

# **FULL EMPLOYMENT: A DISTANT DREAM FOR EUROPE**

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Today, Europe is a continent of low participation, low employment labor markets. There are differences across countries, but there is a “European model” of work: almost every European economy has more stringent employment protection and more generous social benefits than peers in North America, Oceania, and East Asia. This has led to low labor force participation and high unemployment, especially among young Europeans. Layered on top of these weak labor markets is the rapid onset of aging; if policies are not changed, Europe will lose about a million workers every year for the next five decades, especially in the 2030s. In short, Europe has to increase both the demand for and supply of labor. To do so, Europeans have to begin viewing competition as a necessary good, not an unnecessary evil. Restructuring unemployment and pension benefits will help to increase participation and reverse the decline of the workforce, but policies that promote competition for jobs and mobility of job-seekers are needed to increase the demand for labor. To get to full employment, Europe has to alter the employment protection laws that give too much power to those with jobs while marginalizing others to the fringes of the economy. Europeans will have to reduce and restructure the generous social benefits that simultaneously discourage young people from searching seriously for work and encourage older workers to quit work too early. Europeans will have to view migration of workers as a prerequisite of European integration, not just a possible consequence of it. And, over the longer term, Europe will need to attract global talent with more “selfish” immigration policies, driven less by political objectives and more by economic imperatives. If all this is augmented by reforms to reduce public debt, encourage enterprise and innovation, and stabilize finance, Europe will have a vibrant economy, with high participation and full employment.

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## **FULL EMPLOYMENT IN EUROPE: A DISTANT DREAM**

In February 2000, the world watched as France instituted the 35-hour workweek, down from the 39 hours expected of French workers, and the over 40 in most developed countries. The reasoning was that because there are only so many hours of work needed, it would be better to share them among more workers. Unemployment in late 1999 was about 10 percent, so cutting the number of hours by about 10 percent might take care of the problem. Economists call this the “lump of labor fallacy.” Another reason was the belief that French workers should be rewarded for their high productivity by allowing them to work less. Researchers found that the output per hour worked was higher in France than in almost every other country. Getting employers to pay overtime wages for work beyond 35 hours would help labor capture more benefits of high productivity.

What happened over the next few years? Unemployment did not fall by much, though the new requirements might have encouraged workers to move to smaller firms that were not covered by the law (Estevão and Sá 2006). The 35-hour workweek has since been watered down, but no government has tried to repeal it. Instead, businesses have been given ways around the problem, and the regulations have become more complicated. In the meantime, productivity growth has slowed in Western Europe and sped up in the United States. Between 1990 and 2000, output per hour worked in manufacturing—the sector with the most reliable data—grew at roughly 4 percent a year in both France and the United States. Between 2000 and 2007, it accelerated to 6 percent in the United States, while French productivity growth slowed to 3.3 percent (U.S. Department of Labor 2011).

The lump-of-labor fallacy might also be responsible for attitudes toward mobility and immigration in Europe. If there is only so much work to divvy up, people from other EU states—or worse, other parts of the world—should not be allowed in. Prime Minister Gordon Brown, reacting to reports that Italian and Portuguese workers were being hired for construction contracts during the financial crisis, called for “British jobs for British workers.” In contrast, Australia, Canada, New Zealand, and the United States, partly freed from this fallacy by their tradition as centers of immigration, have attracted the world’s best and brightest. They have succumbed occasionally to the same instincts, even though many studies have found that workers mainly move to places where there are jobs that locals are not willing or able to do (Gallaway and Vedder 1997). But the flow of immigrants serves to inject economic adrenaline in a manner that is less evident in Europe.

## **EUROPE’S ALBATROSS: THE “LUMP OF LABOR” FALLACY**

Although institutions and social norms vary across Europe, the stereotype is that Americans “live to work” and Europeans “work to live.” Few would argue that the two weeks of leave that many workers in the United States get is good for their productivity and national economic growth. Americans who have traveled or lived in Europe often lament the imbalance between work and life in the United States, and attribute the rise in stress and tensions in family life to the importance Americans give to work. The stubbornly high rates of unemployment since the financial crisis have encouraged skeptics of the “U.S. work model” to question the benefit of its flexibility, because the U.S. work model seems to deliver a much higher level of inequality and “working poor” than the European work model. One could be forgiven for wondering whether in the years since Europe’s “Golden Age” between 1950 and 1970, Europeans have been drifting to the opposite but equally questionable extreme. In the 1960s, the French worked the longest hours among advanced countries. By the 1980s, they worked about as long as Americans. By 2000, they worked about 300 fewer hours each year—a month and a half less—than

Americans. In France, just 1 in 10 people aged 60–65 works; in the United States, the ratio is 1 in 2. It is difficult to see how norms can change so quickly; the reason has to be policies have changed. If Europeans feel that work has declined too much, then it is obvious that policies have to change.

One development makes these decisions urgent. As people reduce working lives in most of Europe, populations in all European countries are aging. The European Union's labor force is expected to decline by about 39 million by 2060. If the Balkans, Turkey, the Russian Federation, Ukraine, and Belarus are included, the decline is about 50 million; the projected increase of 6 million in Turkey's labor force is more than offset by the decline elsewhere. Only if actual retirement age were to increase by around 10 years and participation rates—especially among women—were to increase to levels seen in Northern Europe could Europe offset the decline in the labor force. None of these measures, though, would prevent the aging of the European labor force.

Europe is not alone in feeling the force of aging populations. Japan and other developed parts of Northeast Asia already find themselves under the strains of low fertility and increasing longevity. In the Southern Cone of Latin America, Argentina, Chile, and Uruguay also feel the effects of aging. Even China faces this challenge. But the most “European” features of the work model—unprecedented job security, generous benefits for the unemployed, and easy pension eligibility—make the imperatives created by an aging population most acute in Europe.

Europeans have a choice: work to maintain the European social model, or give up a big part of it through painful cuts in social benefits. The first imperative is to counter the shrinking of the labor force. As in now-wealthy Western Europe, North America, and Japan, industrialization, urbanization, and advances in hygiene and health care extended lifespan and reduced child mortality and the need for large families. Yet with legal retirement age stuck at 60 or 65 in most countries, and many people retiring even younger, the number of people at work has been falling. The labor force in Europe as a whole is expected to shrink 5 percent by 2020 and more than 15 percent by 2060.

The second imperative is to increase labor force productivity. A shrinking labor force reinforces the need to develop human capital relevant in the labor market. With increasing shortages of qualified labor and rapidly changing industrial structure, any inclusive growth strategy will need to boost labor productivity by investments in human capital. Europe's adverse demography also means that its human capital has to be better leveraged. Labor market regulations, interventions, and institutions have to become more “pro-work.” To ease the brakes on growth caused by aging, it is necessary to have labor market regulations that encourage more people to work, to work longer, and to work more productively. Changes that make jobs more contestable will increase productivity. And increasing the productivity of the labor force will require that Europeans become more mobile.

But even if Europe can put its human resources to best use, the pace of aging and the decline of the labor force will leave a demographic deficit that can be closed only by tapping into talent from abroad. Europe will have to rid itself of the lump-of-labor fallacy that impedes smart immigration policy.

Europe's approach to balancing economic freedom for employers and social protection for workers is unique, though there are noticeable differences among countries in Europe. But in much of Europe, these arrangements are not working well. Over the next decade, two developments—unprecedented in size—will strain the European work model even more. The first is a rapid aging of the population. The second is competition from workers outside Europe, most notably a billion ambitious and increasingly

better educated Chinese and Indian workers. Europe must contend with both. Most countries in Europe are not making the best use of workers, their scarcest asset.

What has to be done? First, Europe must offset the impending labor force decline by increasing the labor force participation of people of all ages. Second, European countries must improve regulations and interventions so that labor is allocated more efficiently, within and across countries. And third, Europeans will have to change their attitude to mobility, both within Europe and across the globe. We arrive at these conclusions by answering four questions:

- *Are employment and social protection practices reducing participation?* In most parts of Europe, they are. Strict employment protection and weak work incentives undermine labor participation and efficiency in Europe. Some governments have reformed labor laws to make hiring new workers cheaper—though these changes have generally been piecemeal, as in Spain during the early 2000s—while others such as Germany have restructured social assistance schemes to make it more profitable to work rather than collect benefits. Central European countries such as Poland have changed social security systems to encourage participants to work longer, but it is far from clear whether these changes will be sustained.
- *Are employment and social protection policies inhibiting efficiency?* In almost all of Europe, they are. Current policies allow “insiders” to make their jobs incontestable through strict employment protection, while creating considerable work disincentives for “outsiders” through poorly designed social benefits, especially in low-wage segments. Many governments in Europe—especially in the north—have been making the labor market more contestable, and others can learn from them.
- *Is Europe taking advantage of the potential for greater labor mobility?* The short answer is no. Although migration between EU countries is higher than other world regions, intra-EU migration falls short of the European Union’s aspiration of a fully integrated labor market. In addition, internal labor mobility in most countries is low. The explanations (beside the obvious difference in language and culture between EU countries) involve inefficient housing markets, wage-setting practices that do not signal labor shortages and surpluses, and the absence of a Europe-wide social safety net that makes moving too risky.
- *Can Europe become a global magnet for talent?* It can, but to do so Europeans will have to abandon the lump of labor fallacy. Without changes in labor force participation, the European Union will need about a million (young) immigrants a year for the next five decades to offset the population decline. Immigration policies in most European countries focus too much on political factors, such as family reunification and human rights, and too little on economics, such as the demands of employers and skill shortages. Though morally laudable, this makes Europe a loser in the competition for globally mobile talent. A new immigration policy needs to be complemented with policies that make risk-taking, entrepreneurship, and skills more profitable.

Europe is aging and its labor force shrinking. This is not news. But the speed and size of these developments is shocking, and should motivate policy responses. Labor market regulations, interventions, and institutions are restraining growth, and they must be updated. Education and training systems will need reform to enable workers to take up more productive jobs, with greater ease and to greater profit. Europeans are still less likely to move than people in other parts of the world, and the success of the single market in services depends on their becoming more mobile. Much more can be done to make Europe a global—not just a regional—magnet for talented people. To do all this, Europe’s policymakers will have to convince themselves and their constituents that the rewards of hard work can be shared sensibly without treating labor as a fixed lump to be parceled out.

## MORE—AND MORE PRODUCTIVE—WORKERS

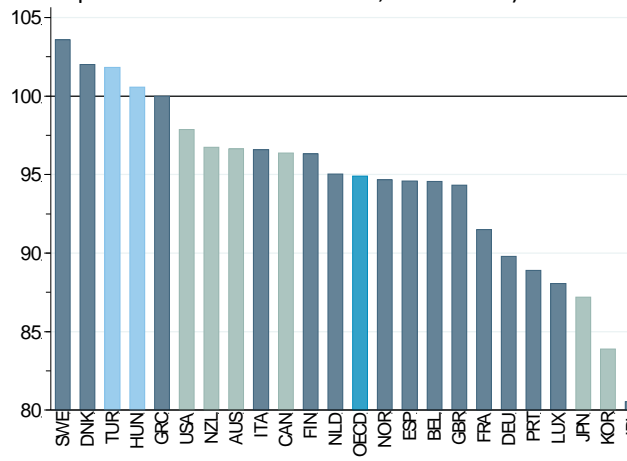
Workers in Europe benefit from the most effective protection against abuse by employers and the most comprehensive job security and nonwage benefits, such as unemployment insurance, paid leave, and retirement pensions, which sustain shorter work hours than in most of the developed world. In many ways, these characteristics set Europe apart from other regions and are a triumph of economic development and liberal democracy. But given changes in Europe and the rest of the world since the end of the continent’s “Golden Age” between 1950 and the mid-1970s, and the speed of global economic integration since, many features of the European work model are coming under pressure. These challenges are exacerbated by a shrinking and aging labor force.

### THE DECLINE OF WORK

People in many countries are working less than they used to. As countries have grown richer, people have consumed more leisure, and the average number of hours worked in a year has declined in most middle- and high-income countries (figure 1). Where this reduction in hours worked is matched by gains in productivity—the output of the average worker—the decline should be expected and treated as healthy, as in Ireland, Poland, and the Slovak Republic. Yet the speed of the decline in hours worked in France, Italy, and Spain since 1995 raises concern when juxtaposed with their modest gains in labor productivity during the last two decades (figure 2).

**Figure 1 The decline in hours worked was faster in Europe than elsewhere in the OECD**

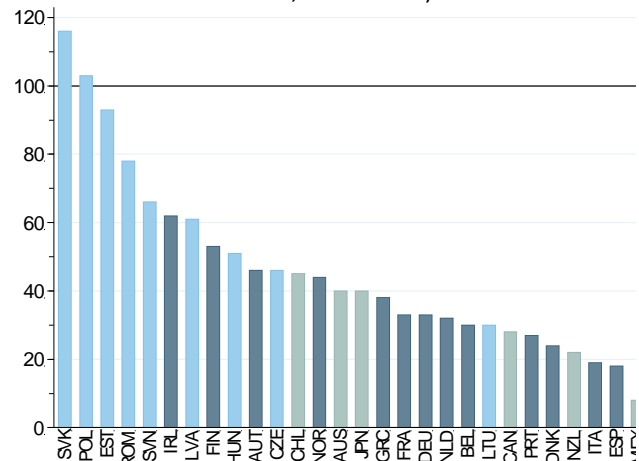
(reported average hours worked per year, percentage point difference 1990–2008, 1990 = 100)



Source: World Bank estimates, using OECD data.

**Figure 2 Europe has both productivity leaders and laggards**

(GDP per hour of work, percentage point difference 1990–2008, 1990 = 100)



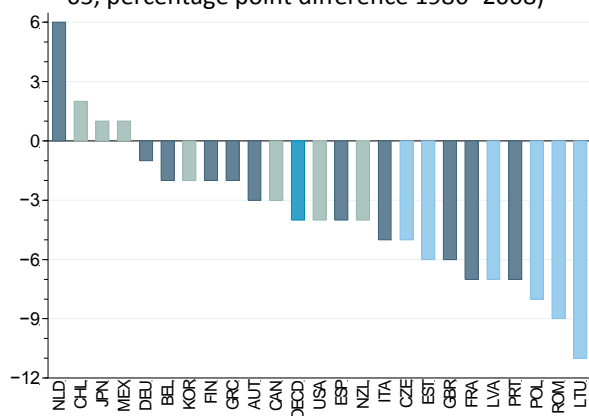
Source: World Bank estimates, using International Labour Organization data.

Several countries in Europe hold the dubious distinction of having among the lowest rates of labor participation in the world. This is a feature that marks both high- and middle-income countries in the region. The percentage of working-age people who participate in the labor market has fallen at a faster pace in several large European economies than in other member countries of the OECD (figure 3). In Europe’s southern periphery, a rare coincidence threatens future prosperity: women have low participation rates and low fertility, adding less to both today’s economic output and tomorrow’s.

Europeans have also been withdrawing from the labor market to retire at a much earlier age than previously (figure 4). In France and Spain, for example, the effective age of retirement of men has fallen about twice as much as it has in Canada, Japan, and the United States. With the notable exception of the Czech Republic and Germany, where workers are staying active a bit longer than they used to, the trend in Europe is toward earlier retirement, despite efforts of governments in many countries to make qualifying for pensions more difficult. This contrasts with the gentler decline in the effective retirement age of workers in the United States, and sharply with the relative stability in the age of retirement in high-income East Asian countries. Men in the Republic of Korea, for example, are actually working almost six years longer than they were in 1965.

