will not only make inequality persist over time, but it will also reduce long term growth, more so with aging.

So how prepared is Europe for the labor market of the future?

While education attainment has increased throughout the EU, too many young people still do not obtain basic cognitive skills. The share of tertiary-educated people increased substantially between 2000 and 2015 across all EU countries except Lithuania. In the latest PISA round of 2015, some EU countries, like Finland, Ireland and Estonia, are almost on par with the leading countries in East Asia, but several EU countries lag significantly behind. More important, many young people across Europe leave schools not having acquired basic cognitive skills. Part of the problem in some countries is that youth leave school too early: early school leaving is close to 20 percent in Malta, Spain, and Romania.³ The other problem, affecting a lot more countries, is the high share of 15-year-olds that perform below the basic proficiency level in PISA: in half of the EU more than 20 percent of 15-year-olds perform below basic proficiency in reading

(and mathematics), and in Bulgaria, Malta, Romania, and the Slovak Republic, a third and more (figure O.6).

Figure O.6 The share of low performers is large in many EU countries



Source: World Bank staff calculations based on PISA 2015.

Much of the skill divide is because of students' socioeconomic background. It is fair to say that, across much of the EU, education is not acting as an engine of social mobility — children from poor background often fail to acquire basic cognitive skills. The share of students below basic cognitive skills is significantly higher among 15-year-olds who belong to the poorest socioeconomic strata and often more than double the average shares presented in figure O.6. More than 60 percent of bottom quintile students in Romania, Slovakia and Bulgaria fail to acquire basic proficiency. This has serious consequences: the learning gap between top and bottom socioeconomic quintiles translates into the equivalent of between two (Latvia) and five (the Slovak Republic) years of schooling. Europe's skill divide has not narrowed much over the last 15 years on aggregate, but

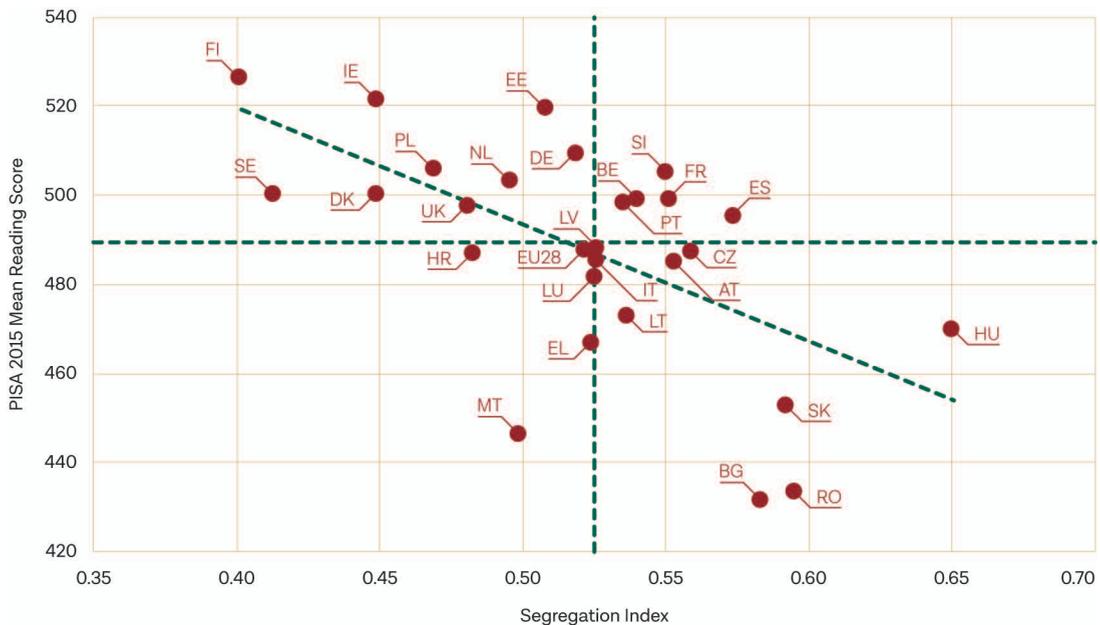
countries like Germany have managed to reduce it significantly. Finland, long considered an example of excellence and inclusion, has seen a growing skill divide in recent years. And there are large differences within countries: for example, five regions of Spain, including the Basque Country, have a higher PISA score and lower inequality than the EU average, while Murcia and Andalusia are well below the Spanish average.

Social segregation in schools is a big driver of the skill divide. Part of the reason why students from disadvantaged background do not perform as well is because they are clustered together in lower quality schools. The correlation between the socioeconomic level of each student with the average socioeconomic level of his or her school, a measure of school segregation, is high in many countries in the EU, with Hungary being the most segregated, and Finland the least (figure O.7). And the schools poorer students go to are often of poorer quality. This matters for inclusion but also excellence: students in more equal, less segregated education systems in Europe tend to perform better on aggregate.

Social segregation is the result of the interplay between residential patterns, educational policies and parental choice. Residential patterns are a given, while school zoning and school assignment policies for students, the nature and extent of school choice, information on school performance and public subsidies to private schools are all matters of education policy. These policies interact with parental choices in shaping school segregation, starting as early as in preschool and primary education, and are often reinforced by policies that separate students by ability into vocational education and academic tracks. Because it often reinforces social divides, ‘tracking’ is one of the core drivers of social segregation. The earlier the selection between vocational and academic tracks takes place, the bigger the risk to social mobility.

