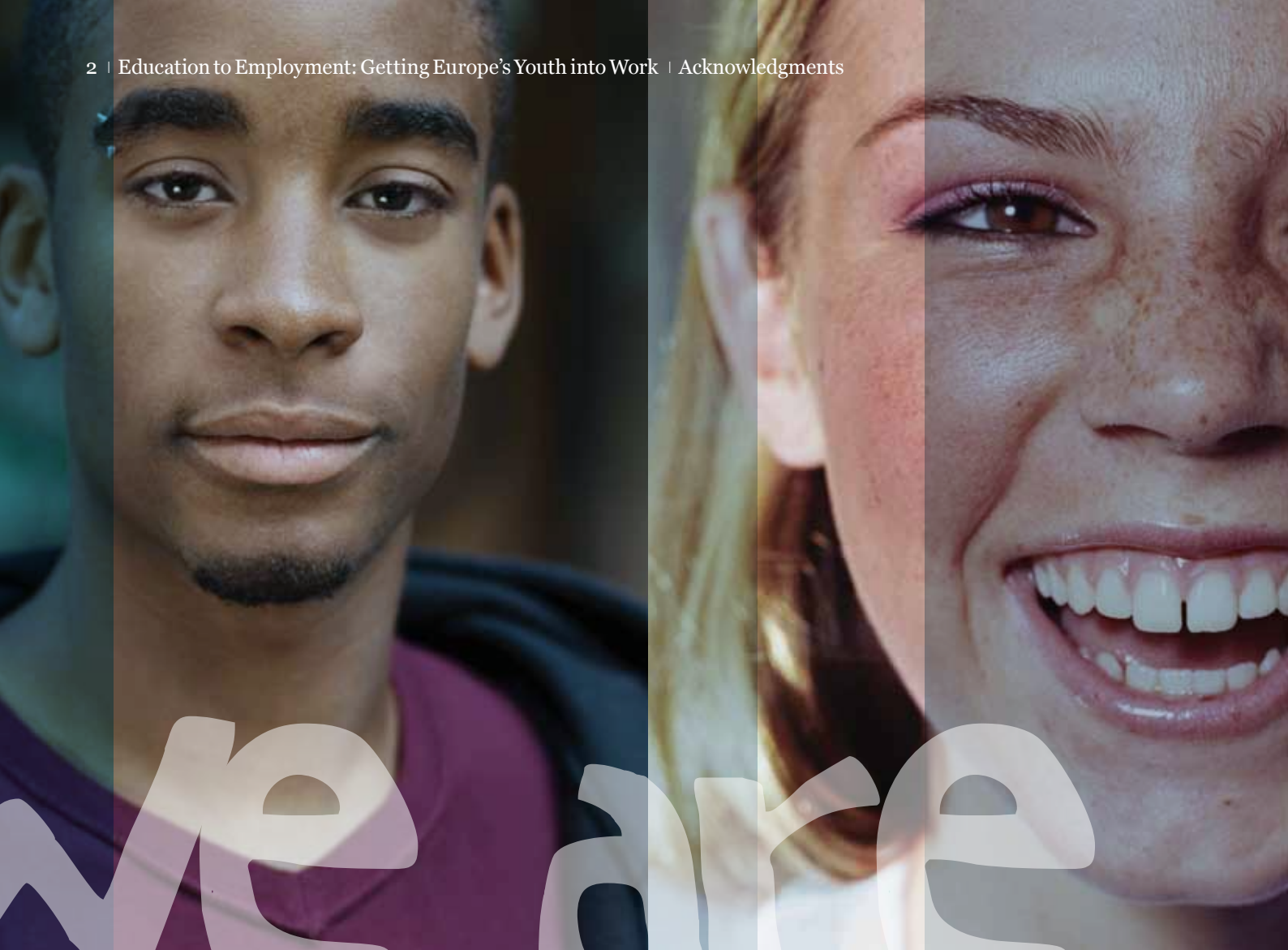


McKinsey
Center for
Government

**Education to
Employment:**
Getting Europe's
Youth into Work





Authors | Mona Mourshed | Jigar Patel | Katrin Suder

Acknowledgments

The authors would like to express their profound thanks to the more than 8,000 education providers, youth, and employers whom we surveyed across eight countries during this research. The authors are grateful to the substantial and committed contributions of our colleagues Solveigh Hieronimus and Kai Holleben for their expertise and Antony Hawkins for his outstanding project management of this work. Emily Henderson, Christina Lein and Joao Reis rounded out our team with insightful thinking on critical issues. Purujeet Vikram Dastidar and Wojciech Kazanecki provided expert research support on challenging topics. Cait Murphy and Nick de Cent provided brilliant editing support and Nicholas Dehaney brought creative flair and design to our work.

The following colleagues provided valuable input and counsel throughout our effort: Alejandro Beltran, Kalle Bengtsson, Marco Biscione, Luis Cunha, Kito de Boer, Jonathan Dimson, Clemence Duchesne, Diana Farrell, Matteo Gaviano, Panagiotis Georgakopoulos, Ian Gleeson, Francisco Goncalves, Laura Gonçalves de Camara, Martin Hjerde, Tom Isherwood, Ali Jaffer, Xenia Kastorinis, Eric Labaye, Roberto Lancelloti, Cheryl Lim, Gloria Macias Lizaso, Alessio Magnavacca, Frank Mattern, Jean-Christophe Mieszala, Karl Murray, Mikael Robertson, Denielle Sachs, Jay Scanlan, Kevin Sneader, Karim Tadjeddine, Leonardo Totaro, and George Tsopelas.



Contents

4	Introduction: Europe's rocky journey from education to employment
8	Executive summary
16	Chapter 1: Education to employment in Europe: the stage and the actors
16	1.1 Supply or demand? That is the question.
19	1.2 The seven segments of youth
27	1.3 The four employer segments
24	1.4 The small business conundrum
34	Chapter 2: A Road with many barriers
34	2.1 The first critical intersection: Enrolling in post-secondary education
47	2.2 The second critical Intersection: Building skills
51	2.3 The third critical intersection: Finding a job
59	Country summaries
78	Chapter 3: Building a system that works for everyone
79	3.1 Improving affordability
82	3.2 Better mindsets, better results
88	3.3 Creating the conditions for success
100	Bibliography
103	Appendices
113	Endnotes



Introduction Europe's rocky journey from education to employment

The European Union has the highest unemployment rate of anywhere in the world apart from the Middle East and North Africa. In 2013, almost a quarter of young people in the EU labour market were unemployed. For one of the most developed regions of the world, this is truly startling—even more so when added to the fact that the youth unemployment rate has been 20 percent or above for 11 of the past 20 years.¹ Youth unemployment has long been a smouldering crisis in Europe, but the economic downturn since 2008 has made it a burning issue.

Change has been so fast and so drastic as to be unprecedented in the post-war era; Europe faces the very real possibility of a “lost generation”. In Greece, the youth unemployment rate increased by 68 percent in the two years from 2010 to 2012. In Spain, the proportion of youth not in education, employment, or training (NEET) rose 27 percent from 2008 to 2009 and has been creeping up steadily ever since.²

Many of those who are working are doing so intermittently, part-time, or in jobs they are distinctly unenthusiastic about. In Spain, where more than half of youth are unemployed, a third of those who are working are doing so in what they consider interim jobs, while another 20 percent are unhappily part-time.

“Change has been so fast and so drastic as to be unprecedented in the post-war era; Europe faces the possibility of a ‘lost generation’.”

With so many young people looking for work, one might assume youth unemployment to be purely an issue of demand and that employers would be able to cherry-pick excellent talent at modest cost.

However, an overriding reason for young people being held back is a lack of skills relevant to the workplace. In Greece, where the unemployment rate has been above 55% in 2013,³ employers still complain they cannot find suitable entry-level hires; the same is true for Sweden and Germany. Across all eight countries we surveyed (see below), most employers—61 percent—were not confident they could find enough applicants with the right skills to meet their business needs.

The imperative to help young people build skills for employment is unlikely to disappear. The 2012 Programme for International Student Assessment (PISA) which measures student performance at secondary level for mathematics, reading and science, saw the scores of three of the eight countries go down and the rest rise only minimally.⁴ As the current generation of secondary students graduates it seems that skills shortages will become even more of a challenge for both post-secondary institutions and employers in the coming years. In short, economic growth is a necessary—but not of itself a sufficient—condition for improvement.

The cost to the European Union of youth not finding work is enormous: one estimate puts the annual cost of the NEET population—in terms of both direct costs and lost output—at €153 billion in 2011.⁵ No less important is the price of joblessness at the individual level. Studies of the generation that came of age in the 1980s have found that those who endure a period of unemployment before age 23 suffer long-

term consequences, earning 12 to 15 percent less than their peers at age 42. Working in interim or part-time jobs at a young age has a similar impact. An extra year of tenure in a job in the first five years after leaving education is linked to an increase in adult wages of 7 to 13 percent for men and 12 to 24 percent for women.⁶

Europe is aware of all this. Leaders of every nation have pledged action to get their young people to work, and at the supranational level, the European Union will implement the Youth Guarantee programme from 2014 to support related initiatives. The aim is to ensure that all those under 25 who become unemployed will receive an offer of employment or training within four months. Funding for this comes from a number of sources, including the European Investment Bank and European Social Fund. On top of this, the European Commission has pledged €8 billion through the Youth Employment Initiative.⁷

The desire for improvement is there. However, to be effective, the Youth Guarantee must be spent on measures that help young people not just find a job, any job, but to develop skills and career strategies. Fundamentally, the goal must be to support systems and partnerships that make education to employment (E2E) systems in Europe more robust.

In this report, we focus on measures that can be taken to tackle the skills element of the youth unemployment problem and help young people find the jobs that they want and deserve. Economic growth, laws and regulations on hiring and firing and having the right fiscal policies in relation to the cost of labour are also, of course, crucial to getting people to work. Labour costs vary between countries: in France

for the population as a whole they are €34 an hour, of which 33 percent goes on the employer's social contributions and other costs that are additional to salaries; in contrast, the UK figures are €19 and 15 percent respectively. The effect of higher labour costs on employment rates is a topic of debate in many European countries. However, these are different topics altogether—and McKinsey has addressed them in other research.

To understand the situation better in Europe, we built on the methodology used in our 2012 global report, *Education to Employment: Designing a System that Works*. For this European report, we surveyed 5,300 young people, 2,600 employers, and 700 education providers from eight EU countries (France, Germany, Greece, Italy, Portugal, Spain, Sweden, and the United Kingdom). These eight countries include Europe's five largest economies—Britain, France, Germany, Italy, and Spain; two of the countries hurt most by the crisis—Greece and Portugal; and one from Scandinavia—Sweden, which has a distinctive E2E model. Combined, they account for close to 75% of youth unemployment within the European Union's 28 countries.⁸ We did not include countries from Eastern Europe, whose history and economic dynamics are distinctive.