**Figure 3 The decline in work participation has been faster in Europe**

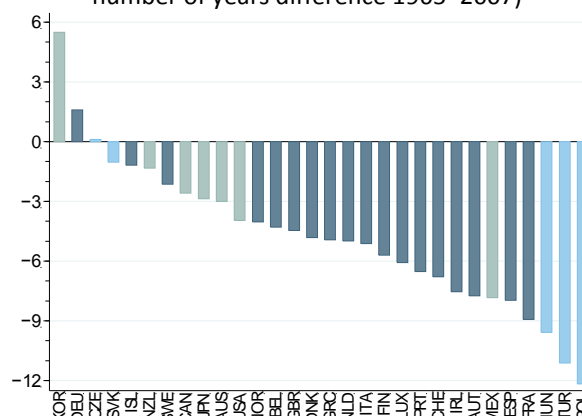
(change in the labor force participation of men ages 15–65, percentage point difference 1980–2008)



Source: World Bank estimates, using the World Development Indicators.

**Figure 4 Europeans are retiring at earlier ages than they used to**

(change in the average effective retirement age of men, number of years difference 1965–2007)



Source: World Bank estimates, using OECD data.

## THE DECLINE OF POPULATIONS

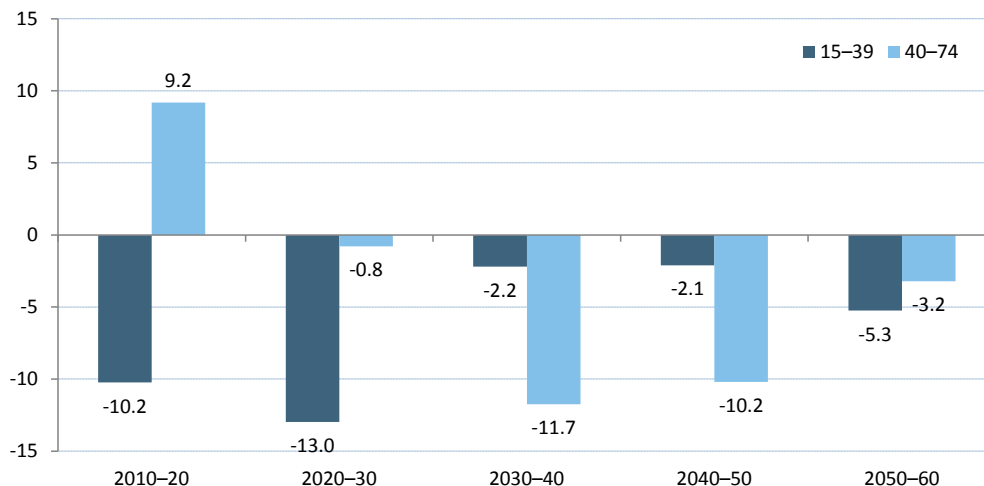
Europe—the EU, EFTA, EU candidate countries, and the EU eastern partnership—will lose 50 million workers between now and 2060.<sup>1</sup> Today, the European labor force—employed and active job seekers—is about 320 million people; in 50 years, it will be down to 275 million, a decrease of 15 percent. Over the next 20 years, the labor force will decrease by 15 million (5 percent). Younger workers—below the age of 40—will shrink substantially during the 2020s. After 2030, the decline of the European labor force will happen among workers over 40 and gradually slow down. The largest crunch will happen during the 2030s: in that decade alone, the European labor force will fall an additional 14 million people (figure 5).

The European Union has been facing an aging crisis since the “baby boom” generation that was born between 1945 and 1960 began retiring in 2005. The largest population cohort “Generation X,” born between 1960 and 1970, will approach retirement age over the next 15 years. Generation X will start to retire in the 2020s, but thereafter, ever-smaller cohorts of young people will follow, pushing what experts call the “old-age dependency ratio” rapidly downward, so that by 2050 in some European countries there will only be two people working for every person receiving retirement pensions.

The decrease in labor force participation varies considerably across European countries. The main reason is that fertility rates in Europe range from around 1.2 to 1.5 in the Eastern, Central, and Southern

European countries, to 1.6 to 2.0 in the Benelux and Northern European countries. This is lower than the demographic replacement rate of 2.1 required to keep the size of the population stable.

**Figure 5 The big reduction in the number of workers aged 15–39 will happen before 2030**  
(projected changes in labor force, by age group and period, millions)



Source: World Bank estimates, using methodology described in Koettl (2009) and data from UN (2010).

The fall in the labor force will be particularly severe for EU and EFTA countries. Their labor force will decrease by 39 million people (18 percent) over the next 50 years. The other eastern European countries do not fare much better, with an equally steep decline of 16 percent. The only exception is Turkey, where the labor force is projected to increase 12 percent until 2060.

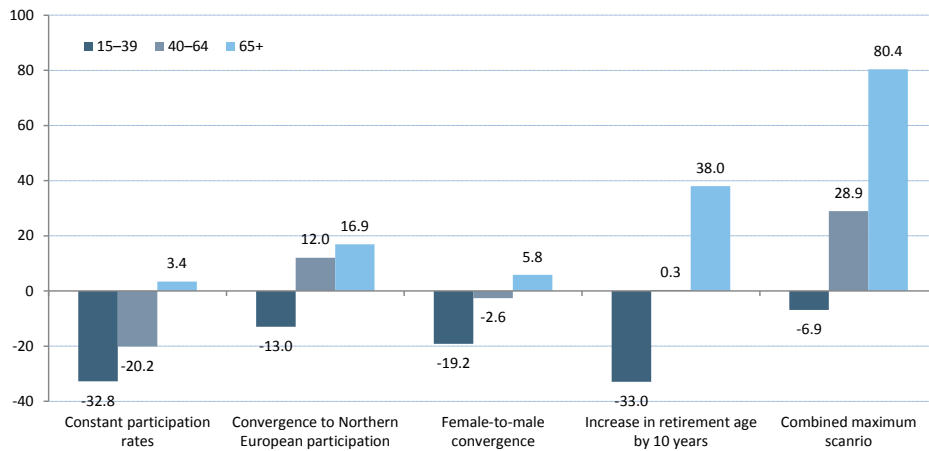
The natural consequence of falling fertility and rising longevity is an increase in the old-age dependency ratio—the number of people older than 65 relative to those of working age (15–65). By 2050, this ratio will double to about 50 percent in Europe, with Spain (68), Italy (66), and Portugal (58) projected to have the highest ratios (Muenz 2007). The projected changes in Europe—especially Southern and Eastern Europe—contrast with trends south of the Mediterranean, where the population is still fairly young.

### IMPROVING EUROPE’S DEMOGRAPHIC ARITHMETIC

Can Europe overturn these trends without increased immigration? Only with radical policy and behavioral changes. If participation rates in all countries were to converge to those seen in Northern Europe or if the retirement age were to increase by 10 years across the board, the European labor force would actually increase by 2060 (by 5 percent and 2 percent, respectively; figure 6). If female labor force participation were to converge to that of men, the labor force would still decrease, but only by 5 percent, as opposed to 15 percent in the baseline scenario. None of these scenarios counteracts the loss of young workers due to continually decreasing younger-age cohorts. Under all four scenarios—including the combined maximum scenario—the labor force below age 40 will shrink. In other words, the only large pool of potential additional workers—apart from new immigrants—that Europe could draw from in the future is among the elderly (ages 65 and older). Even under optimistic conditions, Europe would not be able to prevent the aging of its labor force.

**Figure Error! No text of specified style in document. To keep the size of the labor force stable, Europeans have to work longer**

(change in European labor force between 2010 and 2060 by scenario and age group in millions)



Source: World Bank estimates, using methodology described in Koettl (2009) and data from UN (2010).

Given the low participation rates in many European countries—especially among women, youth, the elderly, and excluded groups—there is room to improve and to stem some of the decline of the European labor force. To encourage people to participate, incentives for work must be aligned to ensure that work pays for both the employee and the employer. This could require, among other policy reforms, significant changes on labor taxation and social benefit design.

Women constitute 50 percent of the working-age population and given that they are increasingly more educated—more than men among younger cohorts—they represent a large pool of untapped talent. Even if their entry into the market in larger numbers does not produce the payoff in additional workers that comes from increasing the retirement age, it could have a large productivity payoff. Increasing female labor force participation would require interventions that allow women to better juggle multiple roles by providing, for example, child care facilities and flexible work arrangements (World Bank 2011e). The latter might also play an important role for keeping elderly workers in the labor force by allowing them to phase in retirement on a part-time basis.

To increase labor force participation across the board, both employees and employers need the right incentives for work. Currently, it seems that disincentives for (formal) work are substantial in many European countries, especially for low-productivity workers. For example, Koettl and Weber (2013) show that when comparing formal jobs with informal jobs, the benefits of formal jobs would have to be quite large to offset their costs in terms of taxes, social security contributions, and withdrawn social benefits. A similar result might hold for a comparison between formal jobs and inactivity. This leads to the conclusion that formal (part-time) jobs at low wage levels may not be an economically viable option for low-productivity job seekers in many European countries. For employers, high labor taxation has similar implications as it increases the total costs of labor and makes it less attractive to hire (see also chapter 7 on labor and corporate income taxation). Analysis using EU-Statistics on Income and Living Conditions data suggests that there is a negative correlation between the incidence of formal employment and work disincentives at the individual level.

Two main levers can make (formal) work pay for low-productivity workers and their employers: decreasing the labor tax wedge at lower wage levels and “smoothing” incentives with changes to social



assistance, housing, and family benefits. Regarding the tax wedge, current social protection financing in several countries discriminates against lower earners. Options for reducing the labor tax wedge include incentives linked to wage subsidies, social insurance contribution credits, or so-called “in-work” or employment-conditional benefits—cash benefits or refundable income tax credits conditional on formal employment—for low-wage earners. With regard to the design of social assistance, housing, and family benefits, the key is to keep the marginal effective tax rate in mind when designing eligibility conditions and how benefits are withdrawn. The goal is to reform these benefits toward so-called “smart safety nets,” making social protection benefits more compatible with work. In particular, any additional wage should also increase beneficiaries’ net incomes, including benefits. Otherwise, additional work does not pay, and beneficiaries will prefer to not work at all, to work informally, or to underreport their earnings.<sup>2</sup>

## **DEVELOPING THE SKILLS TO WORK TO POTENTIAL**

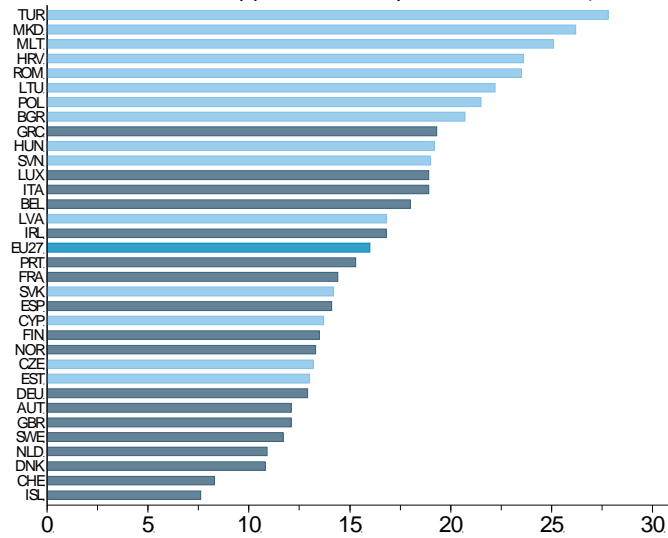
Recent studies from the OECD spotlight the importance of skills—cognitive, socioemotional, technical—in determining productivity. For example, Hanushek and Woessmann (2010) have shown that cognitive skills (proxied by Programme for International Student Assessment scores) explain a sizeable part of the variation in growth rates observed in OECD countries, including Western Europe.<sup>3</sup> In fact, the evidence suggests that generic skills also have substantial growth payoffs, even in advanced economies. Unsurprisingly, skills are at the center of the policy agenda of the European Union and Europe at large, as reflected in the European Union’s growth strategies (Lisbon Agenda, Europe 2020) and numerous strategic and policy documents (European Commission 2010a; World Bank 2011c).

Skills include not only technical ability, but also generic cognitive skills (literacy, numeracy, problem solving) and generic noncognitive skills (socioemotional and behavioral attributes such as team work, self-discipline, and perseverance). A solid base of generic skills seems to be a prerequisite for further acquisition of technical skills, whether through post-secondary education or on the job.<sup>4</sup> Further, the foundation for the development of generic skills is built early in life and during adolescence and hinge on having access to adequate nutrition, nurturing environments, and the quality of basic education (World Bank 2011d). Efforts by the OECD and the World Bank to measure the availability of and demand for cognitive and non-cognitive skills are underway.<sup>5</sup>

Skills not only matter for economy-wide productivity but also individual labor market outcomes. Differences in labor force participation rates between those with tertiary education and those with less than upper secondary education range from about 8 percentage points in Iceland to 28 percentage points in Turkey (figure 7). In other words, in Turkey the higher educated are 28 percent more likely to participate than those with lower education. In Bulgaria, Romania, and Serbia, the share of the Roma working-age population with at least some secondary education is 60 percentage points lower than that of the non-Roma. In some countries, the Roma could be a quarter of potential new labor market entrance in the near future. Helping them become more productive is not only a matter of social inclusion; it could also increase economic growth (World Bank 2010c).

**Figure 7 More educated people participate more in the labor market**

(percentage-point difference in labor force participation rates between those with tertiary education and those with less than upper secondary education, 2010)

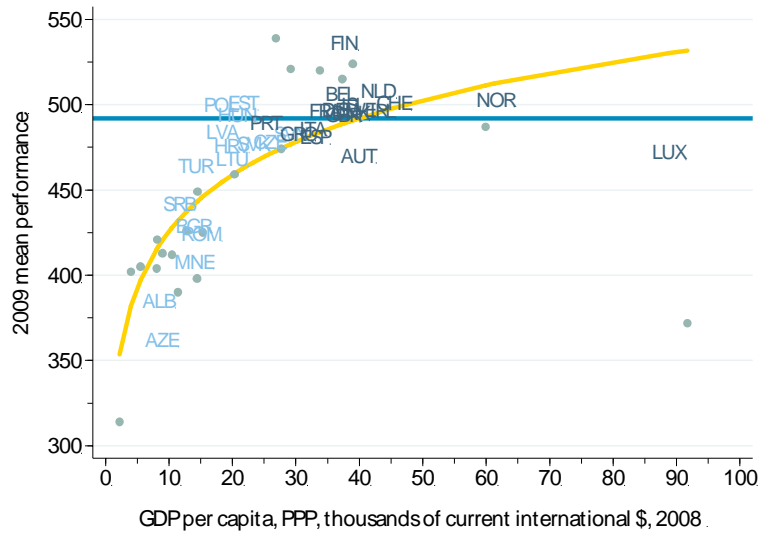


Source: World Bank estimates, based on Eurostat (2011).

Firm surveys show that skills have in recent years become increasingly binding for enterprise productivity and job creation in emerging Europe. Skilled labor shortages have become the second-most commonly reported constraint to growth in the enterprise surveys across all countries in Eastern Europe, behind only tax rates (World Bank 2011c). On average, 30 percent of firms considered education and skills to be a major or severe constraint in 2008. Upwards of 40 percent of firms were dissatisfied with the availability of skilled workers in the former Yugoslav Republic of Macedonia and Ukraine. These surveys have found that in addition to technical skills, the lack of noncognitive generic skills appears especially binding (World Bank 2009 and 2010a). Also in OECD countries and some middle-income countries, noncognitive skills are as important as cognitive and technical skills in firms' hiring decisions.<sup>6</sup>

Despite overall success in increasing student enrollment, the quality of education needs to be improved. The picture of education quality in Europe is diverse. Outcomes—as measured by the Programme for International Student Assessment—appear particularly poor in Azerbaijan, Bulgaria, Montenegro, and Romania, which have students in early grades that underperform relative to the country's level of development (figure 8). For another group of countries (Bulgaria, Croatia, Czech Republic, and FYR Macedonia), the performance in cognitive tests worsened between 2006 and 2009. Worrisome for labor market outcomes, upper secondary and tertiary education students may be graduating with the wrong skill sets (World Bank 2011c). There is evidence that after the transition, the obsolescence of technical skills was not addressed and that vocational education systems have not performed well. As a result, employers today often assert that it is difficult to find graduates with adequate technical skills.