Figure O.7 Poor students often end up with other poor students in the same school, but socially less segregated systems perform better

PISA 2015 mathematics scores and segregation scores across the EU



Source: World Bank staff calculations based on PISA 2015.

Note: The school segregation coefficient measures the correlation between the socioeconomic level of each student with the average socioeconomic level of his or her school.

Labor and social policies often fall short of addressing the needs of workers left behind

Labor and social policies are key tools to reduce inequality of opportunity. First, labor policy can promote flexibility to facilitate access to jobs for new labor market entrants and low-skill workers and to avoid sustained and entrenched duality. This can be done through eased hiring and separation regulations covering permanent contracts, paired with appropriate use of temporary and (voluntary) part-time employment opportunities. Second, social policy can provide adequate security through income protection to Europe's poor and the newly poor who fall behind in the changing labor market, paired with measures to support their reemployment. These principles are embedded in the “flexicurity” principle spearheaded by Denmark, which are becoming increasingly relevant in response to the opportunities and disruptions emanating from technological change. Third, adequate and well-targeted cash transfers and social work are an important investment to address social disadvantage of children and youth, a key determinant of Europe's social skill divide.

However, a closer look at Europe's labor and social protection systems today reveals significant variations in countries' ability to deliver on those ambitions. “Flexicurity” is not yet a reality in many parts of Europe.

Technological change accentuates the challenge of striking the right balance between job security and wage protection, on the one hand, and greater flexibility to facilitate access to jobs for new entrants and low-skill worker, on the other hand. Today this balance varies significantly across the EU. First, while employment protection legislation (EPL) and wage-setting institutions have been successful at reducing wage inequality, there is also evidence that too much of it can hurt firm productivity and job creation (particularly among low-skill workers and new entrants).⁴ Although EPL have become less stringent since the 1990s, the strictness of EPL for permanent contracts remains high (relative to the OECD) in much of the EU (figure O.8). In countries with high degrees of protection for permanent workers, employers face a lower incentive to create new jobs, resulting in worse employment prospects of low-skill workers at a time when technological change is reducing the demand for these workers. Second, while the extent of nonstandard employment

Figure O.8 Employment protection regulations for workers on permanent contracts are above the OECD average for most EU countries

Protection of permanent workers against individual and collective dismissals



Source: World Bank staff calculations based on the OECD Employment Protection Database.

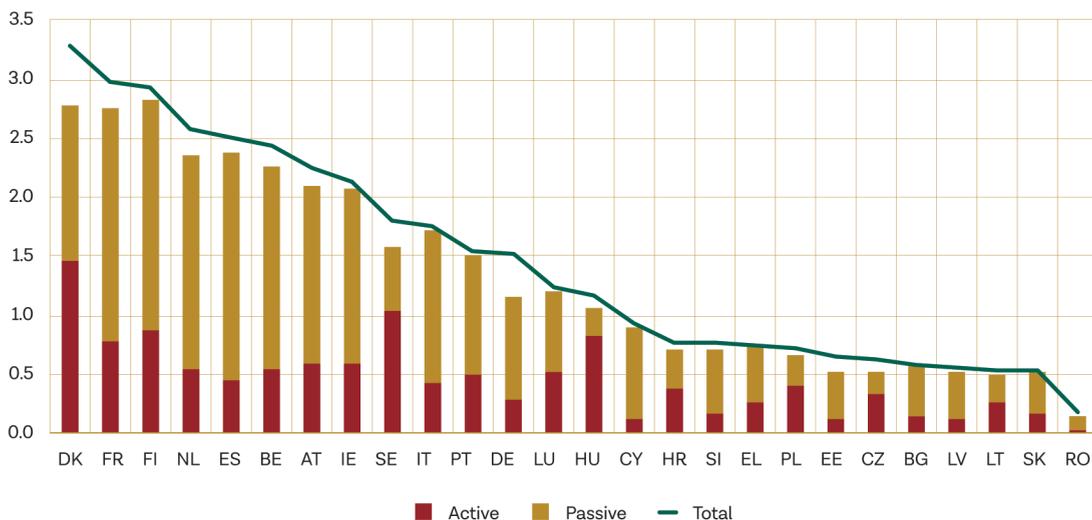
varies significantly across the EU, temporary employment (especially among younger workers) and part time work (among prime age and older workers) have increased significantly in many countries. These trends have gone hand in hand with rising efficiency and equity concerns associated with growing duality between contract types (well-protected open-ended versus less protected temporary) and increases in involuntary part-time work (OECD, 2013).

Labor market policy across Europe is not sufficiently geared toward active measures to help workers retain their jobs or quickly return to employment after job loss. Central to the “flexicurity” principle, these policies are becoming more important with the new realities in the labor market, particularly job-search assistance and skills upgrading. Countries across Europe vary significantly in the way they leverage labor market policies. First, spending on such policies varies significantly between more than 3 percent in Denmark and less than 0.5 percent in Romania (figure O.9). While spending is arguably an imperfect indicator of effective use of labor market policy, the fiscal envelope for such programs defines room to maneuver and reflects their importance in a national policy mix. Second, beyond aggregate spending, passive measures (such as income support and early retirement) dominate active measures across most of the EU.