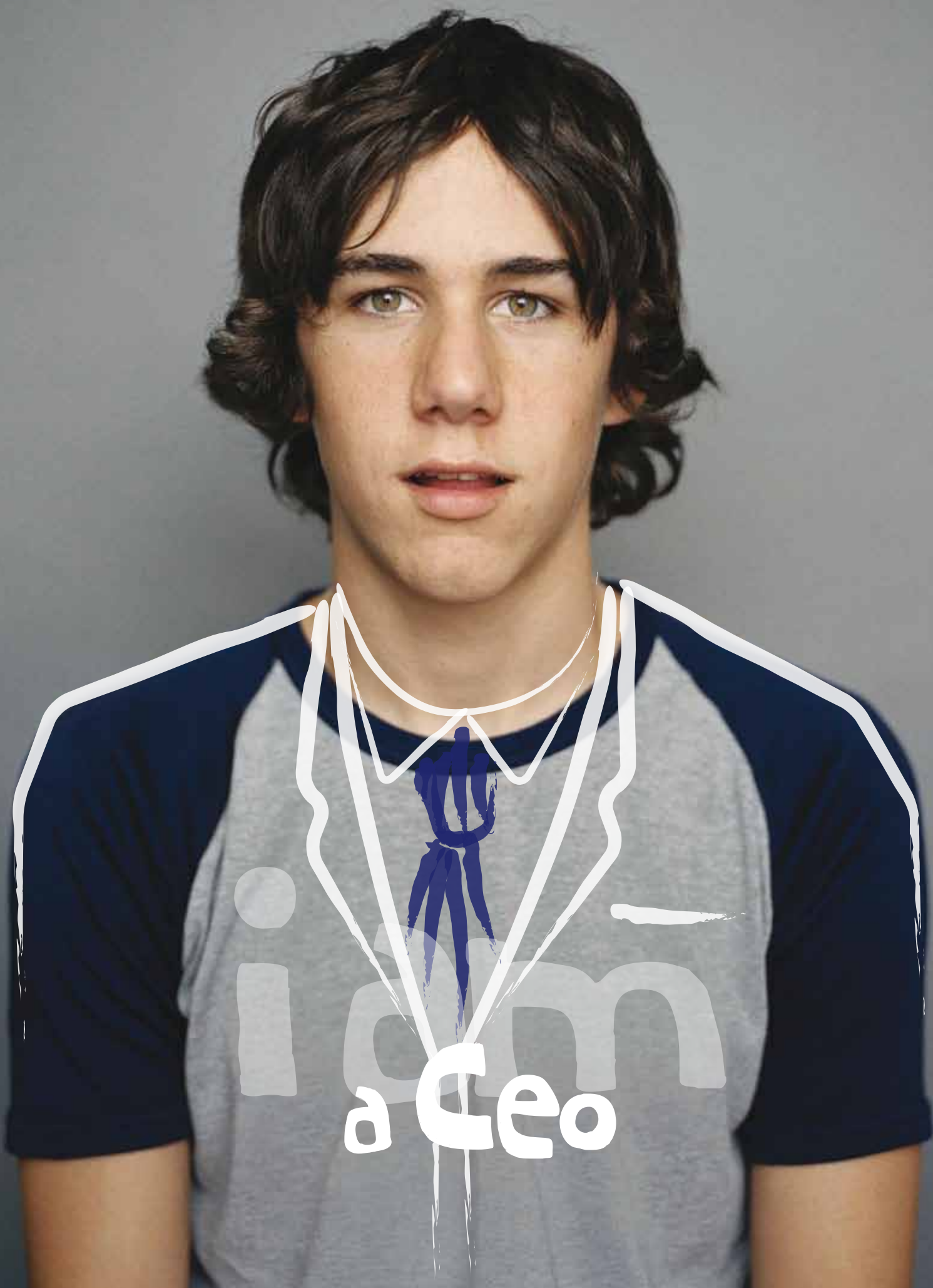
We also sought out solutions—examples of companies, governments, education providers, and non-governmental organisations both from Europe and beyond—that deal with E2E issues in an innovative way.

One challenge in comparing youth unemployment problems across countries is making sense of the statistics. There are two main indicators used to measure youth who are out of

work. The youth unemployment rate includes 15-24 year olds who want a job but do not have one.⁹ This rate captures some students: those who are in work-based training and thus active in the labour market increases the number of people employed, while those who wish to work while studying, but cannot, add to the number counted as unemployed. The second indicator is the NEET rate—those who are not in education, employment, or training. This does not include students, but it does include those who do not want a job for whatever reason—they may be unwell, on holiday, or simply not interested in working. Different countries rank better or worse on one or the other measure; however, both are useful depending on the context.

Nonetheless, the statistics—whichever cut you take—must not detract from the significance of so many youth being out of work. For young people, employment is an important means of cultivating a sense of self-worth: when they are without jobs, social unrest becomes more likely. The consequences of wasting the potential of millions of young people can never be benign.

Employers, education providers, young people, and governments all have a role to play. In the pages that follow, we identify and analyse the problems, and suggest solutions so that this generation does not, indeed, turn into a lost one.



Executive Summary

European leaders have united in acknowledging youth unemployment as one of Europe's greatest challenges. "At stake is the future of an entire generation," said French President Francois Hollande. Italian Prime Minister Enrico Letta has called youth joblessness the "true nightmare" of Italy. German Chancellor Angela Merkel referred to it as "perhaps the most pressing problem facing Europe at the present time." In 2013, the European Union dedicated two summits to youth unemployment, with a third to come in Rome in 2014. One result: the Youth Guarantee, announced in June 2013, promises to provide a job or training to all young people in Europe no more than four months after finishing their education. In addition to existing funding, the European Union has allocated a further €8 billion between 2014-20, the bulk of it to be spent in the next 2 years, to tackle the problem.

In our 2012 report *Education to Employment: Designing a System that Works*, we sought to understand how people move from the classroom to the workforce. To do so, we surveyed over 8,000 young people, education providers, and employers around the world.¹ We examined how and why skills mismatches occur, and what can be done to fill them.

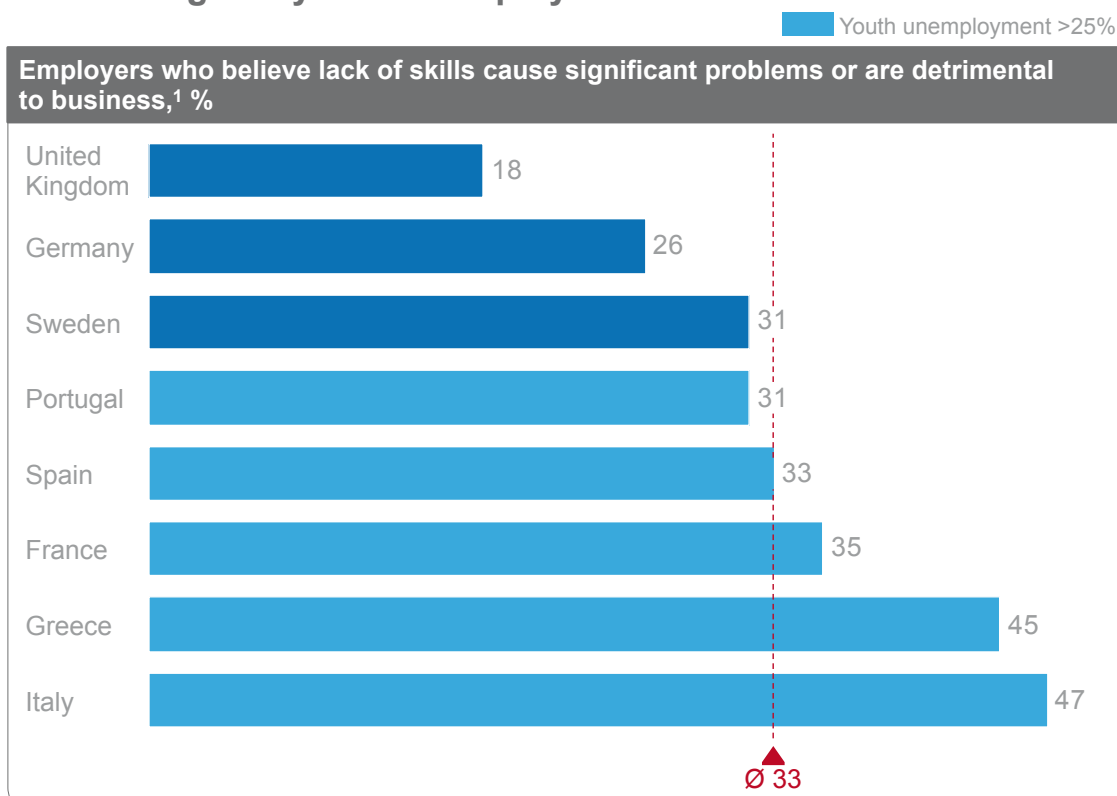
In this report, we take a similar approach to youth unemployment in Europe. We concentrated on four broad questions:

- 1 Is the scale of youth unemployment problem in Europe a result of lack of jobs, lack of skills, or lack of coordination?**
- 2 What are the obstacles that youth face on their journey from education to employment?**
- 3 Which groups of youth and employers in Europe are struggling the most?**
- 4 What can be done to address the problem?**

To answer these questions, we focused on eight countries that are home to three-quarters of Europe's 5.6 million unemployed youth: France, Germany, Greece, Italy, Portugal, Spain, Sweden, and the UK.² To do so, we built a unique fact base along the full journey from education to employment to inform future decision making, through a survey of more than 5,300 young people, 2,600 employers, and 700 education providers. We also examined more than 100 programmes in 25 countries to provide insight into education-to-employment (E2E) solutions that may be relevant to Europe.

Exhibit 1

Skill gaps cause the most problems in countries with the highest youth unemployment



¹ How, if at all, does a lack of entry-level employee skills affect your company?

Source: McKinsey survey, Aug–Sept 2012, 2013

Our research led us to the following answers:

1. Despite more people looking for work, employers in Europe cannot find the skills they need. Across the EU, a quarter of young people under 25 in the labour market are unemployed, the highest level in any region except the Middle East/North Africa. Across most of the region, youth unemployment has risen significantly since the financial crisis hit in 2008. However this is not to say that youth unemployment is a new issue for Europe—in 1995 it was at 21 percent. Since then, it has never been lower than 15%, in 2007.

Clearly, the lack of availability of jobs in Europe is part of the problem, but it is far from the whole story. In many countries, the number of people employed has actually remained steady while, in some countries, this has increased since 2005. More older people are working for longer and more women with children are joining or remaining in the workforce, as a result of long-term social trends and tightening of rules around welfare and pension systems. More participation across all age groups means more competition for open positions. This particularly affects younger people, who are disadvantaged by lack of proven experience. Meanwhile, labour-market regulations that discourage hiring and firing, which are common in Europe, make it even harder for youth to get started.