**Figure 8 Cognitive skills are adequate in Europe, but some countries are lagging**  
(reading competency of 15-year-olds on the PISA 2009 by income levels of countries)



*Note:* The figure shows a log-linear regression line representing countries' predicted Programme for International Student Assessment reading scores based on their GDP per capita. The blue line is the OECD mean reading score.  
*Source:* World Bank 2011c.

Effective policy interventions can address many of these problems. Interventions should focus on overcoming failures in information and quality assurance. Countries should also rethink their training and education systems to avoid specialization in narrow (technical) fields too early in a student's career. Countries should also ensure that preschool and basic education curricula and pedagogic practice pay adequate attention to the development of cognitive and noncognitive skills.

## MAKING JOBS CONTESTABLE

Economists view competition much like most people view exercise. At some abstract level, we all know it is good for us, but we go to surprising lengths to avoid it. Economic agents—individuals or enterprises—are constantly hunting for an opportunity to monopolize a market. Just as we accept that exercise is a good thing, paying ever-higher fees to go to the gym, as tax payers we finance government agencies to eliminate uncompetitive practices. The rationale for the government's role in the labor market is much the same: to protect workers from a lack of competition among employers for their labor and human capital.

Yet these policies are from a time in Europe's history when large-scale manufacturing dominated economies, and a few (and in some places even single) employers could set the price of labor and manage their human resources with impunity. Images come to mind of the abuses in Victorian-era Britain, where workers toiled for 14-hour shifts and could be dismissed at the employer's whim. The balance of information and power between those who seek jobs and those who offer them has shifted considerably in the decades since. And along with this shift, the changing economic structure of most European countries—away from large-scale industry toward varied services—has made the labor market more "atomistic." As more services become tradable, it is harder for employers and workers to avoid competition.

Labor market policies in Europe have not kept up with these changes. The policies prevalent in Europe—and parts of the world that Europeans trade and compete with—make its labor markets more difficult to contest, especially for new, younger entrants. This lack of contestability may discourage some from entering the labor market, impede the efforts of others to match up with employers who could most benefit from their skills and attitudes, and increase the incidence and duration of unemployment. Recent evidence shows that in countries where the labor market is less contestable—especially due to restrictions on dismissal—individuals and firms are more likely to take their activities into the shadows of unregulated and untaxed markets, depriving the state and society of public goods and holding back economies from fulfilling their growth potential.

Does it matter if Europe’s labor markets are uncontestable? The broad divergence in the speed that employment rates are recovering with in the wake of the global financial crisis and recession suggests that it does. In countries that forgo the macroeconomic shock-absorber offered by a flexible exchange rate (that is, all current euro area members and those preparing to join by tying their currencies to the euro), the impact of a sudden fall in demand on the product and labor markets can be mitigated if wages are allowed to fall, hours are flexible, and workers at the margin can be dismissed (see World Bank 2010b; box 1).

When examining the relationship between labor market structures and outcomes, it is helpful to distinguish between regulations, interventions, and institutions. Regulations set work’s legal parameters, in the form of a minimum wage and/or restrictions on dismissal. The state deploys interventions to correct market failures, such as the inability of private financial markets to viably insure the risk of unemployment (unemployment insurance) and differences in how much information employers and job seekers have (job-seeking assistance). Institutions are the structures and agreed procedures for exerting influence and carrying out decisions. For the labor market, the best example is the space afforded in the legal code of most countries for collective bargaining through labor unions.

**Box 1: Is a flexible labor market necessary for successful monetary union? Yes**

For some countries, the last few years have been difficult to be part of a currency union, particularly one as large and economically diverse as the euro zone. Depreciation could have come in handy, as it did in the Czech Republic and Poland. But for euro area members and those with currencies pegged to the euro, this was not an option. For the few such as Latvia that made it easier to adjust wages downward, being linked to a strong currency was less of a problem.

The 2008 crisis and contraction put these strains into sharp evidence. But tensions had been growing long before. Differences in real unit labor costs (RULCs) between euro-area members have persisted since the start of the Economic and Monetary Union, widening during the crisis. RULCs reflect prices and nominal labor costs, and on both indicators euro-area members have diverged. This is most noticeable in shifts in nominal unit labor costs since 2003: while in Germany, the growth rate in nominal unit labor costs has been well below the euro-area average, reflecting a stronger wage discipline; in Greece, Ireland, and Spain nominal unit labor costs have increased noticeably compared with the average.

Widening or persisting differentials in RULCs are at odds with the expectation that setting a common currency—and hence a common anchor for inflation—should have facilitated convergence in prices and wages across euro-area countries, narrowing growth differentials in RULCs. Three reasons seem to explain the divergence:

- Technological factors, with capital accumulation and increases in the price of intermediates both leading to higher growth in RULCs. This would be consistent with capital and labor not being easy substitutes.
- External factors, captured for example by the degree of openness, leading to downward pressure on RULCs due to both the disciplining effect on wage increases and the positive impact on labor productivity as a result of more access to new technologies and markets.

- Institutional factors, reflecting the degree of competition in product and labor markets. Higher replacement rates in unemployment benefits and wage bargaining centralization are associated with higher RULCs as they strengthen the bargaining power of workers; stringent labor regulations for hiring and firing workers could be associated with lower RULCs because they come with lower employment.

Since the divergence in labor costs across euro area members is partly the result of structural differences in the labor and product markets, better policy and institutional alignment could reduce the gaps. With a single currency and low inflation, closing the gaps in RULC growth can be painful, requiring wage cuts and possible unemployment increases.

*Source:* Based on Lebrun and Perez (2011).

## **HIRING AND FIRING WORKERS IS TOO COSTLY**

A legislated minimum wage or other nonmarket floor on salaries increases labor costs for firms and can dissuade them from offering employment to workers whose marginal productivity does not exceed the minimum. This effect will be stronger for workers with lower productivity, especially younger, unskilled, less experienced workers (Montenegro and Pagés 2005). Priced out of jobs on the formal (regulated and taxed) market for labor, they can join those genuinely unemployed, take an informal (unregulated and untaxed) job, or pretend to look for a job while working informally. But a minimum wage might also motivate workers to increase productivity in the “efficient wages” framework, or persuade job seekers and some outside the labor market to hold out for a job on the formal market, even if plenty of informal employment is on offer (Rebitzer and Taylor 1995; Manning 1995).

All new members of the European Union introduced legislated minimum wages. Although several older members do not have legally binding minimum wages, an effective minimum wage is secured through the collective bargaining process in Austria, Denmark, France, Germany, Italy, and Sweden. Generally, legislated minimum wages in the European Union’s new members are considerably lower than the legislated or effective minimum wages in the older member states. Over the past decade, however, these have been on a clear upward trend. Since 2000, the minimum wage as a percentage of average wages has risen fastest in Bulgaria and the Czech Republic.

A second common set of labor laws, employment protection legislation (EPL), restricts employers’ ability to dismiss workers—reducing flows into unemployment but also out of it. Strict EPL can slow new employment if restrictions on dismissing workers make employers wary of hiring someone new. For this reason, restrictions on dismissal can increase unemployment, the duration of unemployment, and the attraction of fixed-term contracts. Past a certain threshold, it can even cause employers to turn to the untaxed, unregulated labor market. Beyond affecting flows into and out of employment, EPL creates an “insider-outsider” divide. Those that have a protected job (“insiders”) are relatively guarded from losing it, while the inactive and unemployed (“outsiders”) find it more difficult to gain employment. EPL changes the distribution of jobs with important implications for first-time job seekers, youth (especially), women, the disabled, and other disadvantaged groups.

Using the OECD’s (2004) measure of the strictness of employment protection—and its application by Lehmann and Muravyev (2010) to non-OECD European countries—the least restrictive conditions for employers are in Denmark, Hungary, Ireland, and the Slovak Republic. France, Greece, Portugal, and Spain have the most restrictive regulations. In Austria, Greece, Italy, Portugal, and the Slovak Republic, employment protection has been noticeably relaxed. Partly, this relaxation has come in the form of more temporary contracts, especially in Italy and Spain (box 2). But over the same period, Hungary, Ireland, and Poland have tightened their EPL. EPL in the European Union’s newest member states is lower than in the older members, but there has been convergence driven both by liberalization in parts

of the west and growing restrictions among members in the east. Lithuania and Slovenia had the most restrictive legislation, though Slovenia has liberalized recently. Romania, by contrast, recently tightened its EPL and, after Portugal and Spain, now has the most restrictive regulation.

### **Box 2: Do temporary contracts increase labor market flexibility? Yes**

During the past decades, employment protection legislation (EPL) reform in Europe was mostly “partial” or “two-tier.” In the mid-1980s, several European countries, characterized by high levels of EPL, introduced temporary contracts to increase labor market flexibility. Since then, most accessions to employment have been through fixed-term contracts. Many countries deregulated the use of temporary contracts substantially but maintained strict protection for permanent ones. There is substantial literature on these reforms, based largely on the Spanish experience (Dolado, Garcia-Serrano, and Jimeno 2002; Bentolila, Dolado, and Jimeno 2008). Because temporary contracts involve much lower firing costs, both in severance payments and legal costs, their incidence increased significantly.

Spain is a good example of labor market dualism, with the highest incidence of temporary contracts. In 1984, a two-tier EPL reform liberalized the use of temporary contracts. Spain registered the most rapid growth in temporary jobs, rising from 11 percent of total employment in 1983 to about 35 percent in 1995 (Guell and Petrongolo 2007). But Spain is far from unique. According to the European Commission (2010c), EU member states that introduced large two-tier EPL reforms have seen an increase in temporary employment since the mid-1980s. Countries with relatively less stringent regulations for permanent contracts—like Denmark, Ireland, and the United Kingdom—do not show any trend increase in the incidence of temporary employment.

Temporary contracts affect young workers more. In most EU member states, 40 percent of young people (ages 15–39) are on temporary contracts, especially among those under 25 years of age. The share of temporary employment among workers in the 15-to-24 age group ranges from more than 50 percent in countries like France, Germany, Poland, Slovenia, and Spain to less than 20 percent in Bulgaria, Czech Republic, Latvia, Lithuania, Romania, the Slovak Republic, and the United Kingdom.

Temporary contracts have both positive and adverse effects. They can help firms to evaluate workers’ suitability for jobs. In that sense, temporary jobs could act as a stepping stone to more stable jobs. Temporary contracts could also act as a shock absorber, protecting firms from temporary demand fluctuations by avoiding costly adjustments to their core labor force. Boeri and Garibaldi (2007) and Boeri (2011) show that the “flexibility at the margin” provided by temporary contracts increases both hiring and firing rates for newly created jobs as firms try to restrict firing costs through reduced conversion. Of course, temporary contracts can simply be an easy way for firms to reduce labor costs, substituting temporary for permanent workers, leading to dualistic labor markets (Layard 2005).

Temporary contracts can help make labor markets more dynamic. Two-tier EPL reforms have dramatically raised the proportion of new recruitments of temporary contracts (Cahuc and Postel-Vinay 2002). Bover and Gomez (2004) found that in Spain, exit rates from unemployment into temporary contracts were 10 times larger than exit rates into permanent ones between 1987 and 1994.

The effects of EPL reforms on unemployment are also important. Using a sample of large Spanish firms in 1993–94, Garcia-Serrano (1998) found that turnover rates varied significantly by type of employment contract. In particular, a rise of one percentage point in the share of temporary employment increased flows from employment to unemployment, unemployment to employment, and employment to employment by 0.26 percentage points. Bentolila, Dolado, and Jimeno (2008) found that, insofar as the use of temporary contracts implies a rise in the hiring rate, they have helped decrease long-term unemployment, especially in periods of high growth.

While helping to create labor market dynamism and employment, temporary contracts can adversely affect productivity and investment in skills. Greater turnover and low conversion rates can reduce incentives to invest in firm-specific human capital (Dolado, Garcia-Serrano, and Jimeno 2002; Bentolila, Dolado, and Jimeno 2008). Guell and Petrongolo (2007) argue that the negative impact of temporary work on vocational training depends on whether temporary contracts are used mainly to lower wage costs or to screen for entry-level jobs. Boeri and

Garibaldi (2007) found that the share of temporary workers in Italy has a large negative impact on firm-level productivity growth. The authors argue that rising employment, in the aftermath of two-tier EPL reforms, led to falling labor productivity through decreasing marginal returns for labor.

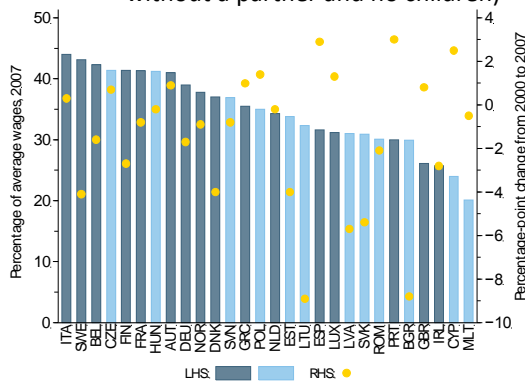
The Spanish experience with piecemeal reform suggests that the two-tier EPL led to an increase in turnover, a reduction in long-term unemployment, and greater employment. But is also is associated with a fall in investment in firm-specific skills and a decrease in labor productivity.

Source: World Bank staff.

Labor market interventions—“active” labor market programs such as training and job search assistance, and “passive” unemployment benefits such as unemployment insurance and other forms of social insurance—are common in the European Union, including the new member states. These interventions are typically financed directly through a tax on earnings. In much of Europe, the cost of these interventions raises the cost of labor, creating a “tax wedge” between what employers pay for work and what workers take home (figure 9). The largest component of the tax wedge comes as personal income tax and contributions to pensions and health insurance, but financing these interventions also adds to labor costs. A higher tax wedge contributes to higher labor costs in the formal sector and can dissuade employers from taking on workers or increase demand for informal ways of contracting workers (Davis and Henrekson 2004). Not only is the level of labor taxation important, but also how it progresses over income levels. In the new member states of Eastern Europe, labor taxation tends to be high on low-wage earners, potentially making it more difficult for them to work in the formal sector (figure 10). Moreover, the wage level at which labor taxes start to increase is also fairly high, making labor taxation less progressive in these countries.

**Figure 9 The wedge created by income taxes and social insurance contributions is highest in Italy**

(average personal income tax and social security contributions [employer and employee] on gross labor income, 100 percent of average wage for a person without a partner and no children)



Source: World Bank estimates, using OECD and Institute for the Study of Labor data.

Note: Dark blue bars represent Western Europe, and light blue emerging European economies.