Looking ahead, labor market policy needs to expand its focus toward enhancing the opportunities for the newly unemployed to return to work, including through better targeting and tailoring of employment support programs to needs and better monitoring and evaluation. “Flexicure” Denmark stands out both in terms of aggregate spending and the share that goes to active measures: hiring and separation rates in Denmark are high, but so is the importance of an activating labor market policy as part of the flexicurity framework.

Figure O.9 Expenditures on labor market policies vary significantly across the EU

Spending on labor market policies as share of GDP, 2015 (percent)



Source: World Bank staff calculations based on Eurostat.

Note: Active includes training, employment incentives, supported employment and rehabilitation, direct job creation and start-up incentives. Passive includes income support and early retirement. Total also includes labor market services.

Social protection systems are often falling short of growing needs of workers who are being left behind in the labor market. Over time, a growing need for protection of those left behind by a changing labor market will compete with increasing aging-related claims on often already large

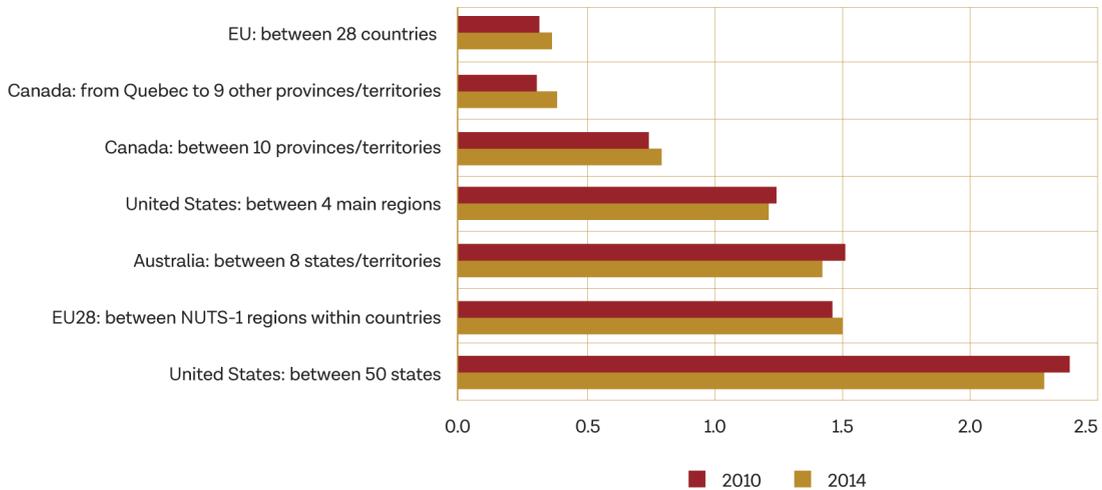
social protection systems. While welfare state spending in parts of Europe is among the highest in the world, it varies significantly across countries — between around 15 percent of GDP in Lithuania, Romania and Estonia and above 30 percent in Finland, Denmark, and France. Moreover, across all countries, the lion's share of spending is geared toward social insurance for old age and health — with benefits linked to jobs and based on a contributory principle. In comparison, spending on social safety nets and income support for those not (or no longer) covered by contributory benefits is very low in most countries, varying between 0.1 percent of GDP in Latvia, Estonia, Poland, and Hungary; and 1.3 and 1.4 percent in Denmark and the Netherlands, respectively. Therefore, even when programs are well designed to cover a larger share of the bottom 20 percent of the population (for example, the well-targeted guaranteed minimum income schemes in Estonia and Latvia), the small size of such programs means that benefit levels are low, thus undermining their protective and redistributive power.

Because they emphasize benefits linked to jobs and based on contributions, Europe's social protection systems are increasingly out of sync with a labor market with growing nonstandard employment relationships. Contribution-based social insurance schemes have been designed for standard employment relationships between firms and workers, where full-time and open-ended contracts are the norm and benefits grow with seniority. For example, unemployment benefits and pensions in the EU are mostly contributory and linked to work history, with larger benefit rights resulting from longer job tenure. This system is not well placed to keep up with changing realities in the labor market where temporary and self-employment is increasingly prominent, particularly among the young. At the core, there is a concern about how to protect people who cannot work long enough, or whose disrupted careers make it difficult to contribute enough, to qualify for these benefits. As a result, current systems need change toward a greater emphasis on noncontributory schemes and individual accounts which are linked to the worker and not the job he or she holds.

Spatial labor mobility in the EU is relatively low and does not serve as a major adjustment channel for labor reallocation and opportunities for low-skilled workers. Europe aims to achieve a single market for goods, services, capital and labor. But the integration of labor markets remains limited and labor mobility low: Only a small share of the total EU28 population is mobile *across* EU borders — and labor mobility is much less than that across United States or Australian states. EU mobility is similar to Canadian mobility between Quebec and other provinces — that is, it is similar to situations where language barriers apply (figure O.10). Labor mobility between regions *within* EU countries is higher than between countries (but still short of mobility between US states). However, EU Labor mobility has been growing in recent years in terms of permanent emigration, the temporary posting of workers in another member state and cross-border commuting. Much of this mobility has focused on a few main sending countries (in Central and Southeastern and Southern Europe) and receiving countries (in Continental Europe) (European Commission 2016).

Figure O.10 Cross-border labor mobility in the EU is low

Annual cross-border mobility, percentage of total population



Source: OECD Survey of the European Union; Australian Bureau of Statistic; Statistics Canada; US Census Bureau.