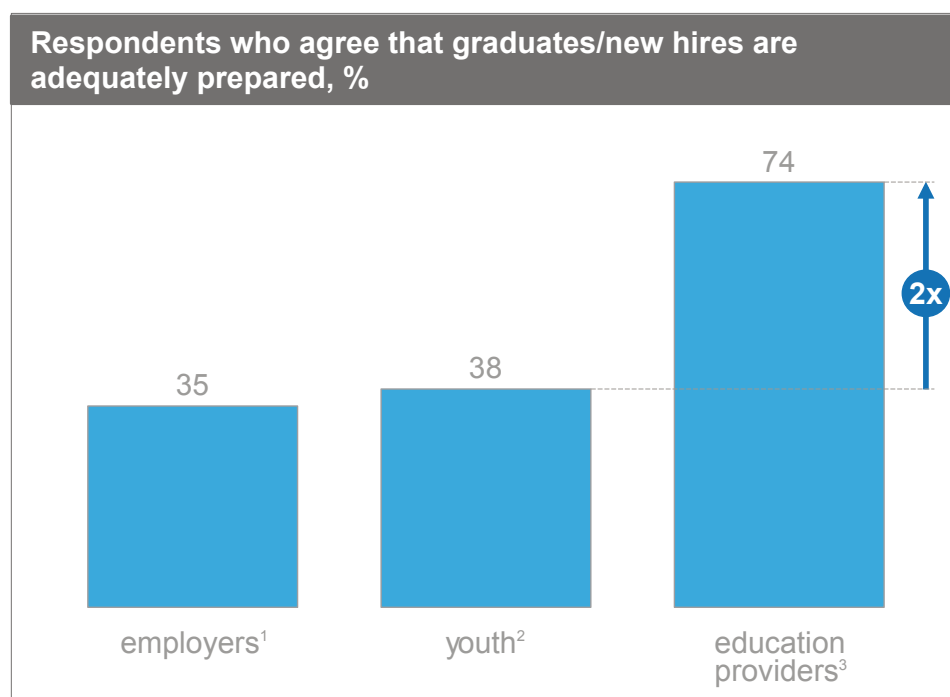
At the same time, employers everywhere report skills shortages. In the survey of the eight EU countries, one-third of employers said that lack of skills is causing major business problems, in the form of cost, quality or time (Exhibit 1). 27 percent of employers reported that a lack of skills was a major reason they did not fill vacancies. Employers from countries with the highest youth unemployment reported the greatest problems due to skills shortages.

A critical reason for youth not getting the skills employers need is that education providers, young people, and employers do not understand one another (Exhibit 2). In our 2012 global report, *Education to Employment: Designing a System that Works*, we concluded that providers, employers, and young people operated in “parallel universes”. In Europe, we found the same phenomenon, but to an even greater extent. For example, 74 percent of education providers were confident that their graduates were prepared for work, yet only 38 percent of youth and 35 percent of employers agreed. Why is there such a big difference between the three? The more pertinent question is, “How could they know any better?” Outside of UK and Germany, only 50 percent of European employers report interacting with education providers several times a year or more.

2. European youth face obstacles at every stage of the E2E journey. Think of the education-to-employment journey as a road with three intersections: 1) enrolling in post-secondary education, 2) building the right skills,

Exhibit 2

Providers are twice as likely as employers and youth to rate youth as prepared



¹ Overall, the entry-level employees we hired in the past year have been adequately prepared by their prehire education and/or training.

² Overall, I think I was adequately prepared for an entry-level position in my chosen career field.

³ Overall, graduates from my institution are adequately prepared for entry-level positions in their chosen field of study.

Source: McKinsey survey, Aug–Sept 2012, 2013

and 3) finding work. In Europe, there are barriers at each intersection that block young people from creating the future they want and deserve.

The most important barrier to enrolling in post-secondary education is cost. Although university tuition fees are generally highly subsidised in Europe, many students find the cost of living while studying still too high to sustain. Also, in a number of countries, vocational courses are not subsidised and can therefore be prohibitively expensive. A second barrier is a lack of information. Except in Germany, fewer than 25 percent of students in Europe said they received sufficient information on post-secondary courses and careers. In Europe, where many young people make a decision between vocational and academic paths at around age 15, such information is crucial. A third is stigma. Most of those surveyed said they perceived a social bias against vocational education even though they viewed it as more helpful to finding a job than an academic path. Fewer than half of those who wanted to undertake a vocational course actually did so.

At the second intersection, building the right skills, too many students are not mastering the basics, with businesses reporting a particular shortage of “soft” skills such as spoken communications and also problems with work ethic. Furthermore, too many young people are taking courses that lead to qualifications for which there is reduced demand. In Spain, for example, the number of people employed in

construction has dropped 62 percent since 2008, but the number of students graduating in architecture and building increased 174 percent since 2005.³

At the third intersection, finding work, the support systems that could help young people secure satisfying, stable jobs are inconsistently available. Fewer than half of Swedish youth considered the career services offered useful, compared with two thirds in the United Kingdom. Fewer than half of UK students completed a work placement, compared with 87 percent of those in France.

The barriers from education to employment combine to make young people doubt the benefit of continuing education after secondary school. Only 42 percent of young people surveyed in Europe believed that post-secondary education improved their employment opportunities, compared to 50 percent of those in the global survey (Exhibit 3).

3. E2E systems fail particularly for young people and small businesses. We identified seven distinct segments of young people (see Chapter 1), based on how much support they received (in the form of financial assistance and career guidance), their commitment to developing skills, and whether they attained a satisfactory job.

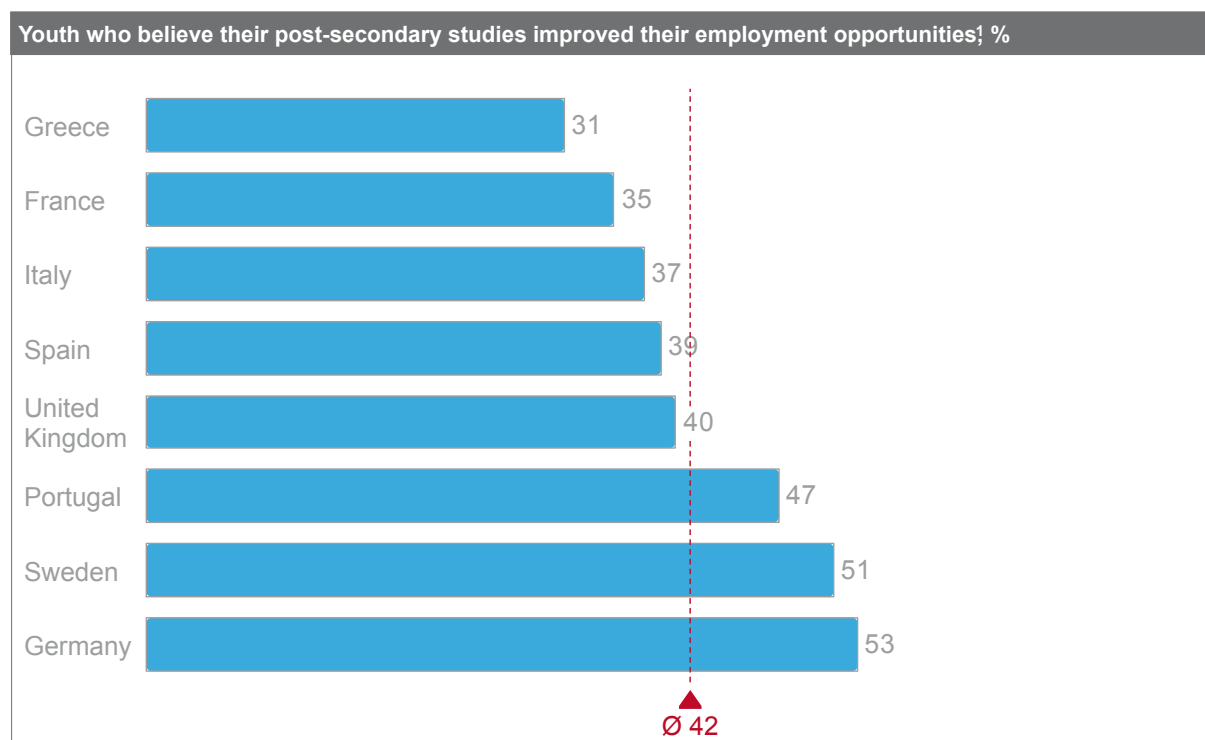
Only one segment, representing 10 percent of the young people surveyed, were extremely satisfied with their employment outcome at the end of their education.³ This



i am
a chef

Exhibit 3

Less than half of youth believe their post-secondary studies improved their employment opportunities



¹ My post-secondary school education improved my chances of getting a job.

Source: McKinsey survey, Aug–Sept 2012, 2013

group succeeded because they received both a strong education and good information; they also focused on finding opportunities to build job skills. A further two segments, accounting for 11 percent of the surveyed youth, received strong support, but were less motivated, and were moderately satisfied with their job outcomes.

The remaining four segments (79 percent) were frustrated that they did not get enough support and unhappy with their prospects. They exhibited different responses to this, from those who persisted in fighting to access every possible opportunity (but rarely succeeding) to becoming disenchanted and leaving education at the first chance.

We undertook a similar segmentation exercise of the employers surveyed, dividing them into four groups based on the ease with which they were able to find new hires and the degree to which they were prepared to invest in training. Two segments were satisfied with their workforce but start from very different places. One (18 percent) was able to attract strong candidates and invested substantially in training new hires. The other (26 percent) found it difficult to attract candidates but developed a strong workforce through training and partnerships with other employers and education providers.

The least satisfied group (21 percent), was disproportionately made up of small businesses (up to 50 employees). This is important because small businesses are crucial in Europe,

representing more than 50 percent of private sector employment and 32 percent of total employment.⁴ In contrast to our global survey, in Europe small firms were more likely than large ones to report problems in their businesses due to lack of skills. They also have the greatest problems in identifying and recruiting high-quality new hires, and are less likely to work with education providers or other employers to tackle their skills problems. This phenomenon is particularly acute in countries such as Greece, with very high rates of youth unemployment, and requires specific interventions to achieve better E2E outcomes—for instance, creating skills councils that give small businesses a voice.

Understanding the mix and concentration of employer and youth segments by country is critical—each segment requires a different set of interventions to reach its maximum potential.

4. There are proven ways to improve the E2E journey.

Europe's governments, employers, education providers and families are operating in difficult circumstances, but there are ways to ease the burden on all of these groups.

Innovate with design, course delivery, and financing to make education more affordable and accessible:

To reduce the cost of courses, one solution is to break up degree programmes into individual modules that focus on a particular set of skills, while still counting towards a degree

“In contrast to our global survey, in Europe small firms were more likely than large ones to report problems in their businesses due to lack of skills.”

or formal qualification. Each of these modules would be short (weeks or a few months) and self-contained, enabling students to combine and sequence them in the order that makes most sense for their career aspirations. This model also enables young people to take a break in their studies to work for a period, and then return and pick up where they left off. Another option is to explore different ways of delivering learning for specific skill sets, such as on-line learning for teaching theoretical content and face-to-face for applied skills.