**Figure 10 Labor costs have been rising quickly in the EU’s newer members**

(average hourly labor costs, calculated as cost of labor divided by hours worked)

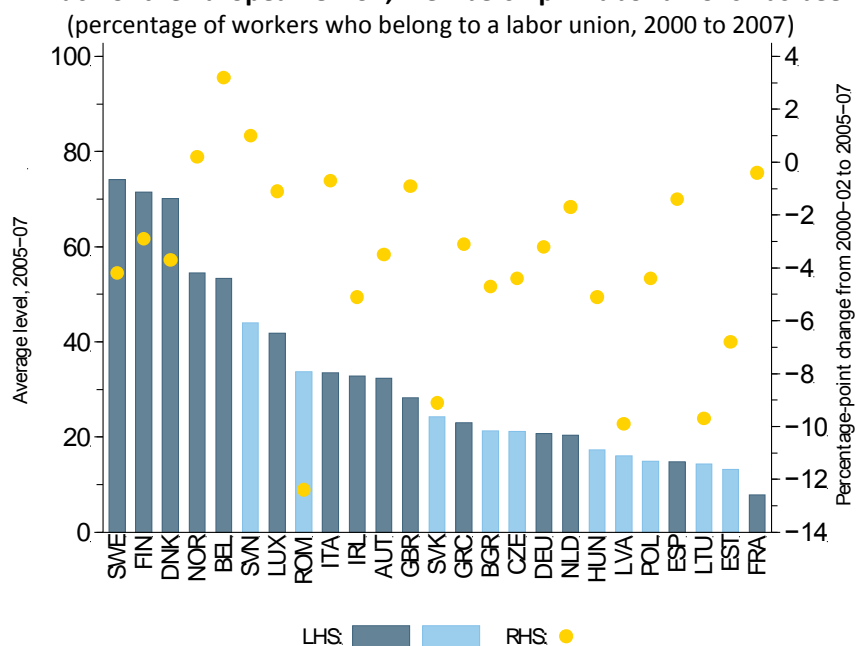


Source: World Bank estimates, using Eurostat data.

When well-designed and administered, such programs may improve labor market performance. Active programs that enhance skills or eliminate information asymmetries that delay or frustrate matching in the labor market should shorten the job search period. Active programs might lower the search and training costs of firms and indirectly subsidize the creation of better jobs. Passive programs, such as unemployment benefits, can remove the urgency of finding a new job and improve the quality of matches. But the record of active programs is mixed at best, and if unemployment benefits are overly generous or poorly designed, they can lower peoples' motivation to look for and accept a job.

Finally, it is difficult to isolate institutions that impact only the labor market from those that also shape other social and economic interactions. One is especially relevant: collective bargaining as proxied by the strength of labor unions. The impact of labor unions is felt largely through the importance of minimum wages, EPL, and active and passive interventions already discussed (figure 11). But strong labor unions can shape the labor market beyond the direct impact of regulation and interventions. For example, even where the share of the total labor force that is unionized is small, it may be high in certain key sectors, such as public administration and the provision of essential services including education, health, and transportation. The labor code in some countries even augments collective bargaining and the power of unions: the salaries and benefits unions succeed in negotiating for their members can become binding for others in regulated employment, whether they are members or not.<sup>7</sup>

**Figure 11 In much of the European Union, membership in labor unions has been declining**



Note: Dark blue bars represent Western Europe, and light blue emerging European economies.  
 Source: World Bank estimates, using OECD and Institute for the Study of Labor data.



### **Box 3 Denmark's "flexicurity": increasing contestability, the gentler (but more expensive) way**

Every year, one in five Danes loses his or her job. But they do not lose their incomes. Unemployment benefits replace close to two-thirds of their earnings, and the government helps them find work. Flexicurity, the combination of flexibility for employers and income security for workers, has been in place since at least the 1970s, but it has evolved over time as the active component has been strengthened. And it seems to work well. Between 1995 and 2008, Danish unemployment rates averaged 4.9 percent, while the rest of the EU15 suffered rates close to 8.5 percent. Denmark has been getting a lot of attention among policymakers.

Danish employment laws have evolved from the "Gent system," when labor and trade unions, not the government, paid unemployment benefits. In the 1970s and 1980s, unemployment rates remained high, while those without jobs got good incomes. The arrangements became too expensive and were reformed in the 1990s. The new approach is sometimes called the "Golden Triangle," because it added both generous unemployment benefits and active labor market programs to flexible hiring and firing laws.

- The first component, flexibility of firing and hiring, remained practically unchanged. The OECD employment protection legislation index for Denmark fell from 2.4 in 1983 to 1.5 in 2009; the OECD average is 1.9. Relatively flexible laws work in Denmark because the country has a history of self-regulation by employers and unions, going back to the "September Compromise" of 1899, which set rules for resolving labor disputes.
- The second part of the Danish model is unemployment insurance financed from contributions and taxes. Membership is voluntary, but it covers around 80 percent of the labor force. Benefits last up to four years, and replacement rates cannot exceed 90 percent of wages, capped currently at €2,173 a month. After four years of benefits, recipients have to switch to social assistance, which means a reduction of between 20 and 40 percent of their benefit income (Andersen and Svarer 2007).
- The new system uses active labor market programs like job search assistance and training to nudge the unemployed back to work. The spending on these programs is sizeable: out of €13 billion spent on labor market programs in 2010, about 75 percent was on active instruments.

How well does flexicurity work? The unemployment rate dropped from 10 percent in 1993 to 3.3 in 2008. The incidence of long-term unemployment (those without work for more than a year) decreased from a third of total unemployment in 1994 to a tenth in 2009. Despite liberal firing and hiring practices, employment has not fluctuated too much in response to output variability. All this is good.

There are some qualifications. First, though official unemployment has fallen, there is a gap between actual unemployment (adding up the unemployed, those in "activation," and early retirees) and official statistics. Second, it is difficult to assess how much of the fall in unemployment is due to flexicurity on its own. Economic performance matters too: active labor policies are useless if the economy is not producing jobs. Finally, the already high fiscal burden can become enormous in a protracted slowdown. The Danish model costs 4.5 percent of GDP. And Denmark spent 2.6 of GDP for labor market programs in 2008 (a good year), compared with 1.4 percent for the OECD as a whole, 1.5 for Sweden, 2.2 for Finland, and 2.3 in the Netherlands. The Danes have flexicurity because of their history and can afford it in part due to high participation rates of 81 percent; the OECD average in 2009 was 71 percent. Those wishing to learn from the Danes should note this.

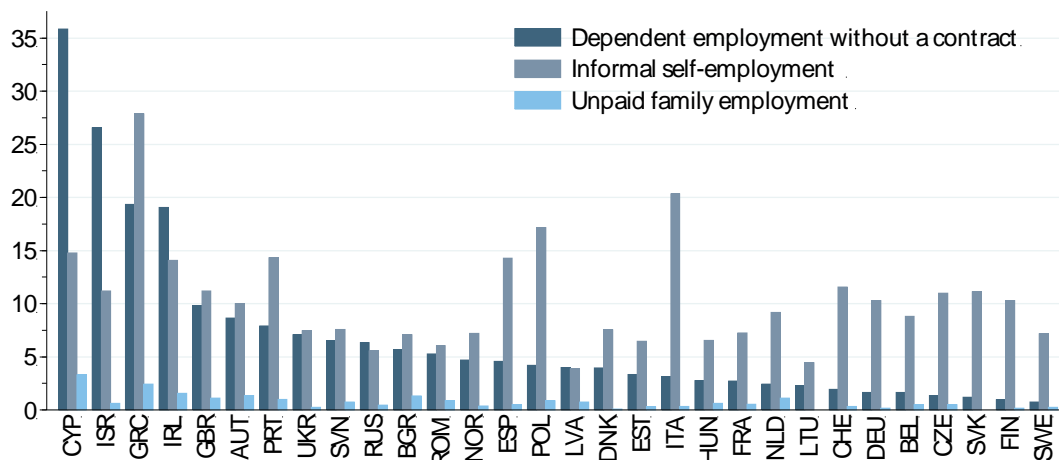
*Source: Andersen and Svarer 2007; Bredgaard and Larsen 2007; Hansen 2010; OECD 2010.*

### **WORK IS BEING PUSHED OUT OF (REGULATED) MARKETS**

Taxes and regulations can create incentives for people to consume more "own-provided" services at home and for workers and employers to transact "in the shadow" on the unregulated and untaxed market (Rosen 1997; Davis and Henrekson 2004). The likelihood that they will transact informally increases where a government's capacity to enforce regulation is low. Conventional textbook models show how restrictions on firing, a relatively high minimum wage, and the taxes on labor that finance

active and passive assistance programs can segment insiders who benefit from the labor code from outsiders who cannot. Less conventionally, in countries where governments fail to provide or sustain high-quality services, employers and workers can become disenchanted with complex labor regulation and consider taxes and compliance efforts not worthwhile. There is evidence that high taxes increase nonmarket or home production of services in Northern Europe, and they push legal market activities into the informal market in the south (figure 12).

**Figure 12 Informal self-employment is most prevalent in Greece, Italy, Portugal, and Spain**  
(unregulated, untaxed work, percentage of labor force)



Source: World Bank (2011a), using data from Hazans (2011a).

## WHAT HELPS, WHAT HURTS

Because there is no simple mapping between labor market outcomes and labor market and social protection policies, a more rigorous analysis of the links between the two is needed, controlling for country characteristics. Country-level data from the OECD, Institute for the Study of Labor, International Labour Organization, and European Bank for Reconstruction and Development can be used to assess how the institutions, regulations, and interventions discussed above are associated with the performance of Europe's labor markets relative to other countries.<sup>8</sup> This approach is fraught with estimation problems, and the results should be interpreted as indicative correlations rather than causal relationships.<sup>9</sup> It also complements the firm-level analysis provided in chapter 4, focusing on country-level legal and institutional variables, which are not captured in that analysis. The cross-country analysis also complements microeconomic evidence at the individual level when analyzing disincentives for formal work originating in the tax and benefit system, as discussed in the subsection on work disincentives (Koettl and Weber, forthcoming).

Koettl and Weber's analysis examines the impact of regulation, interventions, and institutions on four indicators of labor market performance: the activity rate (AR); employment rate (ER); unemployment rate (UR); and long-term unemployment rate (LTUR). This is done for three sets of countries: the European Union and other OECD members,<sup>10</sup> the European Union,<sup>11</sup> and EU new member states, accession countries, and others in the European neighborhood (figures 13-15).<sup>12</sup>

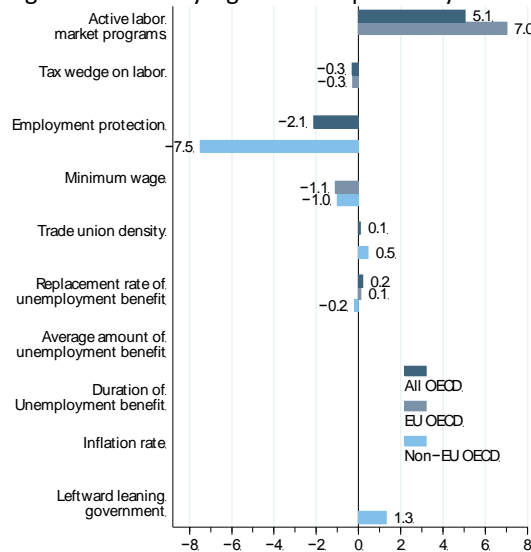
With regard to employment protection, stricter EPL is mostly associated with lower participation rates—except in Western Europe—and higher unemployment rates. Similarly, higher labor taxation is

negatively correlated with labor force participation—with the exception of the new member states—and positively correlated with unemployment rates, though the latter result is less robust. High labor taxation, associated with long-term unemployment, appears to be a major problem in Europe. Overall, the strictness of EPL and high labor taxes lower the employment rate.

Minimum wages are also negatively correlated with participation rates. This appears counterintuitive: the prospect of a higher wage should entice people into the market, not keep them out. But workers priced out of jobs as a result of minimum wages might be discouraged from further participating in the labor market—especially younger people and women. The minimum wage is also associated with higher unemployment rates—especially long-term unemployment rates—and lower employment rates.

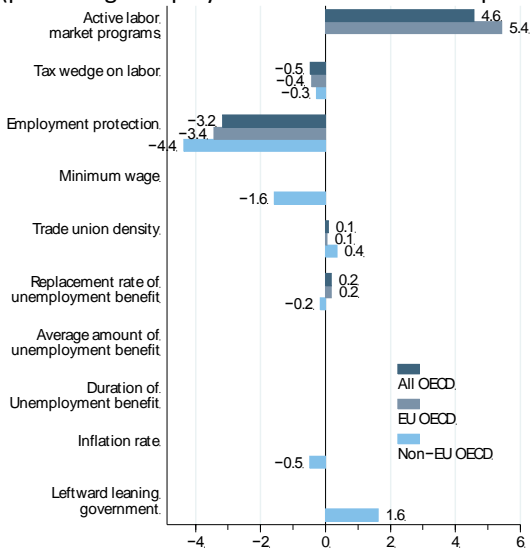
Unionization is positively associated with participation in the labor market and employment rates, and seems to reduce long-term unemployment (in the European Union). Spending on active labor market programs is associated with higher rates of participation, lower unemployment rates, and higher employment rates. The relationship between the generosity of passive labor market programs and labor market outcomes appears more complex: while generosity tends to increase participation in Europe, it appears to have the opposite effect in non-European OECD countries. The generosity of unemployment benefits is also associated with lower unemployment and higher employment in Europe.<sup>13</sup>

**Figure 13 In Europe, active labor programs are associated with higher participation rates**  
(percentage-point change in the working-age population working or searching for a job: estimated impact of a unit change in statistically significant explanatory variables)



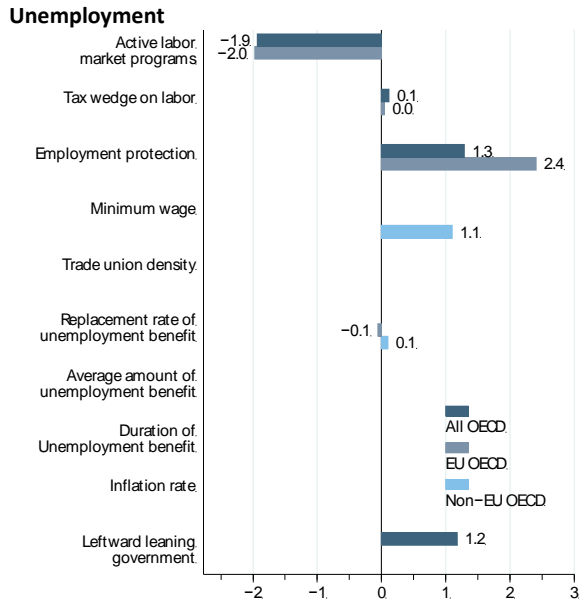
Note: Only coefficients significant at the 1 percent and 5 percent levels are shown in the figure.

**Figure 14 Rigid employment protection legislation is associated with lower employment rates**  
 (percentage employment rate: estimated impact of a unit change in statistically significant explanatory variables)



Note: Only coefficients significant at the 1 percent and 5 percent levels are shown in the figure.

**Figure 15 Rigid laws and high taxes are associated with higher unemployment rates**  
 (percentage-point change in unemployment: estimated impact of a unit change in statistically significant explanatory variables)



Note: Only coefficients significant at the 1 percent and 5 percent levels are shown. Full results are available in annex 2.

When it comes to untaxed and unregulated work in the “shadow economy,” World Bank (2011a) found that when taking a country’s development into account, EPL is associated with larger shares of shadow economy in GDP and greater labor informality. In the southern members of the European Union, where EPL is the most restrictive, all but the highest educated new entrants to the labor market are restricted to part-time and informal work.