Note: Population mobility for Australia, Canada, and the United States; labor mobility for the European Union.

Firms enjoy economic freedom and a supportive innovation environment in some parts of Europe but not in others

Firms are doing better in some parts of Europe than in others in ways that affect the convergence machine. This is because of policies that define the business and innovation environment in a country or region and the institutions that enforce them. *Growing United*, like *Golden Growth*, argues that these policies play a big role in explaining differences in productivity performance across countries and regions in the EU. But it also argues that the role of these policies has gained, and will continue to gain, prominence amid the acceleration of technological change, globalization and demographic change.

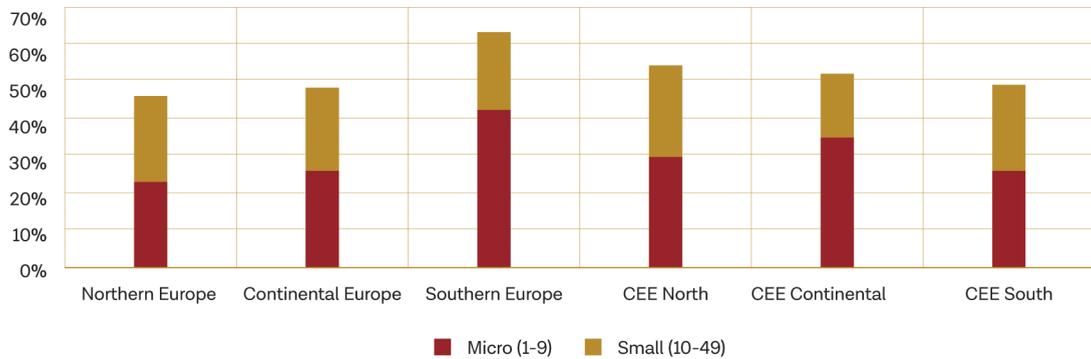
Southern European countries are lagging because of burdensome business regulations

Countries of Southern Europe have firms that are smaller and less global. Microenterprises account for a significantly larger share of employment and value added in Southern European countries than in other EU countries (figure O.11). Small is not necessarily bad, but there is a minimum scale below which size becomes a constraint to growth, particularly in a global market. And not all small firms are equal: microenterprises in Southern Europe are less productive than those in the rest of the EU. Countries in Southern Europe also have the lowest presence of foreign-owned firms in the EU. At the other end, foreign-owned firms contribute the most to employment and value added in Central and Southeast European countries, a tribute to their success at attracting foreign direct investment (FDI). This matters because foreign-owned firms are more productive than domestic firms. Firms in Northern Europe are not just more successful than those in Southern

Europe in attracting foreign capital, but they are also more global: 10 percent of Swedish firms belong to Sweden-based enterprise groups with presence in Europe, while fewer than 3 percent of Italian or Spanish firms do.

Figure O.11 Microenterprises account for 40 percent of employment in Southern European countries

Employment share of microenterprises and small firms, 2014

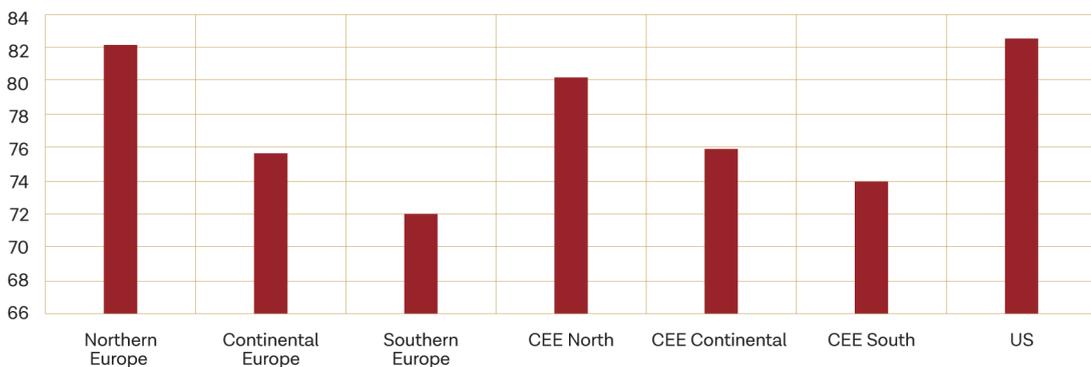


Source: Own calculations, using Eurostat data.

Excessive business regulations drive Southern Europe’s firm profile. The business environment in countries in Southern Europe tends to be more restrictive than in their neighbors to the north (figure O.12). A simple and efficient regulatory framework is needed to balance the social responsibility of firms with a vibrant enterprise sector. Excessive regulations, however, constraint the ability of firms to reach the minimum size required to be competitive, to become more productive, as well as to be international (through exports or offshoring) and attract foreign investment. Small firms in the south may prefer to stay small to avoid more complex regulations (figure O.13). Excessive regulations also constrain the ability of small and medium firms to graduate into large firms.