To improve financing, governments and private financial institutions can offer low-interest loans for students pursuing courses that have a strong employment record; they can also explore initiatives that allow young people to pay for part of their education or training in the form of services. Employers can play a role by promising jobs to young people (following a rigorous recruitment process) and then funding their training programme to prepare them for these jobs. This latter option is only likely to be successful, however, for employers in sectors that face either high skills scarcity or high employee churn.

Focus young people, employers, and education providers on improving employment readiness: The status quo is not working for large numbers of young people and they need help to think more strategically about their futures. This is particularly important in Europe, where students often have to make life-defining decisions about their educational future by the age of 15—the time when many choose whether to pursue academic or vocational tracks. Students need more and better information about different career paths, and they need to be motivated to use it.

Education providers must focus more on what happens to their students after they leave. Specifically, they should track what happens to their graduates, both in terms of employment and job satisfaction. To improve student prospects, education providers could work more closely with employers to make sure that they are offering courses that really help young people prepare for the workplace.

Finally, employers cannot wait for the right applicants to show up at their doorsteps. In the most effective programmes, employers and providers work together to design curricula that fit business needs; employers may even provide their own staff as instructors. Employers might also consider increasing the availability of work-placements and opportunities for practical learning. Larger enterprises may be able to go further and set up training academies for their own workforce and also their network of suppliers.

Build the supporting structures that allow the best interventions to scale up: At a national level in Europe, responsibility and oversight of the E2E highway is split across multiple government departments, resulting in a fragmented and confusing picture. One way to improve this is to create a “system integrator” to gather and share information on the most salient metrics: job forecasts by profession, youth job placement rates, employer satisfaction with the graduates of different programmes, and so on. The system integrator would also identify and share examples of successful programmes, and work with employers and educators to create sectoral or regional solutions based on these.

Technological solutions can also help to compensate for shortages of apprenticeships and other forms of short-term

workplacements. “Serious games” that mimic the workplace context, for example, are low-cost, low-risk ways for students to receive a personalised learning experience through repeated “play” of the game. While not a full substitute for a physical apprenticeship, this approach offers a substantial step forward in terms of providing the applied skills that employers say young people lack; furthermore, such initiatives can be made available to greater numbers of young people without needing to find more employers to provide work placements.

Involve the European Union: To help the most successful interventions reach the greatest number of young people, the European Union has a critical role to play in three areas.

Information: The European Union could develop and share a more comprehensive labour-market platform incorporating the most relevant data to capture employment trends in each sector and region. This would help institutional decision makers, employers, and jobseekers make better decisions, for instance by helping users understand the implications of the data—whether on the courses they should offer as an education provider or the skills gaps they should try to fill as a group of employers within an industry.

Mobility: The European Union can improve educational and labour mobility by working to make vocational qualifications transferable across borders, as has already largely been achieved in the Bologna process for university education.

Sharing relevant practices on matching labour market demand and supply: The European Union is in the best position to take a lead on helping national public employment

services (PES) to compare their successful interventions, and to disseminate and promote those that are relevant to similar context countries

Youth unemployment is a profound challenge for Europe and the financial crisis has made it worse. We hope that our research can help employers, education providers, and young people to understand the problem—and each other—better, and thereby support efforts to create a European education-to-employment system that benefits everyone.



i-start
à journalist

Chapter 1:

Education to employment in Europe: the stage and the actors

1.1 Supply or demand? That is the question.

Is the employment crisis among Europe's young people due to their lack of preparedness for the job market (the supply side)? Or are there simply not enough jobs available to them (the demand side)?¹

These questions are being asked all over Europe—constantly and with a sense of urgency. No one wants a “lost generation” of young people who have never known what it means to work, or who jump in and out of jobs. The conventional wisdom, of course, is that the financial crisis and slow growth are the reason so many are finding it difficult to find stable, full-time work of the kind that will allow them to raise families and evolve into productive adulthood. This is true, of course, but it is not the whole truth. Youth unemployment was at a high level in many countries long before the financial crisis began to bite. Compared to unemployment in the general population, youth unemployment is stubbornly high in Europe; it is more than twice the rate of unemployment in the general population in all of the countries that we surveyed except for Germany.² For the EU as a whole, the youth unemployment rate has not dropped below 17 percent at any point this century. And economic conditions are not to blame for the frustration of employers as they evaluate the skills of young applicants. Our conclusion, then, is that there is a structural element to youth unemployment that must be addressed.

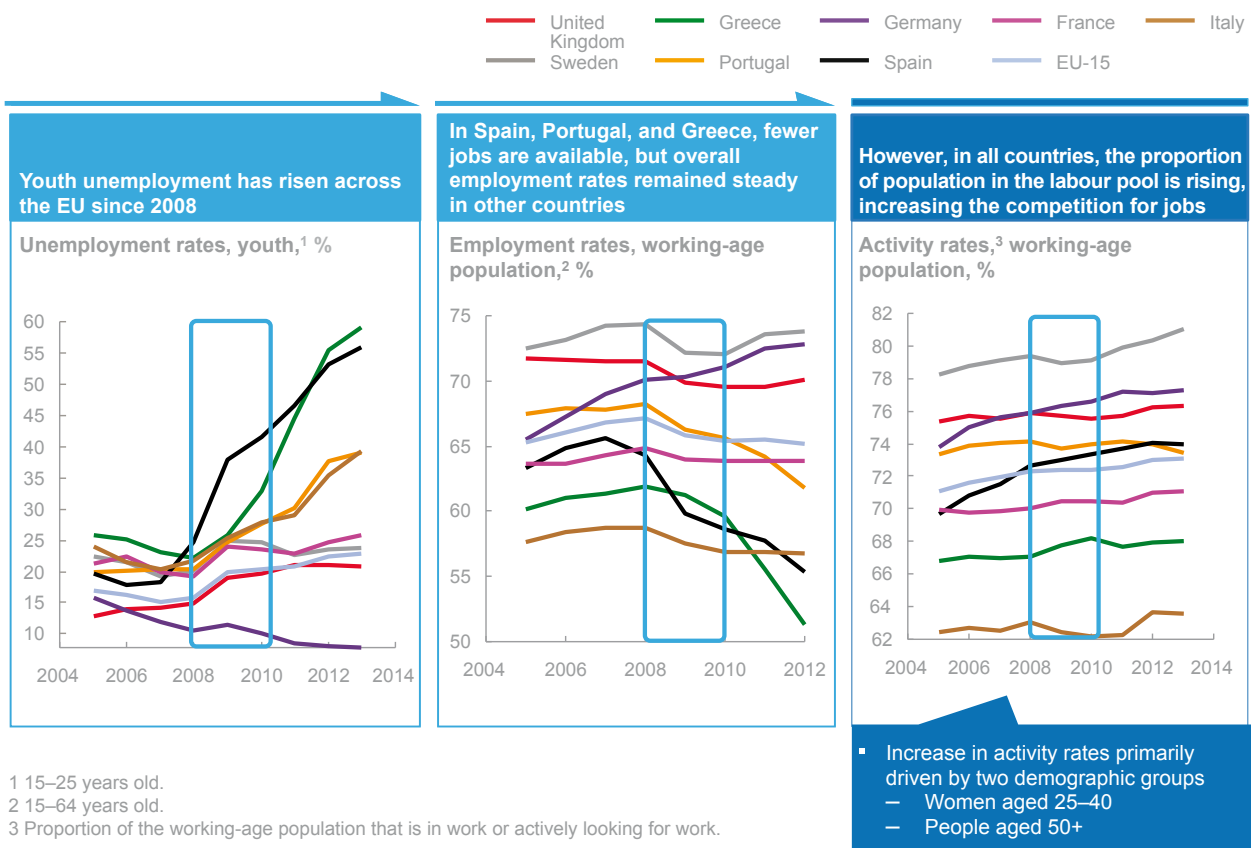
In this chapter, we describe the challenges that young people face in making the transition to employment, and the importance of education and skills in transforming youth employment opportunities.

The labour-market situation Among the countries we surveyed, the southern European economies (Greece, Italy, Portugal, and Spain) face the most difficult circumstances, in terms of both supply and demand. In Greece and Spain, a majority of the young people who are in the labour market, are unemployed—a situation that is historically unprecedented. There are simply not nearly enough jobs available, and job vacancy rates—the ratio of vacant jobs in the economy to total jobs available—have fallen over the past five years. Meanwhile, the employment rate (the ratio of employed to the total working age population) has continued to fall in all three countries (Exhibit 1).³

In Sweden, France, and the UK, though employment rates fell during the crisis, demand began to pick up in 2011. In Germany, the country least affected by the economic crisis, employment rates have been stable.⁴

Exhibit 1

An increasing proportion of the working-age population wants to work



Even for young people who are employed, many describe themselves as underemployed. Over a third describe their jobs as “interim”; furthermore in Spain, where more than half of young people are unemployed, a third of those working are doing so only part-time, with most of them wishing for full-time employment (Exhibit 2). Thus, behind the already serious problem of unemployment, there is also a significant underemployment issue.

One interesting feature is the increase in labour-market activity rates. In previous economic downturns, many people slipped from unemployment into inactivity (neither working nor looking for work). Not so this time. While demand for workers has remained stable in many places, the number of people available to work has risen. The competition is therefore keener—and young people are being squeezed out

The groups who are most often returning to or choosing to stay in the labour market are able to offer greater experience to employers than young people. Across the eight countries we surveyed, from 2005 to 2013, the proportion of people over 50 and women aged 30–39 in the labour market rose. In Spain, the most striking demographic trends relate to women. There was a 20-percentage-point increase in women aged 50 to 59 active within the labour market, and a 15-percentage-point increase in women aged between 35 and 39. Meanwhile, in France, there has been a 14-percentage-point total increase in people aged 55 to 59.⁵

Young people find themselves at a disadvantage in this situation. Their position with employers is weaker than that of long-standing employees who have regular contracts and higher levels of protection from dismissal. In periods of constrained labour demand, employees are less likely to leave a secure job, meaning fewer job openings for young people. Finally, many employers prefer to hire experienced applicants.

There is no question that young people face a real challenge finding quality employment. However, there are also many markets where employers encounter a lack of skilled labour. Unless young people develop the skills that employers need, they will find themselves at a disadvantage even during better economic conditions.