The need to keep EPL sensible is at the core of Denmark's "flexicurity" model, which shifts protection away from jobs to the incomes of people who lose employment with efforts to get them back to work through training, job-search assistance, and help with starting businesses (box 3 above). These "active" intervention measures seem to improve performance and lower informal employment in OECD-member countries and Northern and Western EU member countries. Active programs also lower informal self-employment, (World Bank 2011a). Germany has been getting attention for its attempts to liberalize a section of its labor market and to motivate people with strong incentives to remain idle (people supported by unemployment and social assistance benefits; box 4 below). Although Germany's approach may be all that can realistically be achieved given the controversial nature of labor market reform, it has raised questions of the sustainability and welfare of what could be a working "underclass" in jobs with less protection and even lower wages.

#### **Box 4 Germany's Hartz reforms: modernizing social welfare and unemployment benefits**

Germany experienced high unemployment rates of almost 10 percent between 1993 and 2004. By contrast, U.S. unemployment was about 5 percent. By 2004, almost 4.5 million Germans were unemployed according to the Federal Labor Agency. Less-skilled and older workers had higher unemployment rates; vocational school graduates and high school dropouts had unemployment rates of about 18 percent.

In February 2002, a commission suggested ways to modernize the labor market. Volkswagen's personnel director Peter Hartz headed the commission, which comprised business executives, trade unionists, politicians, and scientists. No economists were invited to join. The commission proposed a three-part reform strategy: improve employment services and active labor market programs, reform unemployment and social assistance benefit programs, and foster employment by deregulating the labor market.

The reforms were implemented between 2003 and 2005. They modernized public employment services and social welfare centers, modified existing active labor programs, and introduced new active labor programs. The reforms changed the institutional and legal framework for the rights and responsibilities of the unemployed and the beneficiaries of social assistance. Employment protection was reduced for parts of the labor market.

- Public employment services and social welfare centers adopted results-based accountability and outsourced services through competition between public and private providers. Employment offices were (partly) merged with social welfare units and converted into centers that provided job search assistance, social services, and benefit payments.
- Unemployment and social benefit levels and duration were reduced. Eligibility for subsistence allowances were changed according to a person's ability to work rather than previous history of contributions. Benefits were cut if recipients did not meet their responsibilities.
- Wage subsidies and start-up grants were provided to entrepreneurs. Jobs with reduced social security contributions were introduced ("midi-jobs"), and the regulations for jobs exempt from such contributions were reformed ("mini-jobs"). The objective was to lower the cost of hiring low skilled workers.

Between January and October 2006, the number of claimants in jobs requiring social insurance contributions rose 47 percent. The number of claimants working part-time grew 30 percent, and the number in marginal employment ("mini-jobs") rose 14 percent. Workers who had survived on low wages without income support could now supplement their incomes with Hartz IV benefits. The reform of temporary work regulations increased employment in fixed-term jobs after the reform. But evaluations have found limited impact on mini-jobs.

The Hartz reforms helped reduce unemployment. Despite the crisis, Germany's unemployment rate today is about 7.5 percent, lower than the U.S. rate of more than 9.5 percent. Many of the newly introduced part-time and temporary jobs have served as a bridge to regular jobs. But the reforms might also have reduced the income of low-wage earners, which has declined 16–22 percent over the last decade. Net real monthly income of workers in mini-jobs declined from €270 in 2000 to €211 in 2010, while income of workers in midi-jobs declined from €835 to €705. This is mainly due to an increase in the number of people in temporary work and part-time jobs.

The reforms raise several questions. First, given the difficulty of comprehensive labor reforms, does a partial liberalization targeted at some groups or sectors work? Second, do allowances in the labor code for more flexible forms of employment lead to a “two-tier” market and a legally sanctioned underclass? Third, do flexible and temporary forms of employment serve as a step toward advancement, or are people who enter through a midi- or mini-job experience scarred in ways that limit their future options? Germany’s experience appears to be promising, but these doubts will be raised in countries that try to adopt strategies similar to the one proposed by the Hartz Commission.

*Source: Zimmermann 2006; Goethe Institut (2007), and Grabka and Goebel (2011)*

## **LABOR MOBILITY—A FREEDOM FORGONE**

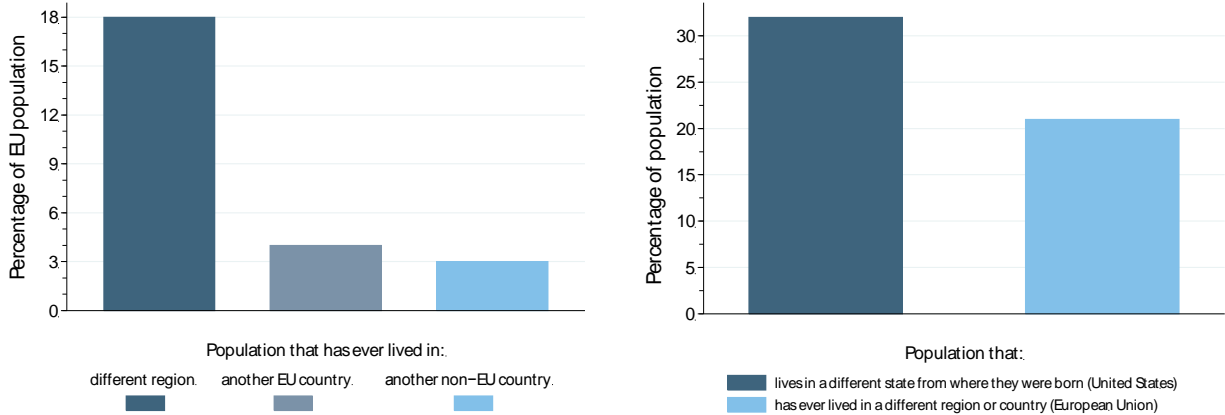
There are many reasons why labor mobility matters for productivity and growth. A country with a more mobile labor force uses available resources more effectively and is more likely to better match its human capital to other factors—both those that are more fluid such as capital, and those that do not move at all such as land. Recent work indicates that labor mobility is critical for social cohesion and the improvement of welfare in lagging regions.<sup>14</sup> When people move, they create links between places where economic activity is densely concentrated and those where it is not. These links become channels for resources that flow back to peoples’ places of origin in the form of knowhow and remittances, that sustain the welfare of family members left behind and lead to investments in locally appropriate enterprises. A mobile labor force can better adjust to shocks, and recover more quickly. Given its demographic outlook and the decline in the working-age population, increased labor mobility will be needed in Europe. And there is a lot of room for it.

### **EUROPEANS ARE LESS MOBILE**

The European Union is the most integrated region in the world, and accordingly, migration between EU countries is higher than in other world regions. Europe’s aspiration, however, is more ambitious: a fully integrated labor market with no borders. Against this yardstick, Europe still falls short. By most measures, these differences are particularly great between the European Union and the United States (Eurofound 2007a,b,c, using Eurobarometer data 2005; figure 16). In the former EU15, prior to enlargement in 2004 and 2007, only about 1 percent of the working-age population changed its country of residence in a given year. By contrast, until recently about 3 percent of the working-age population in the United States moved to a different state in a given year. In Australia, this figure is 2 percent; in Canada, slightly less than 2 percent. Even in Russia, with its history of outright restrictions on peoples’ movement, mobility is 1.7 percent.

With a common language and fewer institutional differences, people in Australia, Canada, and the United States can move with greater ease than Europeans. Measures of movement between territories (at the Nomenclature of Territorial Units for Statistics 2 level) within EU countries change the picture considerably: about 21 percent of the EU population has lived in a territory or country other than where they were born. But even by this measure, labor mobility is still below that of the United States, where 32 percent of the population lives outside the state they were born in.<sup>15</sup> About 2 percent of the EU labor force was born in a member state different than their current state of residence; approximately 4 percent of the EU population has lived in another EU country at some point in their life; and 3 percent has lived in a country outside the European Union (Eurobarometer 2005).

**Figure 16 Europeans are less mobile within countries**



Source: Eurobarometer 2005.

Internal mobility is difficult to compare across countries because its measurement depends on the size of the measurement unit. If the measurement unit is small—for example, the municipality—the corresponding internal migration rate will be high, because many more people move across municipalities than between provinces. Plotting the average size of the unit of measurement (like a region or district) against the corresponding internal migration rate controls for the size of administrative units. The exercise reveals that many European countries, especially the transition economies, have low labor mobility.

But lower labor mobility within a single market could reflect the smaller size of countries and shorter distances between centers of economic activity. Why move when you can commute? In a 2008 report on labor mobility in Europe, the Institute for the Study of Labor adopted a broad definition of geographic mobility that included not only changes of residency within countries and across borders but also cross-border and regional commuting (Bonin and others 2008, using the European Labor Force Survey). The Institute for the Study of Labor report showed that between 2000 and 2005, workers' mobility within the European Union was barely 1 percent each year and that the movement of people in Europe was lower than mobility across Australian (2 percent) and U.S. states (3 percent).

The Institute for the Study of Labor report showed that in the EU15, the share of the active working-age, foreign-born population from an EU27 country increased during the previous decade. Spain had the largest increase, followed by Greece, Denmark, Portugal, Sweden, Ireland, the United Kingdom, and Austria. Among the newer member states, those with the highest initial share of foreign-born people (Latvia and Estonia) showed a decline over time. In most EU15 countries, foreign nationals from another EU15 country comprise only a small share of foreign nationals. An exception can be found in the United Kingdom: the largest nonnative resident minority group in London is from France.

These statistics present a paradox. The movement of people within the European Union is one of the Four Freedoms, and probably the one that comes most immediately to the average European's mind when asked why the European Union is important. The Eurobarometer survey in 2005 showed that European citizens view geographical mobility positively (table 1). Yet a large majority (almost 70 percent) had no intention of moving in the near future.

**Table 1 Internationally, the Irish are the most mobile Europeans in the single market**  
(percentage of population, by type of mobility)

	Local move	Move in country	Move inside the European Union
Ireland	44.5	18.8	14.5
Luxembourg	53.8	19.4	13.2
Cyprus	47.8	17.2	8.1
Denmark	62.6	36.2	7.5
Sweden	65.9	41.8	7.1
United Kingdom <sup>a</sup>	52.3	23.7	6.6
Finland	64.5	34.7	5.1
Germany	59.4	18.1	4.9
Belgium	59.6	13.0	4.5
Spain	46.6	9.9	4.5
Greece	34.7	16.4	4.4
Netherlands	55.0	21.6	4.4
Portugal	41.7	8.6	4.2
Austria	54.1	9.4	3.4
Malta	27.6	6.2	2.7
France	58.2	28.8	2.6
Latvia	44.2	22.5	2.0
Czech Republic	41.9	8.2	1.6
Italy	43.8	7.9	1.6
Slovenia	38.2	9.6	1.6
Slovak Republic	34.2	5.8	1.4
Estonia	50.5	23.4	1.1
Poland	40.6	7.1	1.0
Hungary	47.5	9.9	0.7
Latvia	57.4	7.4	0.7

a. Includes Northern Ireland.

Note: Weighted averages. Multiple answers allowed. Therefore, final column does not represent the sum of columns 2–5.

Source: Eurobarometer 64.1, World Bank staff calculations.

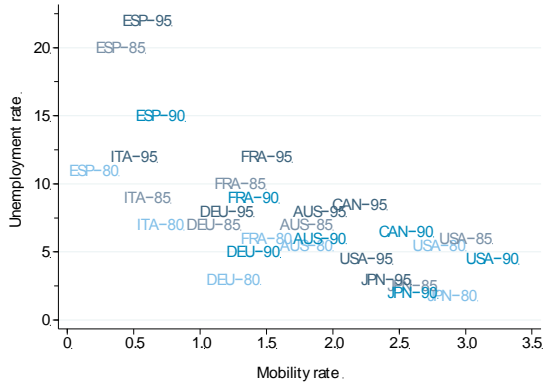
This may be changing. The same survey showed that mobile Europeans are younger and have higher levels of education than those who have no intention of moving. In these respects, they are similar to mobile people in many countries, both wealthy and poor (World Bank 2008). Students in Europe are among the most mobile, enthusiastically taking advantage of such cross-border education programs as Erasmus. For many, these programs lead to longer term resettlement for employment. Recent statistics show an increase in mobility. In 2008, about 2.3 percent of EU citizens (11.3 million people) resided in a member state other than their citizen state, according to the European Commission.<sup>16</sup> That number has grown more than 40 percent since 2001.

A lack of movement is often blamed for high unemployment rates in areas that lag and for labor shortages that drive up wages in places that lead. This negative correlation between mobility and unemployment is apparent in data from selected OECD countries for 1980 to 1995 (Hassler and others 2001; figure 17). Labor markets can respond differently to shocks, often resulting in differences in the impact on jobs across areas. Adjustment to regional shocks in Europe has been achieved more through unemployment rates and changes in labor force participation (people stop looking for work if a region goes into economic decay) and less through mobility of labor.<sup>17</sup> By contrast, in the United States, labor mobility leads to greater agility in responding to differences in wages and job opportunities across states, reducing disparities in unemployment rates and real wages.



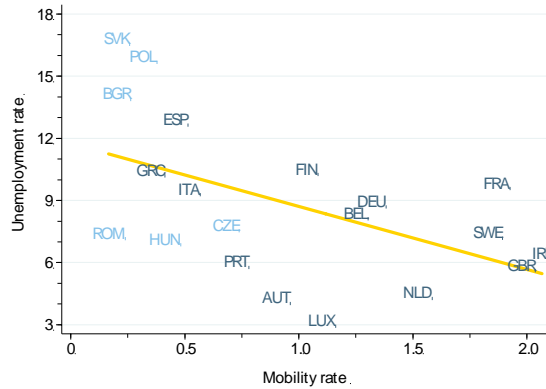
### Figure 17 Low labor mobility can keep unemployment high

(labor mobility and unemployment rates in the nine largest OECD countries, 1980–95)



Source: Hassler and others 2001.

(labor mobility and unemployment rates in EU member states, 1995–2006)



Source: World Bank staff, based on Eurostat data.

But does a mobile labor force really make much of a difference for a country’s economic prospects? Policymakers are aware of statistics showing the relative immobility of Europeans and are eager to know what they can do about it. The phased withdrawal of restrictions on the movement of people from the newest member states of the European Union has been an obvious obstacle that will disappear in time. Yet people from the newer member states still face explicit barriers to mobility within the European Union (table 2).<sup>18</sup> Lessons from how different EU15 members have managed this aspect of enlargement are still being absorbed, but evidence from movements since 2004 and in reaction to the crisis indicate that the member states that embraced newcomers from the newest member countries benefited.

Looking beyond adjustment to shocks and recovery from the recession, growing literature provides evidence that internal labor mobility tends to have positive effects on countries’ productivity and growth. For example, without mobile labor, the growth rate of the United States would likely have been only half of what it actually has been (World Bank 2010). In Canada, the movement of people across provinces contributed to economic growth (Sharpe and others 2007). Due to the high volume of movement from low-productivity eastern provinces to high-productivity western provinces, Canada benefited from a huge boost to economic growth in 2006.

**Table 2 Not a single market for new members**  
(EU15 restrictions on workers from newer member states)

	Entry of EU8 workers		Entry of workers from Bulgaria and Romania <sup>a</sup>
	May 2004 to April 2006	May 2006 to April 2009	2007–08
Austria	Restricted	Restricted	Restricted
Belgium	Restricted	Restricted	Restricted
Denmark	Restricted	Restricted	Restricted
Finland	Restricted	Open	Open
France	Restricted	Restricted <sup>b</sup>	Restricted <sup>b</sup>
Germany	Restricted	Restricted	Restricted
Greece	Restricted	Open	Restricted
Ireland	Open	Open	Restricted
Italy	Restricted	Open <sup>c</sup>	Restricted <sup>d</sup>
Luxembourg	Restricted	Restricted	Restricted
Netherlands	Restricted	Open <sup>e</sup>	Restricted
Portugal	Restricted	Open	Restricted
Spain	Restricted	Open	Restricted
Sweden	Open	Open	Open
United Kingdom	Open	Open	Restricted

a. Bulgarian and Romanian workers also face restrictions in Hungary and Malta.

b. Except for health care, transport, construction, hotels, and catering.