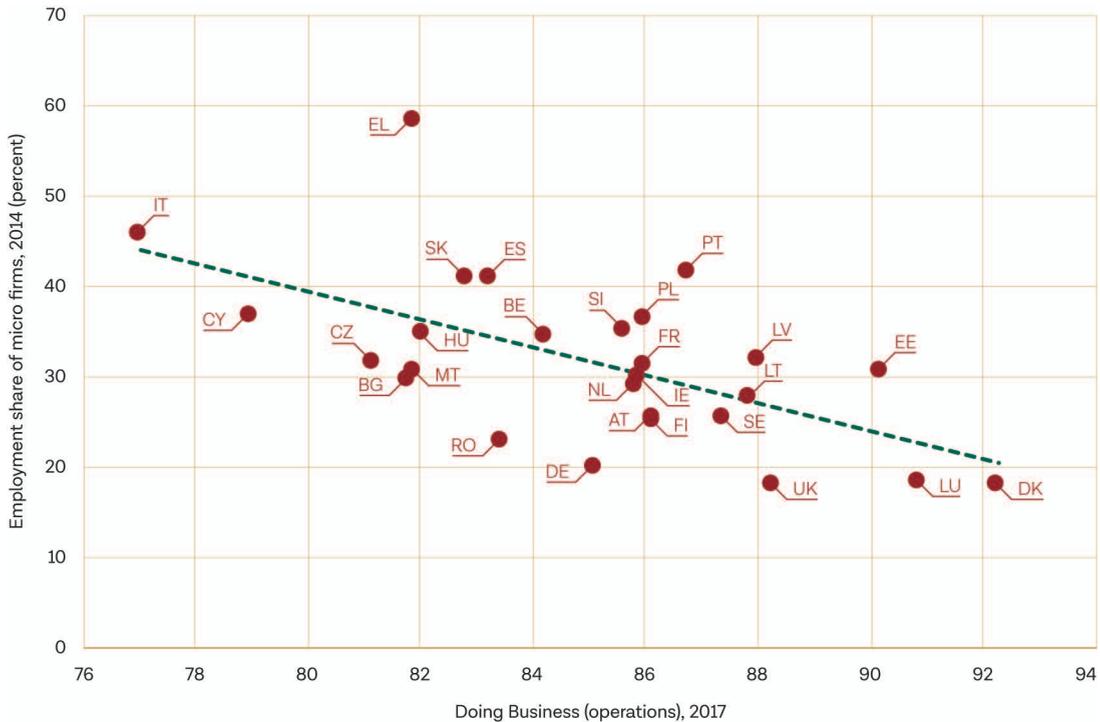
Figure O.12 Business regulations are more burdensome in Southern Europe, Bulgaria, and Romania

Doing Business, distance to best performer; best performer = 100, 2017



Source: Doing Business 2017.

Figure O.13 In a difficult business environment, firms stay small



Source: Doing Business and Eurostat.

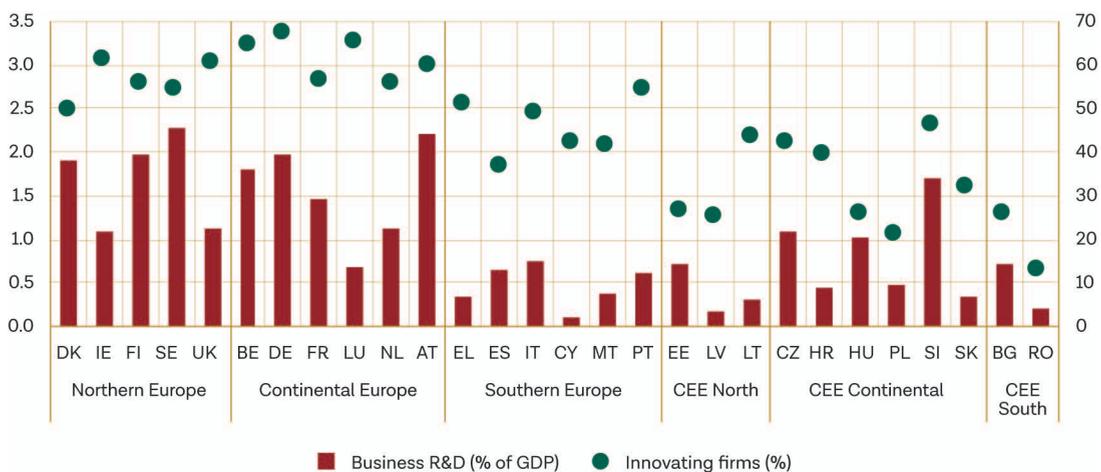
Central and Southeastern European countries have successfully attracted foreign investments, but business regulations and infrastructure remain a challenge in some countries. Foreign-owned firms contribute the most to employment and value added in Central and Southeastern Europe. And FDI inflows have been a key determinant of firm productivity growth in these countries. All this attests to the key role of FDI inflows in helping Central and Southeast European countries catch up with more advanced economies in the EU. However, the quality of public infrastructure remains relatively low, and a key binding constraint to firm productivity growth, in many of these countries. And the quality of business regulations remains a challenge in Bulgaria and Romania, particularly in their lagging regions.

Restrictions on services are holding back productivity growth across the EU. Services make up more than three-fourths of the EU's GDP and almost the same share of its employment, but contribute relatively little to productivity growth because of excessive regulation. While the EU's Services Directive was adopted in 2006 with the aim of creating a Single Market for services, many barriers to the exchange of services across EU borders persist – in stark contrast to the free mobility of goods (World Bank, 2016). Service firms face many hurdles to offer their services in another EU member states: they may have to change their residency or even nationality, adopt a different ownership structure, reorganize their insurance, find workers with different specific diplomas, or become members of specific professional associations. Professional services are the most restricted. In general, service sector regulations are much more restrictive in the EU than in other OECD member states, particularly in CEE and Southern European countries.