The skills situation

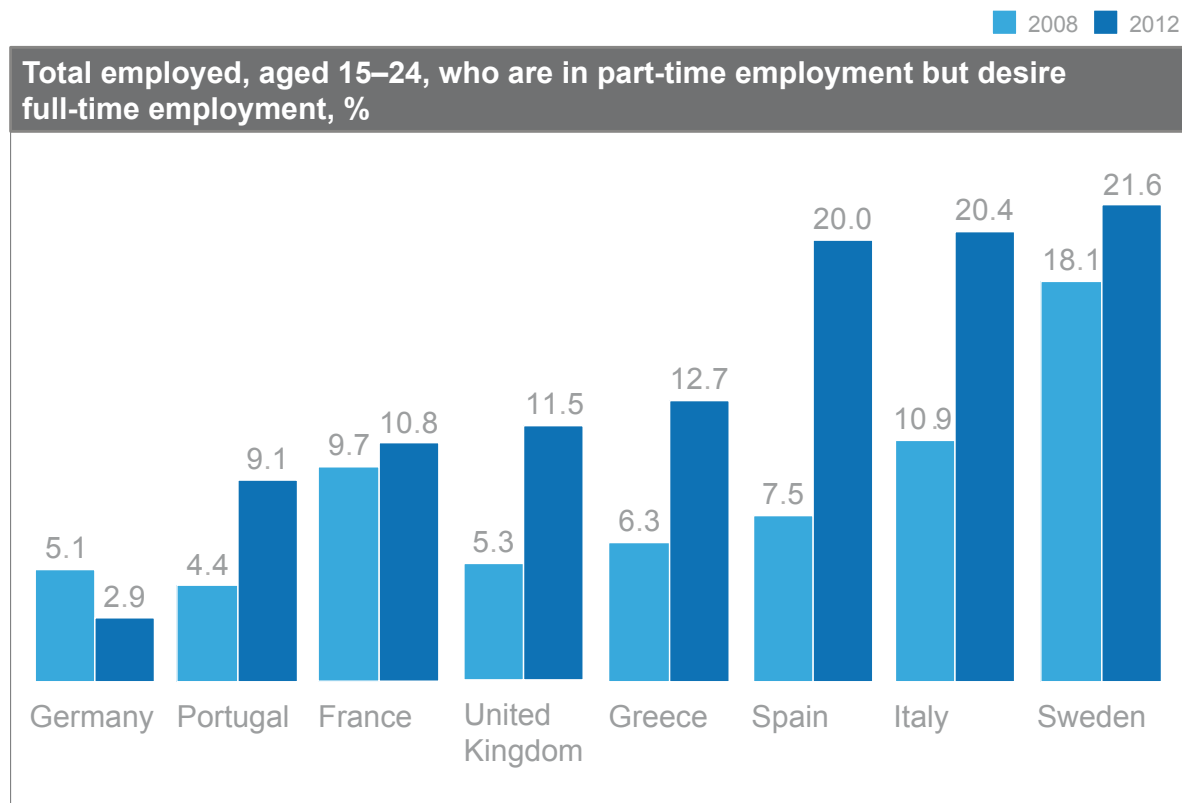
Only four in ten employers surveyed, in widely different countries and industries, reported that they were confident they could find enough skilled graduates to fill entry-level positions. The reasons differ depending on where you look. In Germany, for example, there is evidence that the fairly buoyant economy is demanding more skilled entry-level candidates than exist in the population. That is not entirely surprising 32 percent of employers surveyed said that lack of skills is a common reason for leaving entry level positions vacant, because the labour market is tight; only 8 percent of youth are unemployed,



i am
à pharmacist

Exhibit 2

Many have part-time work but want full-time employment



Source: Eurostat

But Greece is in the opposite position: as Exhibit 1 illustrates, more than 55 percent of youth are unemployed. Even so, our survey found that 33 percent of employers regularly leave vacancies open because they cannot find the skills they need. Our conclusion, then, is that a lack of job-readiness skills—even in countries with slack labour markets—is hindering employment for young people. In effect, many employers choose not to hire, rather than take a risk on spending time and money training them.

The shortage of skills is also holding back employers. In each one of the countries surveyed except the United Kingdom, more than a quarter of employers said that lack of skills has caused significant problems for their business (Exhibit 3). It is particularly interesting to note that in the countries with the highest youth unemployment, such as Greece, the proportion of employers reporting lack of skills as a problem was generally higher.

We see a similar picture across most countries: the proportion of employers that find a lack of skills is causing problems for their business, is highest in the service industries, such as hotels and restaurants, and in public-service organisations, such as health care or education.

Given that more and more people of working age are filling the labour market, even when economies recover, young people will continue to be at a disadvantage because too

many just don't have the skills the market demands. They face a Catch-22 situation: because they have not been able to develop relevant workplace skills during or immediately on leaving education, they cannot find a workplace to give them an opportunity. Unless there is some movement, this generation of young people risks being scarred the way a previous generation has. Adults who were unemployed before age 23 in the 1980s were still earning 12–15 percent less than their peers, ten years later.⁶

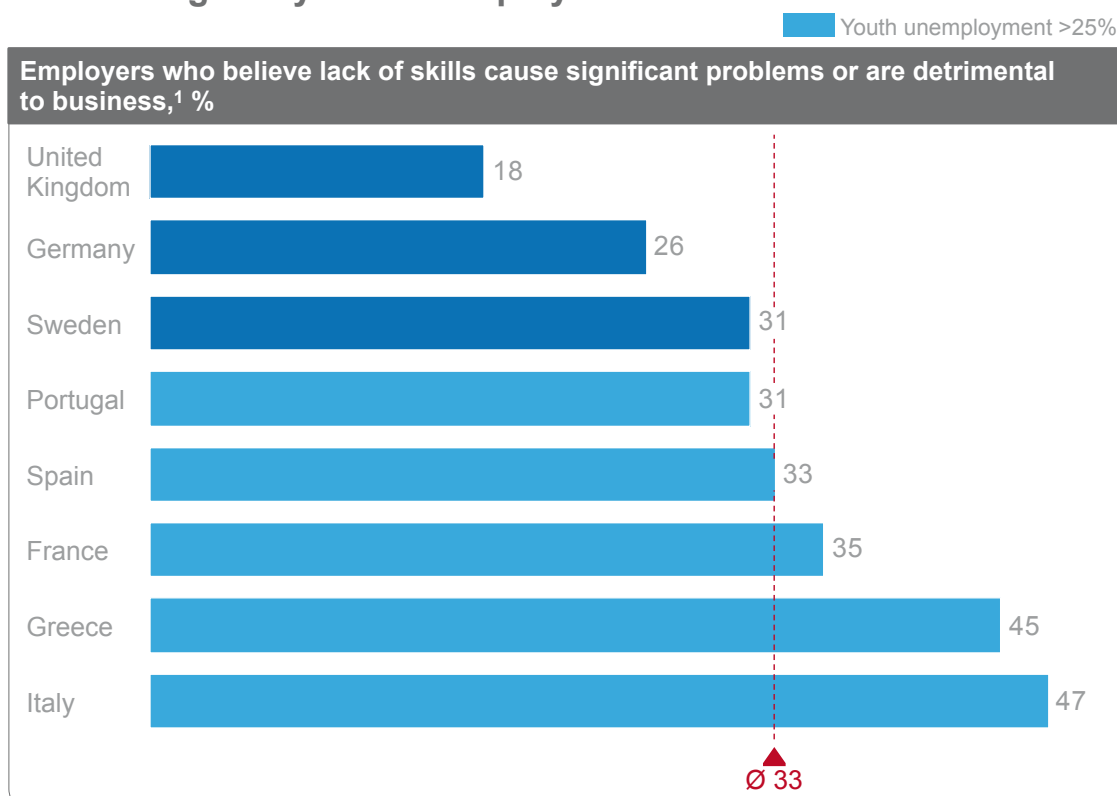
Of course, not all young people are in the same position. “One size fits all” is not a useful approach. So we took a page out of the consumer-marketing textbook and divided Europe's youth (age 15 to 29) into seven segments, based on their access to support and their commitment to building skills useful in the workplace. This segmentation helped us to understand their different needs and the different types of issues. By defining where Europe's young people are, we can start to figure out how they got there and how best to support them. We undertook a similar segmentation exercise with the employers, dividing them into four groups, based on their satisfaction with their workforce and investment in training and workforce development. We focus on this work in the following two sections.

1.2 The seven segments of youth

We based the segmentation around young people's perceptions of the degree of support they received, as well

Exhibit 3

Skill gaps cause the most problems in countries with the highest youth unemployment



¹ How, if at all, does a lack of entry-level employee skills affect your company?

Source: McKinsey survey, Aug–Sept 2012, 2013

as their own desires and eventual outcomes. These can be distilled into three questions:

How much support did young people receive on their E2E pathway? This measures access the young person has to the education-to-employment system, whether in the form of information about courses and careers, provision of support services from their secondary or post-secondary institution, or funding to pursue post-secondary education.

How committed were young people to developing the skills that employers demand? This essentially measures ambition, taking into account the degree to which youth considered job-placement rates when selecting a place of study; used available career support services; gained work experience; and visited companies.

How successful were they? This establishes the extent to which surveyed youth were able to find full-time employment that provided job satisfaction and to which their education was relevant.

Here, briefly, are the seven segments (see sidebar, “The seven youth segments in detail” for more complete definitions).

1 The High-achievers (10 percent): “I focused and made the best of the support I received.”

2 The Coasters (6 percent): “I flew through education without stopping to think what would come next.”

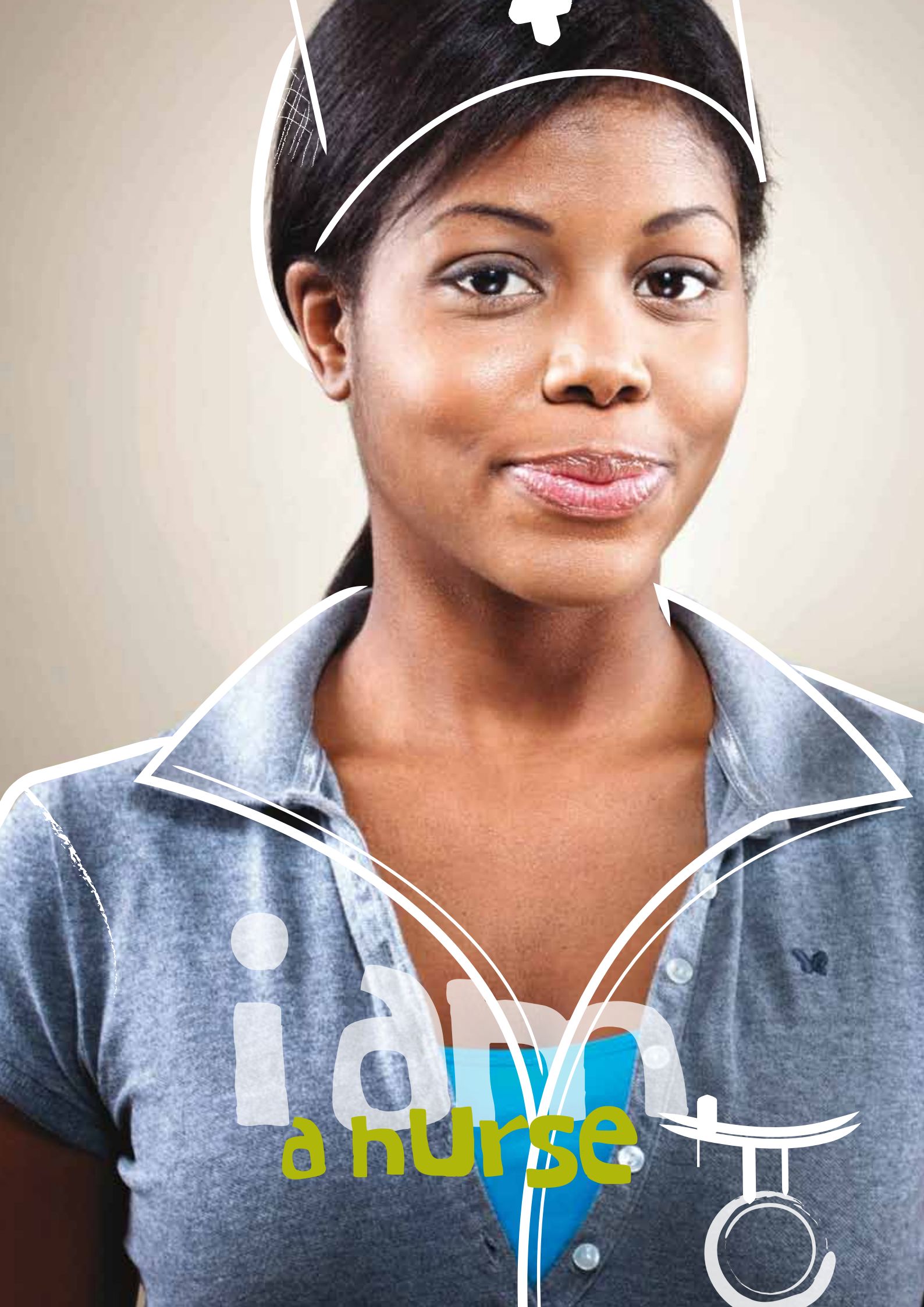
3 The Meanderers (5 percent): “I got support but I’m not aiming high. Good enough is enough.”