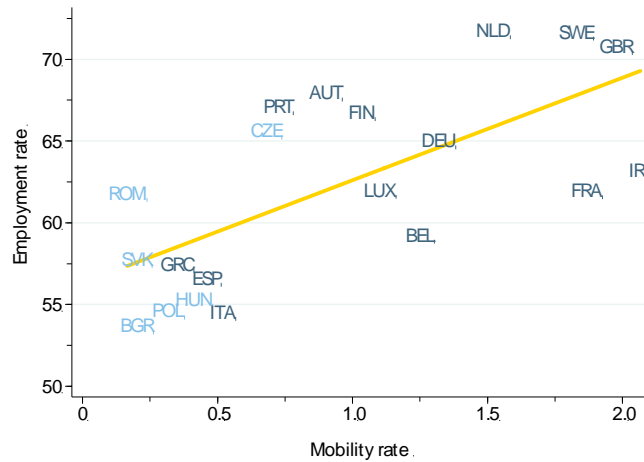
c. Since July 2006.

d. Procedures for obtaining work permits are simplified in certain sectors.

e. Since May 2007. Between May 2006 and April 2007, the Dutch labor market was open to EU8 workers in a large number of sectors.

Further, countries with higher labor mobility have better performing labor markets and higher rates of employment. For instance, the three European countries that have reached the Lisbon employment targets—the Netherlands, Sweden, and the United Kingdom—all have labor mobility rates in the top quartile (figure 6.31). Conversely, countries with the highest dispersion in employment rates across their territories (Italy, Spain, Hungary, and the Slovak Republic) have mobility rates below the European average.<sup>19</sup>

**Figure 18 Greater labor mobility is associated with higher rates of employment in Europe**  
 (correlation between labor mobility rate [average 1996–2006, horizontal axis] and employment rate [average 1996–2006, vertical axis], selected European countries: coefficient 0.677)



Note: Labor mobility is the share of the population that moved from one region (Nomenclature of Units for Territorial Statistics 2) to another within a given year.

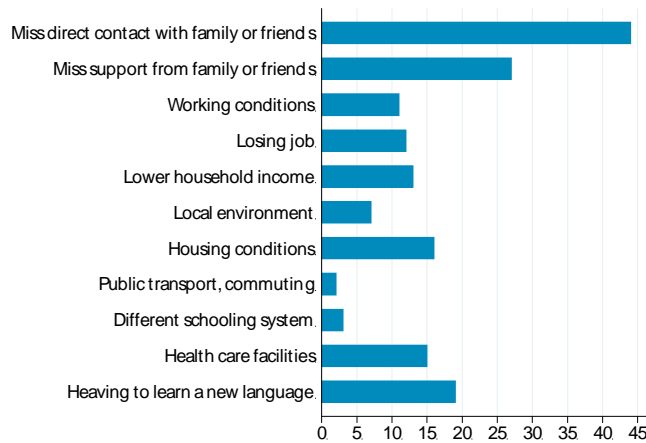
Source: World Bank estimates, using Eurostat data.

Researchers have been trying to identify the impediments to mobility in economic areas where labor is legally free to move. Language and cultural barriers obviously play a role (OECD 2007). But putting language aside, even with a legal right to work in every member state, EU citizens face implicit but powerful deterrents created by differences in rules that determine social insurance coverage, the accrual of occupational pension rights, entitlements to social housing and other forms of assistance, and the recognition of their professional qualifications and previous work experience. Perhaps reflecting the current tough times, as in Europe, local chambers of commerce and professional guilds of U.S. trade associations are starting to erect barriers—even to people offering their services online—in order to restrict movement and thus competition. This strict “rule of license” is an obstacle to movement and faster labor market adjustment. These impediments may be more serious for prime-aged workers than for the young or the retired. As the median age of Europeans increases from 40 years today to nearly 50 by 2050, the mobility imperative will become more pressing.

### WHAT KEEPS EUROPEANS AT HOME

Among the strongest deterrents to greater mobility in Europe are those created by failures in housing markets (figure 19). In many European countries, housing is a good that is still exchanged informally on unregulated or poorly regulated markets (Janiak and Wasmer 2008). Rental markets are shallow, rent is expensive, and supply is limited by zoning restrictions. These problems constrain people’s mobility at both their origin and destination: moving can be a costly prospect, made more so by difficulties selling or renting one’s house. Bottlenecks in the housing market are a serious impediment to mobility. Homeowners in Europe are more sluggish to move in response to changing labor market conditions than people who rent their homes (Hughes and McCormick 1985 and 1987; Henley 1998; Gardner and others 2000). The relatively high unemployment rates in some European countries can be explained in part by a large portion of people who are owner-occupiers (Haavio and Kauppi 2003). The constraints to labor mobility created by failures in the housing market have been documented elsewhere (World Bank 2008) and create powerful deterrents to movement even in countries on the European Union’s doorstep.

**Figure 19 Language, housing, and health care are the main impediments to mobility**  
 (factors that deter people from moving to another EU country [percent])



Note: Figures are for respondents from the EU25 who do not intend to move.  
 Source: Eurobarometer 2005.

Another likely culprit preventing Europeans from moving is the relative rigidity of wages and generous pay-out period of unemployment insurance plans. Wage regulation leads to an earnings compression that can mute the signals that the labor market sends from one part of a country to another. If wages are not sufficiently flexible, they can fail to provide incentives for capital to flow into economically lagging regions or for workers to move to economically booming regions. Generous unemployment insurance plans that provide support over long periods can act as a disincentive for workers with industry-specific or place-specific skills to retrain and move. A negative relationship can be shown between the mobility rate and unemployment insurance: on average, high-mobility countries are characterized by low unemployment insurance benefits, while low-mobility countries have the most generous unemployment insurance plans (Hassler and others 2001).

Higher structural unemployment in many European countries also deters the movement of labor. Although differences in unemployment rates between the lagging and leading parts of a country should encourage movement, a high overall national unemployment rate will discourage people from taking the risk. Unemployed workers will probably not want to pay the cost of moving to more dynamic parts of their country if they would still face the high likelihood of not finding a job.<sup>20</sup>

The lack of portable social benefits—such as pensions, health care, and social assistance—might also constrain the mobility of labor between EU countries. EU legislation grants portability of such benefits at a level not found in any other region of the world. In principle, the most important benefits (for example, public pension and health benefits) are fully portable within the European Union and, to some extent, with countries outside the European Union. Nevertheless, important challenges remain.<sup>21</sup> First, the administration of portability can be burdensome for intra-EU migrants. For example, old-age pensions are not paid as a single benefit, but by each pension insurance fund separately. The determination of separate pensions, taking into account contribution periods from different member states, is complex and opaque. Second, legislation on portability does not apply to occupational benefits, so moving might lead to considerable losses. Third, social assistance benefits are excluded from portability; the lack of a Europe-wide social safety net could also act as a barrier to intra-EU mobility.

Finally, some EU policies may inadvertently be keeping Europeans immobile. The free flow of trade in goods and foreign direct investment across the single market might reduce the need for labor to move. Trade flows react more elastically than people, and capital is far more mobile. Trade in goods—particularly intermediate goods—along with capital transfers could make the movement of labor to other economic areas less important. This is a “good reason” for lower labor mobility in Europe, especially in the European Union. But other policies may not be so benign. European agriculture and cohesion policies and investments from regional and structural funds could be creating disincentives for mobility. Regional development policy instruments pour investment into economically lagging areas, sometimes with the stated objective of fostering job creation to retain young and qualified workers. Although the track record of these policies is mixed at best, to the extent that they deter movement of people at the margin, they obviate the need for European workers to move to where persistent vacancies arise.

## **WINNING THE GLOBAL RACE FOR TALENT**

There is a looming labor force deficit in Europe’s immediate future, and it is unlikely to disappear even if more people work, work longer, and become more productive. The aging of the European labor force cannot be prevented, not even under the most favorable scenario. In its annual report to the European Parliament, the European Commission pointed out that the population of the European Union will rise to 521 million in 2035 but then fall to 506 million by 2060. In 2010, there were 3.5 people of working age (20–64 years) for every person ages 65 or older. In 2060, there will be half as many (European Commission 2011).

### **EUROPE WILL NEED IMMIGRANTS**

The European Commission’s report shows that immigration from outside the single market and even from far beyond the European neighborhood countries will be the main driver of population change in the European Union. In 2009, net immigration to the European Union was 857,000 people, contributing to 63 percent of total population growth. At the start of 2003, the number of third-country nationals in the EU25 was 16.2 million, or 3.6 percent of the population. But by 2010, 20.2 million non-EU27 citizens were living in the European Union (4 percent of the total population). The European Commission noted that foreign citizens living in the EU27 were significantly younger (median age of 34.4 years) than the population of EU27 nationals (median age of 41.5 years). For this reason, immigrants are likely to help close the demographic deficit and meet the quickly rising costs of population aging.

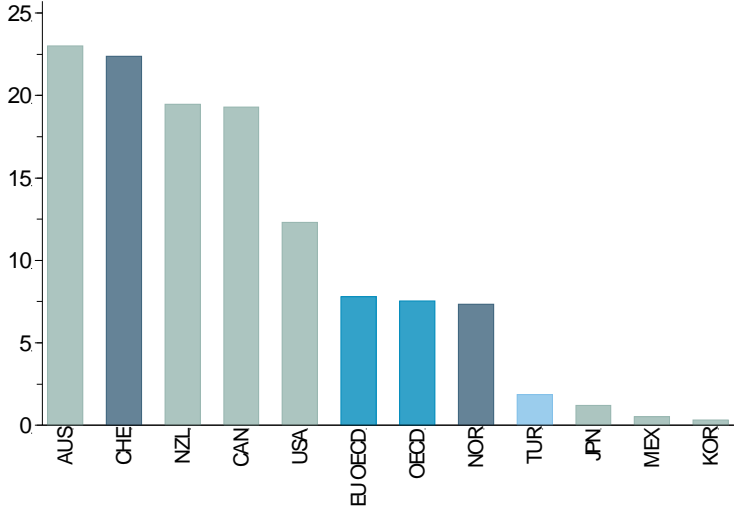
People have been crossing seas, mountains, rivers, and political borders into, out of, and throughout Europe for centuries. During the first great Age of Globalization in the late nineteenth century, right up to the interwar period, Europe sent large waves of people to the Americas, Africa, and the Antipodes. Post-war immigration to Europe on a mass scale is a recent phenomenon, with roots in the guest-worker programs that became common in the late 1950s and early 1960s to help sustain the fast pace of Europe’s Golden Age (Maselnik 2010).

Between 1950 and 1990, the resident foreign-born population in the EU15 grew more than fourfold, from 3.8 million (1.7 percent of the population) to 16 million (4.5 percent). Between 2005 and 2009, the resident foreign-born population increased on average by 1.6 to 2 million immigrants each year, and accounted for approximately 80 percent of the overall population growth. During this period, only 20

percent of the population increase in the EU27 could be attributed to natural growth (live birth minus deaths). Ironically, the countries that lead the statistics of recorded live births are all also the largest immigrant destinations in the EU27: France, the Netherlands, Spain, and the United Kingdom. The conclusion one could draw is that before 2030 the European Union will experience a prolonged decrease of young (and semiskilled) workers with secondary education (Koettl 2009). The question addressed is whether current European immigration policies can accommodate these needs or whether the policies need to be changed.

Current immigration policies in Europe and other OECD countries provide some answers. Of particular interest are lessons drawn from the four “Traditional Immigration Countries”: Australia, Canada, New Zealand, and the United States (figure 20). To attract the right types of immigrants in the future, European policies will need to be more proactive in selecting immigrants and preferably will rest on strong, demand-driven mechanisms that respond quickly to shifting economic and labor market needs. If Europe does not adjust its policies, it risks considerable labor shortages in the future.

**Figure 20 European countries host fewer immigrants than other OECD countries**  
(percentage of the population that is foreign born, various OECD member countries)



Source: World Bank staff, using OECD data.

**EUROPE’S IMMIGRANTS ARE MOSTLY UNSKILLED**

Relative to other popular OECD destination countries, EU countries mainly attract low-skilled immigrants—those with at most primary education—in stark contrast to the Traditional Immigration Countries, which attract much lower shares of primary-educated migrants and far higher shares of tertiary-educated migrants. Migration outcomes occur on many dimensions, just as migration policies take effect through a wide range of institutions. It can thus be helpful to distinguish immigrants by their motivation to migrate, their legal status, their duration of stay, and their education and skills. With regard to government policies, the framework will distinguish between policies with a direct effect on the size and composition of migrant flows and stocks, like immigration rules, and policies with indirect effects, like social policies, labor market policies, and integration policies.

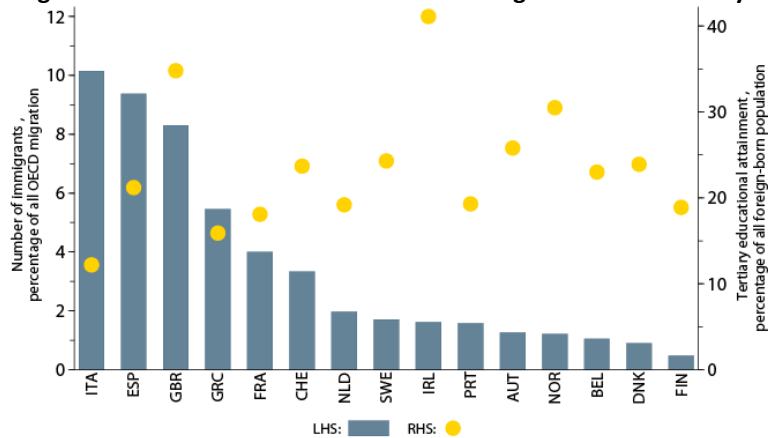
The limited data currently available on the education attainment of immigrant populations suggest that the 49 percent of the EU25+ immigrant population originating from outside the EU25+ are primary educated, while only 25 percent have secondary education, and 21 percent have tertiary education (table 3). By contrast, the Traditional Immigration Countries achieve much higher shares of tertiary-educated migrants. About 40 percent of immigrants to Australia, New Zealand, and the United States have a tertiary education. Accordingly, their shares of primary-educated migrants are fairly low (16–30 percent). The range for secondary-educated migrants is wider, from 12 percent in Canada to 35 percent in the United States.

### Box 5 Beyond the white cliffs: immigration to the United Kingdom

The United Kingdom is a major destination for immigrants in Europe, especially the highly educated. Among European countries, the United Kingdom enjoyed the third-highest inflow of permanent immigrants, amounting to 347,000 people in 2008—the foreign-born accounted for 10.8 percent of the British population—and attracted the second-highest number of permanent highly skilled immigrants seeking employment (box figure 1). The United Kingdom was one of the few countries that did not impose any restrictions on labor from newest member states of the European Union and is one of the hotspots for international students, hosting on average 132,700 international students between 2003 and 2008.

The strength of the United Kingdom’s policy orientation toward immigration is that it favors people who want to come to the United Kingdom to work. The employment rate among immigrants was 80 percent, 5 percentage points above the OECD average. According to estimates by the British Treasury, immigrants grew the working-age population by 0.5 percent a year between 2001 and 2006 and GDP by around £6 billion in 2006.