Northern European economies are productivity leaders because they innovate

Enterprises in Northern Europe enjoy considerable economic freedom, but they also innovate more and adopt new technologies more intensively. Northern economies are in the top 15 countries of the Doing Business rankings. Their firms enjoy considerable economic freedom, but it is really their superior innovation capacity that makes them European and, in some cases, world leaders. Business executives in Northern and Continental Europe rate firm innovation capacity and technology high, not much different from the assessment of American executives. These countries also stand out, and are similar to the US, in terms of business research and development (R&D) (figure O.14). Firms in Northern and Continental European countries also stand out as the most innovative. They also sell more online and use more sophisticated cloud computing services than firms elsewhere in the EU. Why? Because these countries provide a good business environment, with more competition and less restrictive employment protection legislation; quality information and communication technology (ICT) infrastructure; and dedicated support for firm innovation and technology adoption.

Figure O.14 Northern economies innovate more, making them productivity leaders



Source: Eurostat and 2014 Community Innovation Survey.

Note: Percentage of innovating firms is measured on the right axis. A firm is innovating if it has implemented a new/significantly improved product, process, new marketing method, new organizational method in business practices, workplace organization or external relations.

The low quality of the business environment and local institutions limits the opportunities of firms in lagging regions within countries

The divergence generated by technological change also has a spatial dimension. Technological change mostly benefits agglomeration areas with high opportunities for firms and people. Lagging regions, often peripheral and sparsely populated and characterized by a poor business environment, stand to benefit less. Thus, technological change risks widening the divide between leading and lagging regions in Europe.

Lagging regions rely more on agriculture and have smaller and less productive firms. Lagging regions tend to be highly dependent on the agricultural sector. And firms in lagging regions are

smaller than firms in nonlagging regions of the same country. The enterprise structure of 'low-growth' regions in Southern Europe is dominated by self-employment and family-run enterprises specialized in local nontradable activities. Firms in these regions have significantly lower productivity growth than firms elsewhere, including in the agricultural sector (World Bank, 2018)".

The economic structure and firm profile of lagging regions is partly driven by economic geography, but there are untapped opportunities for agglomeration. Periphery (that is, low proximity to economically dynamic areas) is a defining feature of lagging regions, constraining the access of firms to markets. Some regions are both peripheral and sparsely populated (mainly in "low-growth" regions). Firms in low-density lagging regions are less able to exploit sources of agglomeration for productivity growth. Lack of market scale and economic density makes competitive environment weaker, undermining the incentive of firms to upgrade their capabilities. Periphery is compounded by poor connective infrastructure, including broadband connectivity, particularly in lagging regions of CEE countries. And many peripheral lagging regions are more densely populated than the European average, indicating untapped opportunities for further economic agglomeration around secondary cities.

Opportunities for firms in lagging regions are also limited by the low quality of the business environment and local institutions. Business regulations vary considerably between cities and regions within countries. Lagging regions tend to have more burdensome regulations, particularly in Southern European countries, and less firm competition. In Italy, additional delays in obtaining construction permits and enforcing contracts result in substantially lower firm sales and profits in lagging regions. Firm competition is lower in lagging regions for structural reasons, but poor governance also plays an important role. In fact, excessive regulations, limited competition and poor connective infrastructure in lagging regions are partly explained by the low quality of local institutions — local governments in lagging regions often lack the incentives and capacity to design and deliver appropriate interventions.

How to upgrade Europe's convergence machine: Toward convergence of opportunities

The divergence of opportunities across the Union today risks undermining inclusive growth and convergence in the future. At one extreme, many countries in Northern and continental Europe manage to equip the vast majority of youth — including those from disadvantaged backgrounds — with basic cognitive skills. Firms enjoy considerable economic freedom to thrive and receive support to innovate, making these economies global productivity leaders. At the other extreme, most Southern European countries, as well as Bulgaria and Romania, tend to have a high share of low performing students, mostly from low socioeconomic backgrounds, and high early school leaving. They also tend to have burdensome regulations and low support for firm innovation, which generate too few frontier firms and too many lagging firms. Technological change is boosting inclusive growth in countries and regions that provide high opportunities for people and firms to thrive, but it is disrupting it in places where opportunities are low, generating divergence.

The convergence machine 2.0 should be about convergence of opportunity for people and firms across the Union. Europe's convergence machine is due for upgrading to seize the benefits of technological change for all Europeans. How? By accelerating reforms to provide better opportunities for firms and people to thrive. An upgraded convergence machine would propel low-opportunity

countries to converge to a high-opportunity equilibrium, and those above the EU opportunity average to move closer to the frontier. Even the leading countries in Europe cannot afford to be complacent take Finland, a global role model for PISA excellence and inclusion, which has recently seen a widening skill divide. The message is that all countries, leaders and laggards, need to continuously adapt policies to promote opportunities for people and firms, or else risk falling behind. That requires a clear policy focus on equaling opportunities and bold action at the regional, country, and EU levels.

Equalizing opportunities for people

Equalizing opportunities for people is about three things: building their capabilities (skills), providing a level playing field with flexible and secure (“flexicure”) labor markets, and supporting those who fall behind.

How to equip Europe’s workers with the right skills?