4 The Persisters (17 percent): “I tried and tried, but my education did not equip me to reach my ambitions.”

5 The Dreamers (14 percent): “I wish I had known more so that I could have made better decisions to reach my ambitions.”

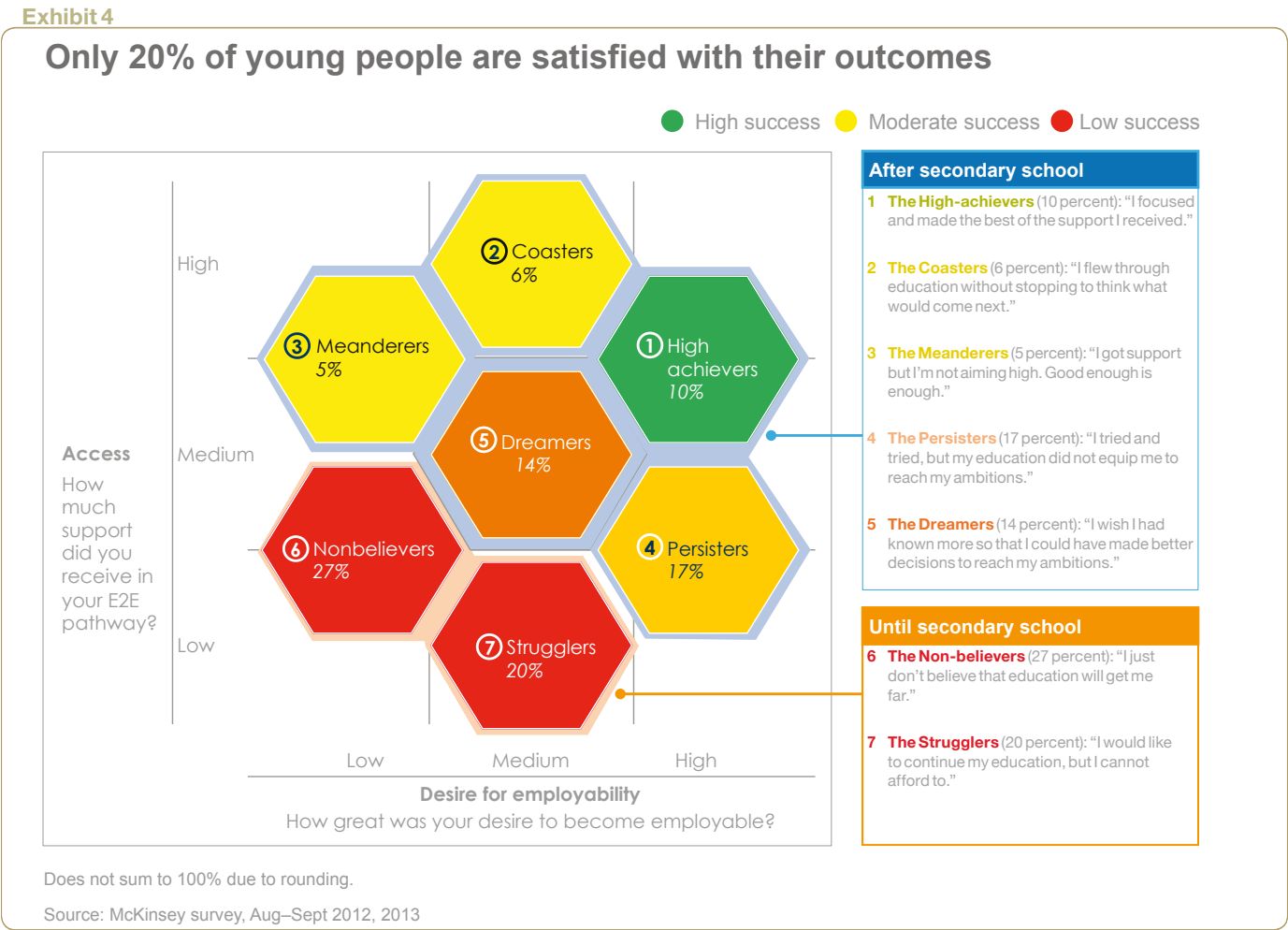
6 The Non-believers (27 percent): “I just don’t believe that education will get me far.”

7 The Strugglers (20 percent): “I would like to continue my education, but I cannot afford to.”



i am
a nurse



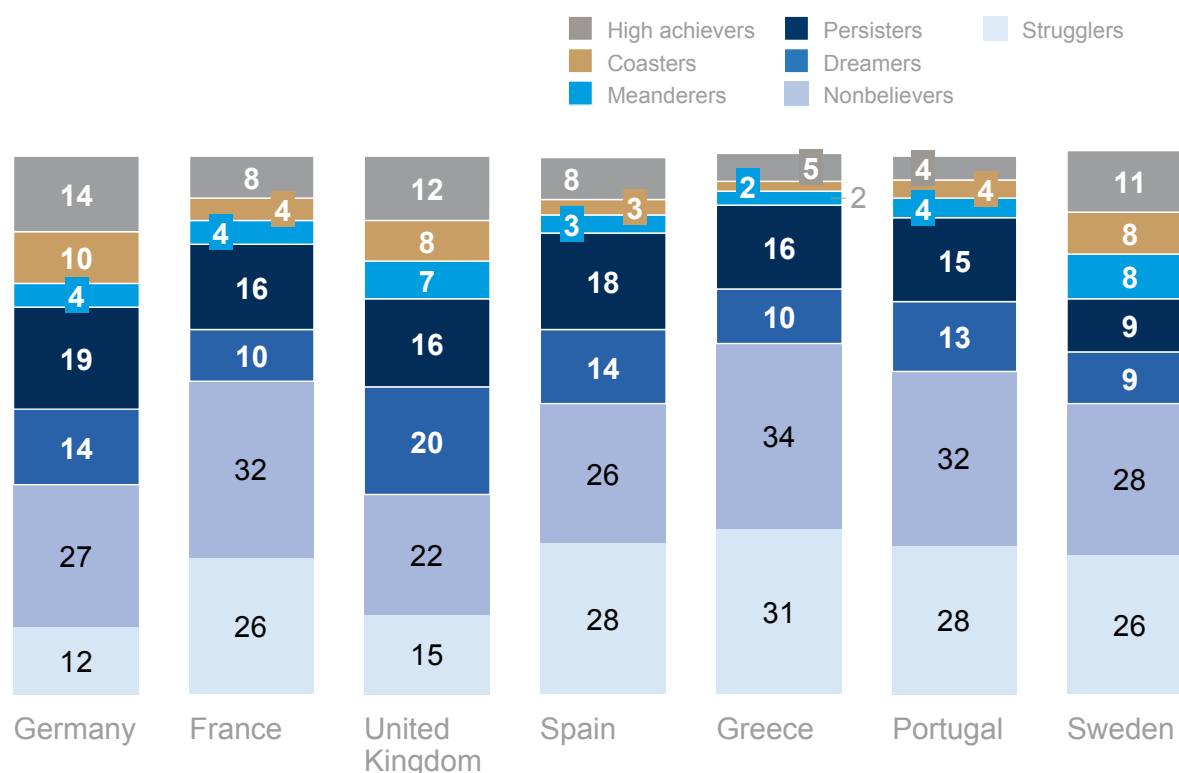


“Of the seven youth segments, only one—the High achievers, representing 10 percent of the population— reported success in both finding suitable employment quickly, and satisfaction with their employment.”

Exhibit 5

Countries have different mixes of youth segments

Distribution of post-secondary segments by country,¹ % of respondents



Source: McKinsey survey, Aug–Sept 2012, 2013 ¹ Italy not included in segmentation analyses

This segmentation gives a stark picture of how few young people find their way to a job that matches their skills and ambitions. Of the seven segments, only one—the High-achievers, representing 10 percent of the population—reported success in both finding suitable employment quickly, and satisfaction with their employment.

Another two segments—the Coasters and the Meanderers (11 percent total)—were satisfied with the support they received, and moderately satisfied with their employment. However, both groups appeared to lack direction on completing education, and in many cases, this resulted in their struggling in their early years in the labour market. Of the two groups, the Coasters tended to be academically successful, and valued education. However, they rarely took advantage of career services or work-placement opportunities, and left education uncertain about what to do next. The Meanderers were well supported, but less academically successful; they were also less concerned about what type of employment they would find.

The remaining four segments (79 percent) include two groups that completed post-secondary education (the Dreamers and the Persisters) and two that did not (the Non-believers and the Strugglers). These segments were all dissatisfied with their position after education. Many could not find employment, and of those who did, few found jobs that matched their ambitions or their level of training (Exhibit 4).

The segmentation provides a diagnostic that can help countries define their E2E priorities more precisely. For policymakers to define the right interventions, they need to consider where the problems are, and these differ from place to place. For example, if a country has a small share of the segments with highest access to support—the High-achievers, Coasters, and Meanderers—that is a sign that there is a shortage of opportunities for young people to strengthen their skills and to gain experience.

Places with a higher proportion of Coasters and Meanderers, such as Britain and Sweden, appear to be providing services that young people are not using. In these circumstances, one response might be to change the way that information is provided to young people, to better engage them in thinking about a career, for example by bringing employers to schools.