**Box figure 1. Immigrants in OECD countries and share of foreign-born with tertiary education, 2008**



Due to a large volume of immigrants since 2004, and to mitigate a possible threat to social cohesion, the United Kingdom introduced a points-based system, focusing more on the quality of immigrants than the quantity. The new system consists of five tiers, tier 1 for highly skilled migrants, tier 2 for skilled workers required in certain sectors, tier 3 for low-skilled workers, tier 4 for students, and tier 5 for tourists, athletes, and musicians. A special cap of 21,700 for 2011–12 non-EU work visas was introduced, limiting the number of economic immigrants per year. However, immigrants who are earning more than £150,000 were excluded from the cap.

There have also been problems related to integration of immigrants. According to MIPEX III (2011), British immigration policies are less favorable toward integration, to some extent due to the fact that immigrants are excluded from some social benefits. But the strong points of the British immigration policy are: education, with a well-tailored living-in-diversity training, and anti-discrimination regulation. The weakest element is the difficulty in obtaining permanent residence and nationality.

Source: Iwulska (2012).

Looking only at immigrants originating from the Middle East and North Africa, the outcomes for Europe appear worse. Almost two-thirds of the 2.5 million migrants from the Middle East and North Africa residing in the European Union have only a primary education, and 17 percent each have secondary or tertiary education. Again, the Traditional Immigration Countries attract much higher shares of tertiary—and secondary—educated migrants from the same Middle East and North Africa countries.

These statistics show the obvious importance of geographical distance in determining the composition of immigration flows. Europe attracts a high share of low-skilled migrants from the southern Mediterranean, just as the United States attracts a relatively higher share of low-skilled migrants from Central America. Of migrants from Central America in the United States, 46 percent have just a primary education, compared with 23 percent of the overall immigrant population of the United States. If, in addition, the host country relies mainly on family reunification as its immigration policy—as the European Union does—and does not apply proactive economic immigration programs—as in the United States—the share of primary-educated migrants originating from these countries is likely to remain high.

Europe is losing the global competition for highly skilled migrants to the Traditional Immigration Countries. The exception is perhaps the United Kingdom (box 5). Indeed, the European Union is losing some of its most skilled people to the United States. Currently, the United States hosts 1.7 million tertiary-educated migrants from the European Union, while the European Union hosts roughly 200,000 tertiary-educated U.S. emigrants—a net drain of 1.5 million people educated mostly at the expense of European taxpayers.

Does this imply that the European Union should copy the Traditional Immigration Countries' policies of large-scale permanent immigration programs and, in particular, systems like Canada's, which seems to attract by far the highest share of tertiary-educated migrants (box 6)? Should the European Union imitate demand-driven temporary worker programs for specialized migrants like those in the United States, which seems to attract the highest share of secondary-educated migrants? Or is there a genuinely European guest-worker program that will help master future challenges of migration?



**Table 3 The wealthier countries in Europe attract fewer high-skilled immigrants than countries in North America**  
 (immigrants with a tertiary diploma in selected OECD countries by country of origin, total and recent immigrants in thousands, circa 2000)

<i>Origin</i>	<b>Total Residence</b>						
	United States	EU15	Other EU OECD	Australia	Canada	New Zealand	Other OECD
United States		-972	-178	-9	-219	-6	-665
EU15	972		-301	241	443	44	71
Other EU OECD	178	301		21	95	1	18
Australia	9	-241	-21		-1	-50	-11
Canada	219	-443	-95	1		-2	-30
New Zealand	6	-44	-1	50	2		-1
Other OECD	665	-71	-18	11	30	1	
Other countries	5,763	3,275	139	458	1,261	72	444
<b>Net OECD</b>	<b>2,048</b>	<b>-1,469</b>	<b>-614</b>	<b>314</b>	<b>350</b>	<b>-12</b>	<b>-618</b>
<b>Net total</b>	<b>7,811</b>	<b>1,807</b>	<b>-475</b>	<b>772</b>	<b>1,611</b>	<b>60</b>	<b>-174</b>

<i>Origin</i>	<b>Less than five years of residence Destination</b>						
	United States	EU15	Other EU OECD	Australia	Canada	New Zealand	Other OECD
United States		-154	-23	-5	-63	-1	-188
EU15	154		-14	25	15	7	29
Other EU OECD	23	14		1	5	0	4
Australia	5	-25	-1		-2	-12	-5
Canada	63	-15	-5	2		0	-7
New Zealand	1	-7	0	12	0		-1
Other OECD	188	-29	-4	5	7	1	
Other countries	1,211	412	7	114	334	29	38
<b>Net OECD</b>	<b>435</b>	<b>-215</b>	<b>-47</b>	<b>40</b>	<b>-37</b>	<b>-6</b>	<b>-169</b>
<b>Net total</b>	<b>1,646</b>	<b>351</b>	<b>-18</b>	<b>158</b>	<b>360</b>	<b>25</b>	<b>58</b>

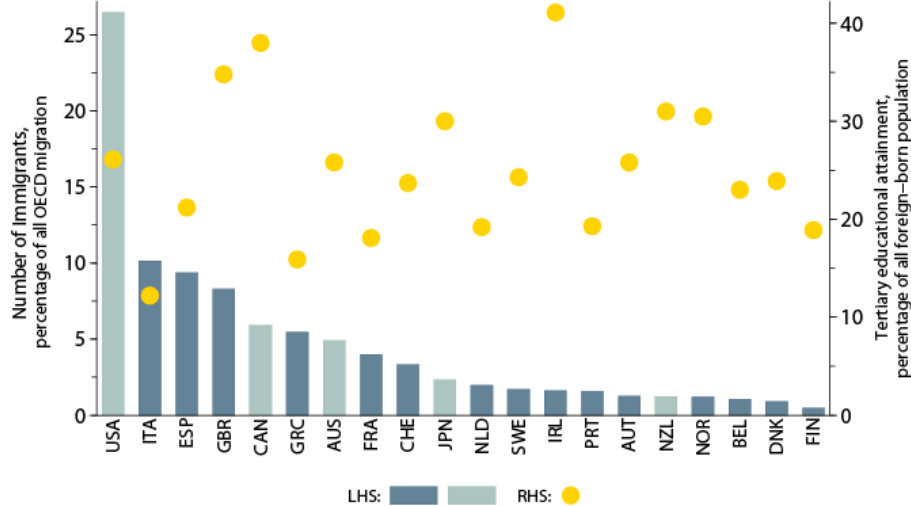
Source: OECD 2008; Database on Immigrants in OECD Countries.

## Box 6 The smarter North Americans? Immigration to Canada

Canada has one of the highest percentages of immigrants among developed countries, with highly favorable policies toward immigrants' integration. In 2008, Canada's foreign-born labor force accounted for 21.2 percent of total employment. Moreover, one in five people living in Canada was foreign-born. Between 15 and 20 percent of foreign students remain in Canada and start working.

According to MIPEX III, Canadian policies toward immigrants' integration are very favorable, ranking third. This high ranking pays dividends in the form of immigrants with top-notch skills. Canada has the second-highest share of immigrants with tertiary education among all OECD countries (box figure 1). In drawing foreign talent, Canada relies on a well-managed selection process. With its scoring system of visa applications, Canada prioritizes certain features of the labor force that are crucial for the country's development. Canada chooses whom to grant visas based on a system that ranks candidates according to their profile—having a job offer or tertiary education, for example, grants additional points. To attract highly skilled labor, talented immigrants without a job offer can be admitted to the country.

**Box figure 1. Number of all immigrants in OECD countries and share of immigrants with tertiary education**



The Canadian system is designed to treat all immigrants equally, regardless of ethnicity, race, religion, or nationality. Permanent immigrants have the same access-to-work opportunities as Canadian citizens, including setting up a business. Immigration policy provides stable solutions for fostering family reunion.

Another important aspect of integration policy is universal access to education for all children, regardless of immigration status. Political participation is one of the few aspects of life from which permanent immigrants are excluded. To become a citizen, one must pass a citizenship test, which measures language abilities and basic knowledge about the country. According to MIPEX, Canada has one of the most professional citizenship tests from all countries included in the ranking.

Source: Iwulska (2012).

### NEEDED: A MORE SELFISH IMMIGRATION POLICY

When assessing the effects of institutional arrangements on immigration, it is useful to distinguish between types of migration. First, one can distinguish migration according to the intended duration of stay: temporary, transitional, or permanent. Temporary and permanent immigration are straightforward

concepts. Temporary migrants arrive in the host country with no intention to stay long-term, leaving after a short period of time once their work contract or assignment expires, their education or training has finished, or their business objective is accomplished. Permanent migrants, by contrast, arrive in the host country to settle indefinitely, with no intention to return to their home country.

In reality, many movers fall into the category of “transitional migrants”. These are migrants who arrive on temporary visas and work permits with no intention to stay permanently but eventually become long-term or permanent settlers. Many migrants who arrived in Europe through the guest-worker programs of the 1960s in Austria, France, and Germany probably never imagined they would stay on. Yet, as they performed inherently permanent jobs they integrated into the labor market and developed nation-specific expertise. They evolved into permanent migrants, generally with the support of their employers and host governments.

One might distinguish between immigrants by their main motivation for moving: humanitarian, family reunification, or economic migration. Family reunification should not be seen separately from good economic management of immigration, as it is essential for the integration of immigrants. If these rules are too generous, though, family reunification programs can become the driving factor of a country’s immigration policy, as has been the case for years in some countries in Europe and even the United States. When family reunification becomes the main driver of immigration policy, it can bias the selection of immigrants. The same holds for humanitarian migration, based on the right to asylum and refugee status. Initiatives to legalize undocumented migrants are a part of many immigration policies, sometimes nearly replacing a proactive immigration policy with purely reactive regularization, as in Spain.

European immigration policies will have to be geared toward Europe’s economic and labor market needs, and immigration policies that focus on demand-driven elements may be the best way to do so. Well-designed, demand-driven immigration programs for temporary and transitional migrants are the best models for the “New Immigration Countries” of Europe to select the right types of migrants for their economies.

Demand-driven programs have the advantage of being flexible and reacting quickly to changes in the labor market. They require less research and government planning, putting the administrative burden on employers. The disadvantage is that they need more monitoring of compliance and enforcement efforts by the government. Static models—in particular, points systems for permanent immigration—are less flexible, requiring more capacity to determine labor market needs and ensure a consistent selection process. Successful demand-driven immigration programs for temporary migrants offer jobs of a truly temporary nature, like seasonal jobs in agriculture and tourism. In addition, certain jobs in sectors with a highly competitive goods market can be subcontracted to foreign companies through trade in services, opening the gates for a new type of temporary migration, through Mode 4 of the World Trade Organization’s General Agreement on Trade in Services.

Well-designed demand-driven immigration programs for transitional migrants help identify successful newcomers by granting migrants temporary access to the host country—with full or limited access to the labor market—and offering a clear option for permanent residency and work permission. Three main avenues of transitional migration exist: education-to-residency, business-to-residency, and work-to-residency. An advantage of demand-driven programs is that they are the most responsive to the needs of the host countries’ labor markets. Employers can request an entry visa and work permit.

Demand-driven immigration programs can ensure that the right types of migrants are recruited to match the changes in the economy. Governments' capacities to assess labor market needs and plan responsive immigration and labor market policies are not limitless. Immigration policies are more likely to be effective if designed to require less government planning (Hopkins 2000). For example, Koettl (2009) finds that Europe will need both highly skilled and semiskilled migrants with secondary education. Yet, as with all projections—especially long-term forecasts—uncertainty is great. European economies might develop faster than anticipated toward a more knowledge-based economy, or the flow of highly skilled migrants to other countries might increase. Both scenarios would shift the demand toward tertiary-educated migrants. At the same time, the need for low-skilled service providers might shift demand toward primary-educated migrants, as suggested by the increasing numbers of undocumented migrants.

Planned immigration programs—like well-designed points systems—require the government to assess labor shortages and adjust the selection process of immigrants accordingly, which require resources and time, without a guaranteed good outcome. For example, although Canada's points system attracts the largest share of tertiary-educated migrants, many end up overqualified for their jobs (Reitz 2011). This suggests that somewhere in the Canadian immigration system, there is a mismatch of supply and demand. The program seems designed to select highly skilled migrants, but the Canadian labor market either does not recognize immigrants' skills or it simply demands less-skilled immigrants. Too many overqualified immigrants can be as distorting as too many underqualified immigrants. Allowing employers more say in the process could help reduce these mismatches.

Points systems can include demand-driven components by granting additional credit to migrants with a job offer, as the Australian system does. This is complemented by a special visa type granted to visitors interested in obtaining a job, making the Australian immigration system more responsive to shifting labor market needs. Nevertheless, the system puts the government in the driver's seat, with all the associated responsibilities and administrative costs this role implies.

The biggest risk of government-controlled selection criteria is that they might fall prey to lobbying efforts. Demand-driven programs, by contrast, are less likely to be influenced by lobbying efforts because they decentralize the decision process, putting the employer in control. If well-designed, they also put the administrative and cost burden on the employer. The U.K. Work Permits program, for example, can issue a visa and work permit within 24 hours of the employer's request—assuming the employer provides adequate documentation. Similarly, the U.S. H1-B visa procedure is initiated and sponsored by the employer for a specific migrant, though the bureaucratic procedures and costs are far more burdensome for the employer. The drawback of employer-driven programs, however, is that they require regulations to prevent employers from abusing the system and to ensure that employers hire migrants only in sectors and skills segments with labor shortages. For this, a so-called "labor market test" is usually administered, requiring the employer to first post the job vacancy for native workers; only after sufficient time has passed with the post unfilled can the employer turn to migrant labor.

Europe can learn from the strengths and weaknesses of the Traditional Immigration Countries' immigration policies. There is no one good program that addresses all the challenges of a well-crafted immigration policy. But the principle of a good immigration policy is the same: an ability to respond to changing labor market needs. In this sense, European immigration policy has to become more selfish. Of courses, immigration policies alone cannot attract the best and the brightest: if Europe wants to win the global race for talent, it will need to make working and living in Europe more attractive. This means paying a premium on skills, increasing the rewards to risk-taking, and encouraging entrepreneurship.

## TOWARDS FULL EMPLOYMENT

If current trends persist, members of the European Union, the EFTA countries, and the candidate countries, and the eastern European partnership countries will lose almost 50 million workers between now and 2060. Today, the European labor force—the employed and active job seekers—consists of 323 million people; in 50 years, it will be down to 273 million, a decrease of 15.3 percent. Over the next 20 years, the labor force will lose 15 million workers. The largest reduction will happen during the 2030s, when the European labor force is expected to fall an additional 14 million people. The fall will be especially severe for the European Union and EFTA countries. Their labor force will decrease by almost 40 million people (18 percent) over the next 50 years. The other eastern European countries will not fare much better, with an equally steep decline of 16 percent.

These trends should not be allowed to persist. Many Europeans—especially women, youth, elderly, and some minorities—do not work at all, and they should. Many Europeans retire too early, and they should work longer. Some unemployed Europeans do not look hard enough for work, and they should be encouraged to look harder. Only with radical policy and behavioral changes can Europe counter the shrinking labor force. Yet, even under such optimistic conditions, Europe will not be able to prevent its labor force from aging. If participation rates in all countries were to converge to those in northern Europe, or the retirement age were to increase by 10 years across the board, the European labor force would actually increase by 2060. If female labor force participation were to converge to that of men, the labor force would still decrease, but only by 5 percent, as opposed to 15 percent in the baseline scenario. None of these scenarios counteracts, however, the loss of young workers due to continually decreasing younger-age cohorts. Increased migration will also have to be part of the solution. With revamped immigration policies that combine the altruism of humanitarian policies with the self-interest of an economic approach, Europe can attract bright Africans, Americans, and Asians.