Europe’s skill divide shows that education policy is due for an update. Education systems across the European Union today are highly diverse. Diversity comes in many ways, including around basic features like compulsory schooling ages and structural pathways (general vs. vocational schooling), teacher policies and remuneration and school assignment policies. Europe also features diversity in reform experiences — good and bad. While this diversity reflects different history and rich traditions, it is increasingly evident that some of these systemic and policy differences translate into diverging capabilities of countries to provide equality of opportunity to its future workforce. In learning from these diverse experiences, countries in Europe need to critically reexamine their education systems. Many do so already, but now is the time to do it jointly.

In the age of accelerating technological change, ensuring foundational cognitive and social-emotional skills for all is a necessary, if not sufficient, opportunity policy. To enhance equality of opportunity, education systems need to equip all students, including those with disadvantaged background, with the necessary basic cognitive and social-emotional skills to make them resilient to technological change. In other words, the goal is to achieve universal basic proficiency in national and international student assessment, for example maximizing the share of 15-year-olds who achieve basic proficiency in mathematics, reading and science in PISA. The goal of achieving universal proficiency would require a step up in monitoring of cognitive skills at various ages as well as investments in measuring social-emotional skills. Given important regional variations within countries, this would ideally involve producing a disaggregated picture at the regional level in each member state (for example, at the NUTS 2 level). Necessary data could be collected in sufficiently large sample sizes to produce a regionally disaggregated picture.

To close the skill divide, governments need to revisit fundamental questions about education systems and policy and their impact on equity. First, governments need to revisit the systemic policies in education that might fuel social segregation in schools. This includes school assignment policies, the nature and extent of school choice, information on school performance and public subsidies to private schools — and their interaction. This is not to say that all these policies should be dropped, but their potential impact on school segregation needs to be questioned and understood. Second, governments need to rethink policies to make up for disadvantaged background. While teachers cannot fight their students’ disadvantage alone, schools need strong outreach to community and parents. Governments need to examine how to promote closer alignment between social and educational policies at the local level, for example through close collaboration

between teachers and social workers, to tackle disadvantage. Third, governments should encourage innovation in teaching methods and classroom practices to foster the formation of cognitive and social-emotional skills and to ensure that innovation spreads from leading to lagging schools.

Europeans need to become lifelong learners, but can only do so with a strong foundation of cognitive and social-emotional skills. Lifelong learning is becoming ever more important and yet ever more difficult as the acceleration of technological change makes technical skills redundant at an ever-faster pace. At the same time, strong cognitive and social-emotional foundation skills are essential foundations for continuous and lifelong learning. This is why governments should rethink policies related to technical skills formation. First, teaching technical skills should not come at the expense of building foundational skills in school: should technical skills formation through vocational schools therefore be delayed to the postsecondary level to emphasize cognitive skills over technical skills during secondary education? Second, how can industry-school/university partnerships be strengthened to ensure that the technical skills that students learn are not already out of date when they graduate? Should governments encourage the private sector and enterprises to play a greater role in driving content and delivery in vocational training, higher education and adult learning — a greater role which is already visible in the case of private coding schools across Europe?

How to adapt Europe's labor market and social policy?

As technology disrupts labor markets, labor regulations and social policies are also in line for upgrading. More than ever before, policies and regulations should aim to protect people, rather than jobs. To protect people, Europe should bring back to the center of the discussion the question of how to achieve the right balance between labor market flexibility and security (the right mix of “flexicurity”). More flexible labor markets with eased hiring and redundancy regulations offer more opportunities for lower skilled and vulnerable workers. But more flexibility should not be about promoting less well-protected temporary jobs while open-ended jobs retain full protection — the result would be further rises in (inequitable and inefficient) labor market duality. Rather, is there a case for reducing protection for open-ended contracts or introducing a single contract as the standard arrangement under which protection increases with seniority? To deliver the other part of the flexicurity bargain, countries in Europe need to consider how to modernize protection: by balancing increased income protection for the unemployed and the poor with more effective active labor market policies and expanded tax-financing of old age security.

Boosting intra-EU labor mobility is a core element of the convergence machine 2.0. While labor mobility across Europe's single market has been growing in recent years, there is room for more. Increasing labor mobility can help provide opportunities for Europe's workers (and firms) and contribute to a better allocation of labor. Amid concerns of brain drain and displacement of native workers, there is a role for national and EU policy in steering labor mobility and creating a level playing field. This starts with reinforcing opportunities for young people to study, train and gain experiences across the EU (and acquire language skills), for example by further boosting the Erasmus+ program, and can be complemented by improving systems to provide information about jobs and to ensure recognition of qualifications across the EU. Effective steering of labor mobility also means combating illegal practices and enforcing labor regulations. And, as people base their mobility decisions on multiple criteria ranging from wages and cost of living and housing to the quality of social services, countries and regions are competing with each other to create attractive conditions for increasingly mobile workers.

Equalizing opportunities for firms

Equalizing opportunities for firms is about two things: providing an enabling business environment across all parts of Europe's single market and supporting the upgrading of firms' capabilities through innovation and technology adoption.

How to build an enabling business environment across Europe's single market?