For countries with a large share of Persisters and Dreamers, the segments that place the greatest importance on job placement rates when considering post-secondary education, the key is to recognise that these young people very much want to be employed and employable, but have little information on how to obtain support that helps them. The Persisters and the Dreamers could benefit from more support, such as high-quality information about their options or more opportunities for internships and work placements.

As for the two segments that do not get past secondary school, the Non-believers and the Strugglers, many would benefit



i d m
a photographer

The seven youth segments in detail

Segments 1 to 5: Young people who pursue post-secondary education

1. The High-achievers (10 percent): “I focused and made the best of the support I received.” The High-achievers are the most successful group. They start from a strong position: they come from the wealthiest family background and also perform well academically. But it is this segment's focused approach to education and finding a job that really sets them apart.

The High-achievers get strong career support and take advantage of opportunities to meet and visit employers'. This group feels the most satisfied with the information they received on job opportunities, and they are almost as satisfied about the information regarding their educational choices. The key, though, is that they use this support well. When provided with such information, they make job-placement rates part of their decision. When they have the opportunity, they take an internship, even if it is unpaid.

On leaving education, the High-achievers are well positioned to take off, and do. They tend to find a job quickly; are the most likely to secure a job related to their field of study; and to be satisfied in their work.

2. The Coasters (6 percent): “I flew through education without stopping to think what would come next.” The Coasters tend to come from homes with higher incomes and educations, and they have the best academic record of any segment. Throughout their education, they are offered first-rate support, and they feel positive about the information they receive on both education and job opportunities. They are enthusiastic about education in general and happy with the field of study they have chosen. As a result, they feel the most prepared for their life beyond education.

But they do not make the most of these advantages. The Coasters are among the least likely to take an internship, or to make use of career services and academic support. When it is time to make decisions on their educational path, they seem to be the least likely to take advice. Their personal preference is their primary guide, rather than the views of peers or teachers, or objective information on job-placement rates.

When the Coasters graduate, they are confident that their academic success will lead them to good job opportunities. But graduation can also bring rude awakenings. Their lack of interest in exploring career options while studying leaves them unclear on their path. As a result, this group exhibits lower job satisfaction than the High-achievers, and is less likely to be working in a field relevant to their study.

3. The Meanderers (5 percent): “I got support but I'm not aiming high. Good enough is enough.” The Meanderers achieve moderate success, relying heavily on outside support. This group comes from below-average-income households, but has good access to support and finance for their education, chiefly from the state. They are the most likely to fund education through a government grant.

The Meanderers acknowledge that they have good access to information about education and job opportunities. Even so, they are the least likely group to use career services, or to take an internship. As a result, they don't have a good sense of the job market and are slow to build work experience. Moreover, staying close to home and family is particularly important to the Meanderers. Though they generally succeed in finding work, they have the lowest rate of unemployment of any segment; they quickly fall behind and end up being less satisfied with their jobs.

4. The Persisters (17 percent): “I tried and tried, but my education did not equip me to reach my ambitions.” Of all the segments, the Persisters are the most focused on finding opportunities that can lead them to a job. They are the most likely to know about relative wages and to seek out the job placement rates of education providers. They are also the most likely to obtain work experience. They listen to their teachers and their families, and they invest in their futures. They don't give up. And yet—they don't do all that well.

The Persisters end up with higher-than-average unemployment, and they take longer to find work. They end up only moderately satisfied with their jobs and their chosen paths in education. Looking back, they feel disappointed. They are the least convinced that education improved their prospects; the most certain that there are not enough jobs; and the least confident that they can find the ones that do exist.

The challenge for the Persisters is to help them turn their ambition into a good outcome. Background may be a barrier for the Persisters; they tend to come from below-average-income families. They are also dissatisfied with the information available to them about educational and job opportunities, and believe there is not enough support available upon leaving education.

5. The Dreamers (14 percent): “I wish I had known more so that I could have made better decisions to reach my ambitions.” The Dreamers start from the toughest position, with the highest proportion from below-average-income families. Members of this group dream of success, and are willing to make decisions—on what to study, for example—that increase their employability. Members of this group are also open to vocational training, but are only moderately inclined to use student career services or to take an internship.

Part of the challenge may be access. The Dreamers are lonely in the sense that they have the least interaction with employers and they don't get the support they need, such as career guidance services. The latter is particularly important because their parents have the lowest education and income levels.

The Dreamers end up disappointed: they report high rates of unemployment and spend a long time looking for a job. When they do get a job, it is unlikely to be relevant to their field of study, and they are likely to be dissatisfied with it.

Segments 6 and 7: Young people who leave education before or upon finishing secondary school

6. The Non-believers (27 percent): “I just don't believe that education will get me far.” These young people had access to information but decided that education beyond high school was not the best path to full-time employment. They strongly prefer vocational training or direct work experience, and tend to be reasonably satisfied with the work they do find. They are below average in academic achievement and tend to come from poorer homes. They would pay for additional education only if they thought it likely to improve their chances of securing an attractive job—and they don't believe it will.

7. The Strugglers (20%): “I would like to continue my education, but I cannot afford to.” Members of this segment tend to come from families with relatively low income and educational achievement. They often start working while in secondary school. As the least certain that there are enough jobs to go around, they place a high priority on getting into work. However, their grades are not good, and their knowledge of the labour market is limited. Very few (3 percent) said they received adequate information about job opportunities while in school and they were also the least likely to have interacted with an employer during their education. They leave the E2E path after (or without completing) high school to find a job. If they are fortunate, they do, but in most cases, they don't like it much. The Strugglers record the lowest job satisfaction of any segment; many would like to continue their education, but can't figure out how to manage it.

“The most successful segment—the High-achievers—accounts for around 12-14 percent of young people in Germany and Sweden, but less than 5 percent in Greece and Portugal.”

from support in enrolling in further education. For many in these groups, cost and lack of information are the highest barriers to continuing education. They could benefit from innovative delivery models, such as distance learning, or from access to shorter, lower-cost, stackable courses that allow them to build their skills gradually and thus enter education with a lower stake.

The seven segments are common to all the countries surveyed, but their distribution differs widely (Exhibit 5).

For example, it's interesting that the most successful segment—the High-achievers—accounts for around 12-14 percent of young people in Germany and Sweden, but less than 5 percent in Greece and Portugal. Among those who finished secondary school, the least-satisfied segments—the Dreamers and the Persisters—are overrepresented in the United Kingdom and Spain. That might describe a situation where the type of post-secondary education young people are receiving is not helping them step into the job market. There are far fewer Dreamers and Persisters in Sweden. Among those who do not pursue education beyond secondary school, the Strugglers are overrepresented in Spain, Greece, and Portugal.

1.3 The four employer segments

We grouped employers into four segments, based on reported situation and responses to two questions:
How easy is it for you to find and recruit talent?
How willing are you to invest in talent?

Employers in each segment face different challenges with regard to their ability to attract skilled young graduates. Each also shows a different attitude to the importance of skills to their business, and how to develop these skills. Each segment starts from a different point in terms of implementing good practices to recruit and develop the skilled employees that they need. Each reports a different level of satisfaction with the skills in their workforce. And although there are some practices that are suitable for all four segments, some interventions are higher priority for particular ones.

The four segments are (see sidebar, “The four employer segments in detail):

- 1. The Renowned (19 percent):** “I am able to find the skilled labour I need and I am willing to invest and cooperate with others to ensure this does not change.”
- 2. The Engaged (26 percent):** “I overcome the skills gap by training new hires and I work closely with education providers and other companies.”
- 3. The Stand-alones (34 percent):** “I invest internally to fill skills requirements.”
- 4. The Disengaged (21 percent):** “I know that the lack of skills could hurt my company but it is not important enough for me to act now.”

Three of the employer segments we identified report that they actively try to overcome problems with skills in their business, and have varying degrees of satisfaction with the outcome. (Exhibit 6)

Both the Renowned and the Engaged groups are pleased with the quality of their workforce, but they achieve this in different ways. Of the four groups, the Renowned find it easiest to recruit; half of them say they can find people with good general skills, and 63 percent report their recent hires (in the previous 12 months) also had good job-specific skills. This group typically has a strong brand and good hiring resources. And they don't rest on their laurels. The Renowned invest in training (though not as much as the Engaged segment).

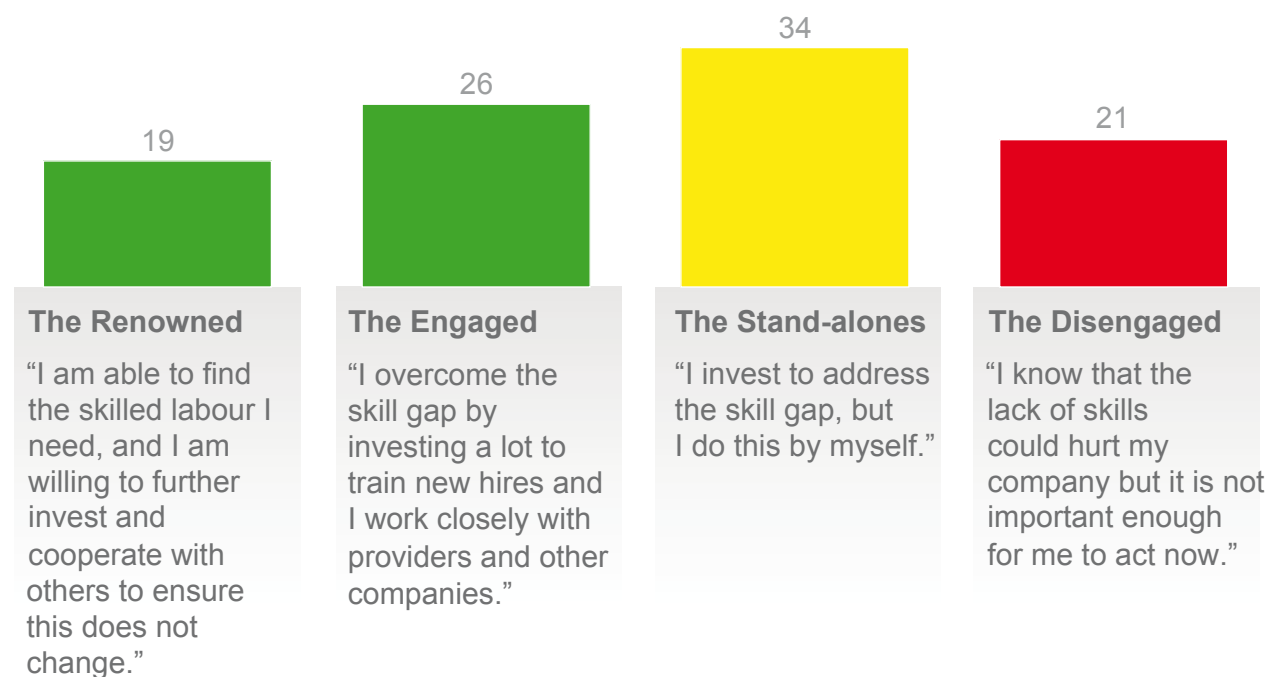
The Engaged are at the opposite end of the spectrum to the Renowned in terms finding people. Only 25 percent find it easy to attract candidates with good general skills, and even