Revisiting the questions posed at the beginning of the paper may be useful.

*Are employment and social protection practices reducing participation?* In most countries, they do, and reforming these policies can stem some if not most of the projected decline of the European labor force, especially by increasing participation rates of older workers and women. Yet, in addition to immigration, increased investments in human capital are also necessary to not only have more, but also more productive workers. Interventions should focus on overcoming failures in information and quality assurance that lead many people to make suboptimal skills investments (too few engineers, technicians, and competent managers). Countries in emerging Europe have to reorganize their school networks in the face of shrinking student cohorts, and pay more attention to developing critical cognitive and non-cognitive skills during preschool and basic education.

*Are employment and social protection practices inhibiting efficiency?* Yes, by creating influential insiders with well-protected jobs at the cost of marginalizing others. The reforms will have to reduce job security while modernizing the systems for providing income security. In wealthier countries, reduced employment protection can be combined with relatively generous unemployment benefits and social assistance. Governments capable of administering programs that supplement employment protection laws with well-designed income support and job search assistance should institute them. But to work well, this “flexicurity” requires high labor force participation rates that are many years away for many in Europe, as well as an institutional maturity and fiscal and administrative resources that are out of reach for most. Especially in the east and south but perhaps also in other countries, there may be no alternative but to reconsider the extent of employment protection and the generosity of social

protection. But all countries should synchronize social insurance for the unemployed with social assistance for the unlucky in order to align incentives for work, as Germany did between 2003 and 2005.

*Is Europe taking advantage of the potential for greater labor mobility?* Not fully. Undoubtedly, the European Union is the most integrated region in the world, and migration between EU countries is higher than in other world regions. Europe's aspiration is, however, more ambitious: the aim is a fully integrated labor market with no borders. Against this yardstick, Europe still falls short. Significant challenges to improving labor mobility, even within European countries, remain. Mobility does come with social costs—missing the support of family and friends—that governments cannot easily reduce. But the costs related to education, housing, and health care can and should be reduced. These are some of the features that make the United States the most mobile economy in the world, and Europe can learn without losing its uniqueness.

*Can Europe become a global magnet for talent?* Yes, but it has to create more selfish immigration policies. A million people immigrate to Europe every year, but less than one in five has more than a high school diploma—and three of five do not even have that. Attracting global talent would require looking closer at successful, demand-driven schemes from Traditional Immigration Countries—Australia, Canada, New Zealand, and the United States. Immigration policies should focus less on political factors such as family reunification, asylum, and human rights and respond more to the demands of employers and longer term assessments of skill shortages. Changes in immigration policies need to be combined with reforms aimed at making Europe a good place to innovate, start businesses, and reward risks. Similarly, increased immigration without more contestable jobs and reformed social safety nets could undermine the success of immigration reform.

Looking back at the last decade and a half, emerging Europe may have done better than advanced Europe in taking advantage of expanding opportunities for trade, finance, and enterprise. Looking ahead, the prospects are bleaker. Demographic shifts threaten Central and Eastern Europe just as much as most countries in Western Europe, which have been reforming labor market policies and can more easily become attractive destinations for immigrants. The exception is Southern Europe, which has not done well in recent years and is projected to shrink and age over the next decade. Greece, Italy, Portugal, and Spain illustrate most starkly how work is simultaneously the weakest part of the European economic model and one of its most attractive attributes. Changing how the labor market is regulated and replenished will be difficult for politicians, but it is none the less urgent. Nor is it hopeless: countries such as Denmark, Germany, Ireland, and Sweden have shown that the European work model's characteristics can be changed while keeping its character distinctly European.

This paper is perhaps best concluded with a simple (but uncomfortable) answer to the principal question it addresses: *Can Europe attain full employment?* The answer is yes, but not until the continent is willing to make radical changes in its approach to work. A central aspect is that most countries in Europe give disproportionate power to those with protected jobs—the “insiders”—through employment protection legislation. This approach would have become difficult to sustain even without the onset of rapid aging. With this shift, it is already unsustainable. Countries such as Austria, Denmark, Germany, the Netherlands, and Sweden, which have kept unemployment low and labor force participation high during the last decade, have done so in some measure by reducing this protection. In effect, they have made jobs contestable. Now others must do the same.

**Table A.1 Regression estimation results: activity rate**

	OECD			EU			NMS EU + European neighborhood		
	Total OECD	EU OECD	Non-EU OECD	Total EU	Old EU	NMS EU	Total	NMS EU	Neighborhood
ALMP	0.072 ***	0.101 ***	-0.017	0.091 ***	0.117 ***	-0.081	-0.077	-0.036	-1.257
TAX	-0.004 ***	-0.004 ***	0.000	-0.004 ***	-0.005 ***	0.005 **	0.003	-0.015 **	0.011
EPL	-0.029 ***	0.016	-0.106 ***	0.018	0.033 **	0.092	0.017	-0.019	0.060
MW	-0.006	-0.016 ***	-0.014 ***	-0.017 ***	-0.019 ***	-0.042 ***			
TU	0.001 ***	0.001 *	0.006 ***	0.001 ***	0.001 **	0.017 ***	-0.001 **	0.004 ***	-0.001
UBRR	0.003 ***	0.002 **	-0.003 ***	0.002 ***	0.001 *	0.002 *			
UNBEN							0.001	0.001	0.000
UNBENDUR							0.000	-0.004	0.011
INFL	-0.001	0.000	-0.003	-0.001	-0.001	-0.005	0.001	0.005 **	0.002
LEFT	0.008	0.011	0.017 **	0.007	0.000	-0.079 ***	-0.065 ***	-0.054	-0.120
constant	4.257 ***	4.215 ***	4.490 ***	4.225 ***	4.243 ***	3.547 ***	4.081 ***	4.835 ***	3.725 ***
R sq.	0.486	0.643	0.973	0.660	0.638	0.903	0.443	0.743	0.933
N	168	119	49	126	105	21	30	19	11
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.081
Chow test F p-value	0.5648			0.9999			0.8413		

\*\*\* Significant at 1 percent level, \*\* significant at 5 percent level, \* significant at 10 percent level.

Note: Regression method is a pooled two-stage least squares procedure with instrumental variables on panel data; robust standard errors used. ALMP = active labor market policies, TAX = total tax wedge on labor, EPL = employment protection legislation, MW = minimum wage, TU = trade union density, UBRR = unemployment benefits replacement rate, UNBEN = average unemployment benefit, UNBENDUR = maximum duration of unemployment benefits, INFL = change in annual rate of inflation.

Source: World Bank calculations based on the OECD, Institute for the Study of Labor, World Bank, International Labour Organization, and European Bank for Reconstruction and Development.

**Table A2 Regression estimation results: employment rate**

	OECD			EU			NMS EU + European neighborhood		
	Total OECD	EU OECD	Total	Total	Total	NMS EU	Total	NMS EU	Neighborhood
ALMP	0.085 ***	0.100 ***	-0.061	0.078 ***	0.070 ***	-0.119	0.087	0.044	2.531
TAX	-0.009 ***	-0.008 ***	-0.004 ***	-0.009 ***	-0.010 ***	0.016 ***	-0.003	-0.009	0.005
EPL	-0.057 ***	-0.063 ***	-0.071 ***	-0.058 ***	-0.066 ***	0.122	-0.069	-0.026	-0.373
MW	-0.004	-0.005	-0.025 ***	-0.009 *	-0.008 *	-0.086 ***			
TU	0.001 ***	0.001 ***	0.006 ***	0.001 ***	0.001 ***	0.027 ***	0.000	0.009 ***	0.002
UBRR	0.003 ***	0.003 ***	-0.003 ***	0.004 ***	0.004 ***	0.001			
UNBEN							0.005	0.001	-0.009
UNBENDUR							-0.005	-0.009 **	-0.034
INFL	0.005	0.009	-0.008 **	0.006	0.002	-0.008	0.001	0.010 ***	0.002
LEFT	0.009	0.017	0.026 **	0.009	0.015	-0.215 ***	-0.100 **	-0.070	0.117
Constant	4.201 ***	4.171 ***	4.408 ***	4.192 ***	4.227 ***	2.796 ***	4.179 ***	4.254 ***	4.819 **
R sq.	0.664	0.622	0.707	0.621	0.671	0.822	0.249	0.695	0.668
N	168	119	49	126	105	21	30	19	11
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.198	0.003	0.736
Chow test F p-value	0.5037			0.9999			0.8499		

\*\*\* Significant at 1 percent level, \*\* significant at 5 percent level, \* significant at 10 percent level.

Note: Regression method: pooled two-stage least squares procedure with instrumental variables on panel data; robust standard errors used. ALMP = active labor market policies, TAX = total tax wedge on labor, EPL = employment protection legislation, MW = minimum wage, TU = trade union density, UBRR = unemployment benefits replacement rate, UNBEN = average unemployment benefit, UNBENDUR = maximum duration of unemployment benefits, INFL = change in annual rate of inflation.

Source: World Bank calculations, based on the OECD, Institute for the Study of Labor, World Bank, International Labour Organization, European Bank for Reconstruction and Development.



**Table A3 Regression estimation results: unemployment rate**

	OECD			EU			NMS EU + European Neighborhood		
	Total OECD	EU OECD	non-EU OECD	Total EU	Old EU	NMS EU	Total	NMS EU	Neighborhood
ALMP	-0.327 ***	-0.314 ***	0.624	-0.198 *	-0.118	0.397	-1.249 **	-0.444	-31.016
TAX	0.021 ***	0.013 ***	0.016	0.018 ***	0.026 ***	-0.099 ***	0.020	-0.021	-0.047
EPL	0.146 ***	0.378 ***	-0.166	0.350 ***	0.383 ***	-0.027	0.538 **	0.123	2.793
MW	0.010	-0.037 *	0.204 ***	-0.018	-0.008	0.325 **			
TU	-0.001	0.000	-0.008	-0.002	-0.002	-0.058 ***	-0.007	-0.029 **	-0.033
UBRR	-0.002	-0.009 **	0.019 ***	-0.012 ***	-0.015 ***	0.009			
UNBEN							-0.024 *	-0.010	0.103
UNBENDUR							0.029	0.039	0.128
INFL	-0.033	-0.058	0.044 *	-0.040	-0.005	0.016	-0.004	-0.051 **	-0.011
LEFT	0.125 **	0.107 *	-0.161 *	0.133 **	0.081	0.876 ***	0.298	0.087	-1.463
Constant	0.982 ***	1.274 ***	0.046	1.174 ***	0.808 ***	5.724 ***	0.785	3.218	-1.603
R sq.	0.378	0.401	0.787	0.345	0.495	0.889	0.369	0.583	0.856
N	168	119	49	126	105	21	30	19	11
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.068	0.146
Chow test F p-value	0.9838			0.916			0.6765		

\*\*\* Significant at 1 percent level, \*\* significant at 5 percent level, \* significant at 10 percent level.

Note: Regression method is a pooled two-stage least squares procedure with instrumental variables on panel data; robust standard errors used. ALMP = active labor market policies, TAX = total tax wedge on labor, EPL = employment protection legislation, MW = minimum wage, TU = trade union density, UBRR = unemployment benefits replacement rate, UNBEN = average unemployment benefit, UNBENDUR = maximum duration of unemployment benefits, INFL = change in annual rate of inflation.

Source: World Bank staff calculations based on the OECD, Institute for the Study of Labor, World Bank, International Labour Organization, European Bank for Reconstruction and Development.

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## NOTES

<sup>1</sup> This projection assumes that overall immigration and participation rates by sex and age group remain at current levels.

<sup>2</sup> For a more detailed discussion on incentivizing formal work, see World Bank (2011a).

<sup>3</sup> See Hanushek and Woessmann (2008) for a literature review of the empirical relationship between economic growth and school attainment.

<sup>4</sup> See Carneiro and Heckman (2002) for U.S. evidence, Brunello and Schlotter (2011) for Europe, and World Bank (2011d) for summary evidence in middle-income countries.

<sup>5</sup> The OECD has initiated its Program for the International Assessment of Adult Competencies to measure cognitive skills in the working-age population (a complement to the Programme for International Student Assessment). The World Bank's Skills toward Employment and Productivity initiative complements the Program for the International Assessment of Adult Competencies initiative by also measuring noncognitive skills. First results are expected by 2013.

<sup>6</sup> See, for example, Bowles and Gintis (1998) for evidence of employer surveys from the United Kingdom and the United States, Blom and Saeki (2010) for a study for India, and World Bank (2011d) for evidence from Latin America.

<sup>7</sup> For an extensive treatment of the impact of labor unions on labor-market outcomes in Europe, see Alesina, Glaeser, and Sacerdote (2005).

<sup>8</sup> Following Fialová and Schneider (2009 and 2011), we use two-stage least squares regression estimation with instrumental variables on pooled data. Standard panel estimation procedures (random or fixed effects estimation) were not employed for insufficient explanatory power of these models and/or too few data. Data were mainly from OECD with some supplements from the Institute for the Study of Labor, International Labour Organization, and European Bank for Reconstruction and Development.

<sup>9</sup> The findings correspond with previous empirical studies using similar techniques by Cazes and Nesporova (2003) and Nickell (1997). With respect to long-term unemployment, employment protection legislation was generally found to be insignificant across country samples. Active labor market policy spending was also insignificant.

<sup>10</sup> The data are from the OECD, for 2001–07. The sample covers Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, the Republic of Korea, the Netherlands, Norway, New Zealand, Poland, Portugal, Spain, Sweden, the United Kingdom, and the United States. Of them, 17 are classified as EU OECD and 7 as non-EU OECD.

<sup>11</sup> The sample covers Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, and the United Kingdom. Of them, 15 are classified as old European Union and 3 as new member states of the European Union.

<sup>12</sup> Data are from the Institute for the Study of Labor database, for 1999, 2003, and 2007. The sample covers Albania, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, the Kyrgyz Republic, Latvia, Moldova, Macedonia, Poland, Romania, the Slovak Republic, Slovenia, and Ukraine. Of them, 9 are classified as new member states of the European Union and 6 as European neighborhood.

<sup>13</sup> The generosity of unemployment benefits seems to have the reverse effect in non-European OECD countries.

<sup>14</sup> Bertola and Ichino (1995) argue that the persistence of unemployment in Europe in the 1980s and 1990s was caused by a lack of labor mobility and people remaining in lagging areas.

<sup>15</sup> However, Eurofound (2007a,b,c) presents data that indicate a decrease in interstate mobility in the United States over 2000–05.

<sup>16</sup> See European Commission Communication (2010). In 2008, 37 percent (11.3 million people) of nonnationals in EU27 countries were citizens of another member state. The number of nonnationals in EU27 has increased 42 percent since 2001 (for further details, see Eurostat Statistics in focus 94/2009).

<sup>17</sup> Tatsiramos (2007) makes reference to important work by Decressin and Fatas (1995) and Jimeno and Bentolila (1998) about European trends. For the United States, Tatsiramos quotes Blanchard and Katz (1992).

<sup>18</sup> Restrictions on the freedom to work can be maintained for up to seven years after the entry of new member states into the European Union. The last restrictions were lifted on workers from the EU8 countries in May 2011. Restrictions will be lifted on workers from Bulgaria and Romania in December 2013.

<sup>19</sup> Using Nomenclature of Units for Territorial Statistics 2 data.

<sup>20</sup> See, for instance, Bentolila (1997) for Spain; Pissarides and Wadsworth (1989) for the United Kingdom; and Fidrmuc (2002) for transition economies.

<sup>21</sup> For a detailed discussion on conceptual issues regarding portability of social benefits, see Holzmann and Koettl (2011).