Europe's convergence machine 2.0 would emphasize reforms to the business environment. Significant variations in the business environment between countries and regions suggest a need for the EU to reexamine its approach and tool-kit to promote a firm-friendly level playing field. The setting and implementation of business regulations are largely in the hands of national and regional governments, while EU-level policy is focused on rolling out the single market for goods, services, capital, and people, on deepening capital markets and on boosting investment. While this division of labor need not change, the EU could deploy its convergence machine instruments to business environment policy: setting targets, benchmarking and monitoring the business environment at the national and subnational levels, promoting mutual learning and reflecting policy upgrades in the European Semester.

Southern European countries need to accelerate reforms to improve the quality of business regulations if they are to narrow the productivity gap with their Northern neighbors. Burdensome regulations have generated an entrepreneurial profile that is not fit for a global market and the adoption of new technology, with too few top-performing firms and too many lagging firms. This is making these countries increasingly lag behind their Northern neighbors, and widening the gap between leading and lagging regions in these countries, as technological change gains pace. Southern European countries have been making progress in recent years, but reforms need to be accelerated to avoid falling further behind. Reforms should cover all aspects of the business environment, reducing excessive regulations and improving their implementation, particularly in lagging regions. (World Bank 2017).

More efforts are also needed in Central and Southeast European countries to improve the quality of the business environment and infrastructure and to continue to attract FDI. This would help to narrow the productivity gap with the rest of the Union faster. Business regulatory reforms are a priority for Bulgaria and Romania – measures which would benefit their lagging regions especially. Poor quality infrastructure is also a binding constraint for firms in many former transition countries. Their lagging regions would particularly gain from improvements in connective infrastructure, including broadband connectivity, as well as from investments in urban infrastructure in secondary cities with high growth potential, positioning them better to take advantage of the opportunities that come with technological change. Support for lagging regions should be preceded by reforms to improve the quality of local institutions. Cohesion policy should continue to play a key role in supporting these regional development efforts.

Completing Europe's Single Market for services can boost productivity across the Union. Reducing service sector restrictions to the level of the three least-regulated EU member states (the United Kingdom, Denmark, and Sweden) would increase productivity of firms operating in services and manufacturing by up to 5.3 percent within two years of implementation (World Bank 2016). Governments should focus their attention on reforms that yield the biggest economic benefits. Reforming conduct regulations, which determine how service firms operate and constitute a deterrent to foreign direct investment, and reducing barriers to the provision of professional services appear to have the largest payoff. The gains will be higher in countries with relatively weaker institutions,

for example, in many Central and Southern European countries. There would also be large productivity externalities from undertaking parallel service sector reforms across EU countries.

How to support innovation and technology adoption in Europe's enterprises?

With the acceleration of technological change, a good business environment is no longer sufficient for countries to sustain productivity growth — more support for firm innovation is needed. Firm innovation and use of digital technologies is low in many parts of the EU — Northern Europe and, to a lesser extent, Continental European countries are the exception. A good business environment, with more competition and less restrictive labor regulations, has helped. But these countries have done much more than that. They have supported firm innovation and technology adoption through better incentives for enterprise-sponsored R&D, public funding mechanisms and intellectual property regimes that foster profitable relations between universities and firms, and a steady supply of high-skill workers and managers. This has made them productivity leaders in Europe. Finland is a good example of that. Countries in Central and Southeastern Europe can also do more to support the adoption of existing technologies and knowledge, using FDI and trade links as conduits.

The time to upgrade the convergence machine is now

Technological change is a source of fundamental economic and social disruptions, providing immense opportunities and challenges alike — and the pace of its disruption is rapid. As the spread of artificial intelligence widens across production and services, and machines take over ever more tasks previously managed by humans, policymakers need to act fast to upgrade Europe's convergence machine. There is no time to lose.

The convergence machine 2.0 involves upgrading policy at the regional, national, and EU levels. This report raises several questions, without necessarily having answers to all, with the aim of stimulating further debate about what policy makers at the regional, national, and European levels can do to promote equality of opportunity. Most policy levers of the convergence machine 2.0 — from education, social and labor policies to business regulations and innovation policies — are in the hands of national and regional policy makers. But enhanced coordination of policy at the EU level and exploiting the EU's biggest asset — its single market — is a major opportunity for member states to jointly upgrade Europe's convergence machine. The EU as a global player also benefits from taking a global view in looking for inspiration and examples from policy reform innovations in countries outside of the continent.

Upgrading the convergence machine need not mean new centralization of powers to the EU level, but fully exploiting its key instruments and the benefits of a Union of countries. How? By crafting joint policies and setting joint targets, jointly monitoring progress across the Union, promoting mutual policy exchange and learning between member states, and strategically deploying European Structural and Investment Funds (ESIF) in the post-2020, multiannual financial framework (MFF) — including using ESIF as an “innovation fund” to help test new approaches. This is the European convergence machine: a machine that draws on diversity of experiences from all member states and common instruments to facilitate the charting of a shared economic and social policy path.

Notes

- ¹ The report also presents results using a measure of the innovation environment as proxied by the percentage of innovating firms based on Eurostat's 2014 Community Innovation Survey.
- ² The innovation environment is proxied by the percentage of innovating firms based on Eurostat's 2014 Community Innovation Survey.
- ³ Early school leaving is defined as the share of people age 18–24 who have only lower secondary education or less and are no longer in education or training.
- ⁴ A key channel is through technology adoption. Strict EPL tends to lead to higher adoption of labor-saving technology in low-skill sectors and lower technology adoption in high-skill sectors (Alesina et al. 2015).

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