Exhibit 6

Only 45% of employers extensively address the skill gap

Employer respondents by segment, % (n = 2,172)¹

- Addresses skill shortage
- Partly addresses skill shortage
- Does not address skill shortage

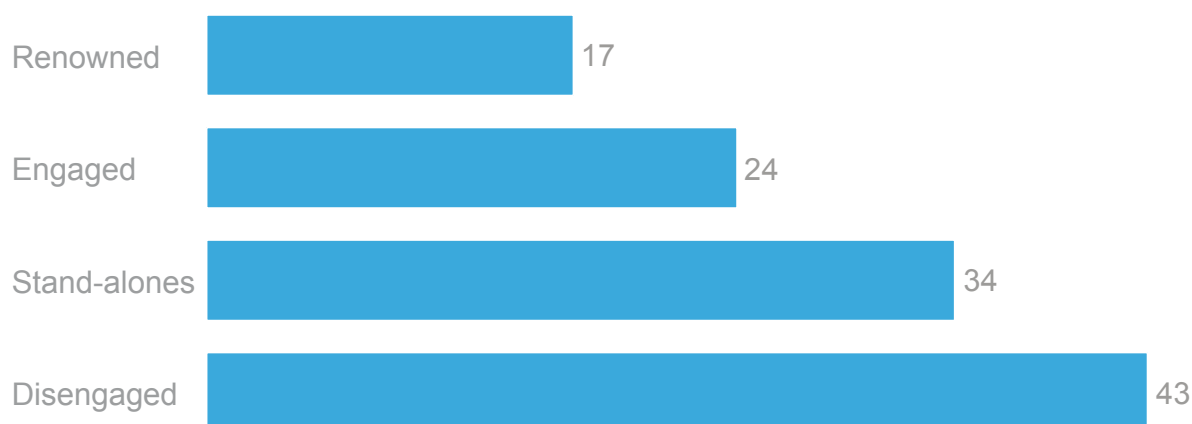


¹ Employer segmentation data from 7 EU countries; Italy excluded from segmentation analyses.
Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 7

Small businesses are overrepresented in the disengaged segment

Proportion of businesses of 1-19 employees in each employer segment, %

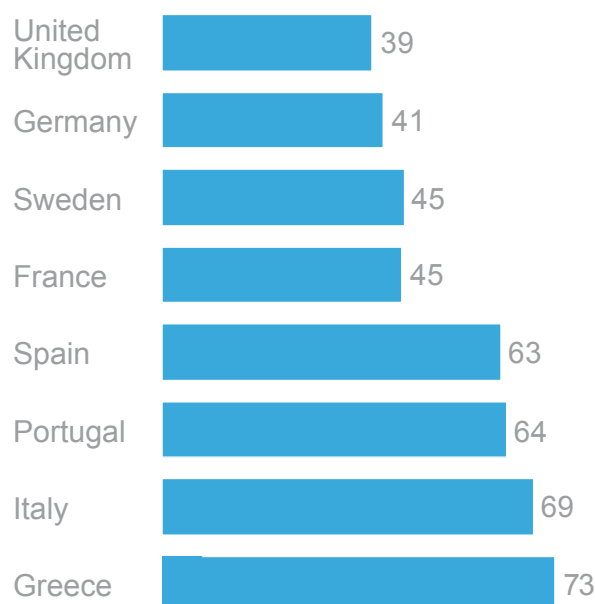


Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 8

Small businesses are the backbone of Europe's employment provision

Amount of countries' private-sector workforce employed in small businesses, %



Source: Eurostat, 2007, McKinsey survey, Aug–Sept 2012, 2013

“Almost 45% of the Disengaged employer segment is comprised of small businesses.”

1.4 The small business conundrum

Small businesses face specific challenges in navigating the E2E pathway. They find it more difficult than medium-sized (50 to 249 employees) and large firms to recruit new workers; they also find it most difficult to change this situation. As a result, they report the biggest skills gaps; small businesses (fewer than 50 employees) make up a disproportionate share of the Disengaged. (Exhibit 7). The problem is greatest for the smallest businesses; 43% of the Disengaged employer segment is comprised of businesses with fewer than 20 employees, compared to only 17% of the Renowned segment.

Small businesses, of course, have limited resources for recruiting; for example, they were the least likely to advertise new roles publicly. They are also more disconnected from other training resources. Fewer than half coordinate with other employers on skills and qualifications, compared with 60 percent of medium-sized and large businesses. Small businesses are also less likely to work with education providers on developing training curricula, or in other ways.

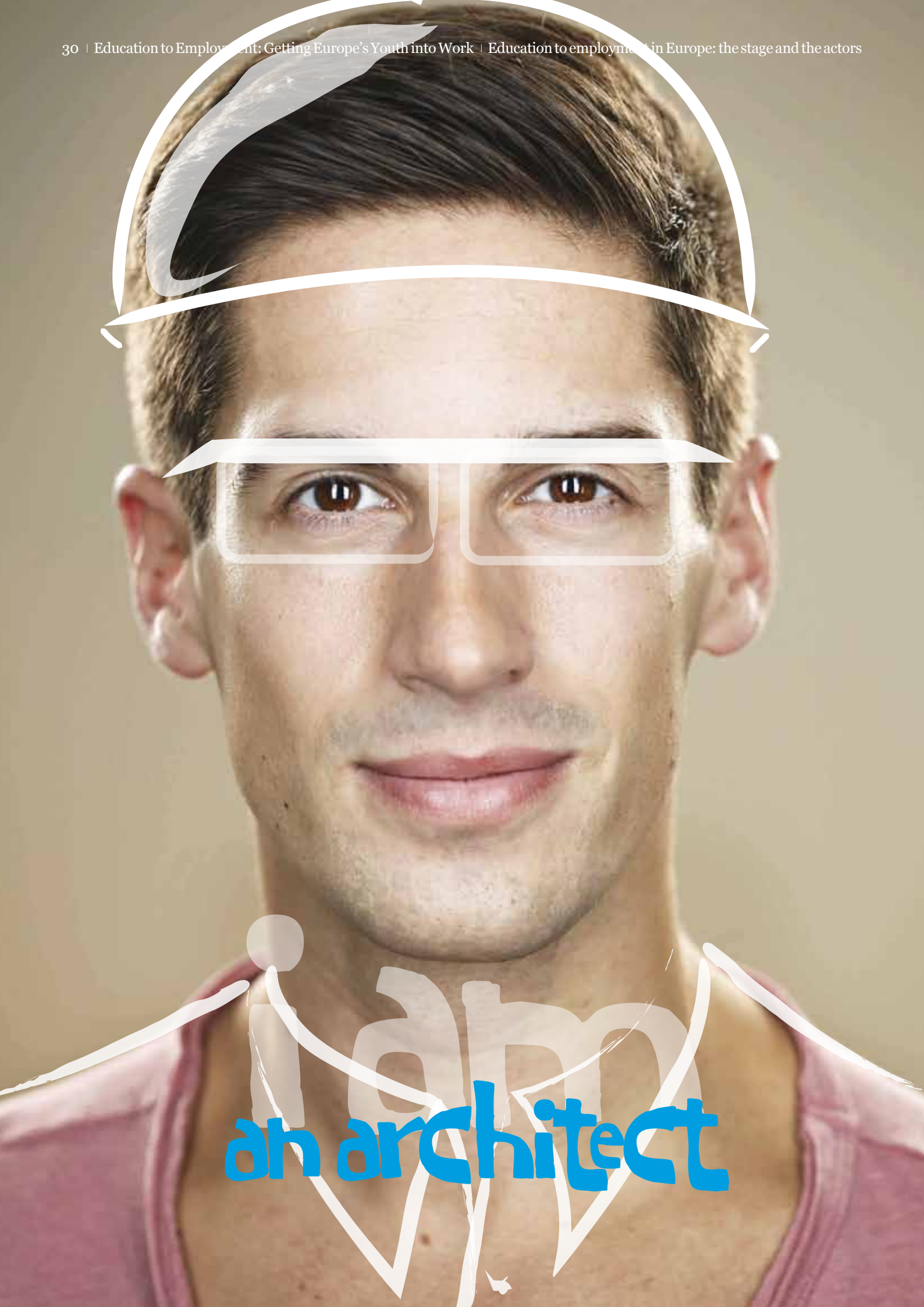
The smallest employers (fewer than 20 employees) were the least likely to find it easy to recruit new hires; to consider their new workers adequately prepared; or to find people with the appropriate job-specific skills. No wonder, then, that these very small businesses reported that lack of skills was hurting them, significantly more than the average.

In Europe, the difficulties of small business add up to a very big problem. Small businesses are crucial to all European economies, and are most important in those countries with the highest unemployment. In Spain, Portugal, and Greece, small businesses employ more than 60 percent of the private-sector workforce, and at least a third everywhere else (Exhibit 8). If Europe wants to improve its E2E systems, small businesses have to be part of the solution.

fewer, 16 percent, say their recent hires had the appropriate job-specific skills. However, the Engaged invest more heavily in training new hires than any other employer type. As a result, they are generally content with their workforce.

The Stand-alones are less satisfied. They find hiring no more difficult than the Engaged, and they also invest in training. The major difference appears to be in how they train. Only 2 percent of the Stand-alones group report working with other employers on skills issues to be effective, compared with 90 percent of the Engaged. Four out of five Engaged employers work with education providers on designing training courses; three-quarters ensure that instructors have relevant industry experience and work with providers to determine which subjects to offer. Only a little more than half the Stand-alones (53 to 57 percent) do the same. This segment, then, might consider not investing more money in training, but in building better partnerships.

The Disengaged segment is the least satisfied with the skills in its organisation. It is also the least likely to do anything about it. Fewer than four in 10 (37 percent) say they are satisfied with the level of general skills, and only 40 percent report that their training is effective in preparing employees to work. Many question whether investing in training pays off. For others, the question is how to get started.



an architect

The four employer segments in detail

1. The Renowned (19 percent): “I am able to find the skilled labour I need and I am willing to invest and cooperate with others to ensure this does not change.” This segment is composed disproportionately of medium- and larger-sized companies; it employs more educated people and is more selective, interviewing many people per vacancy. Many are well known, with strong brands, and they do conspicuously well in hiring skilled and motivated young professionals.

How do they do it? They start from the premise that skills are important and hire people with the highest skill levels they can. They know what they want and have a shrewd and specific idea of what fields of study, work experience, and academic performance they require; they are willing to pay a premium for the right talent. In addition, they are the most likely to provide training to new hires and to monitor effectiveness of training. Finally, they work closely with other employers and also with education providers to develop appropriate curricula.

Small firms are under-represented, as are companies in Greece and Sweden. There are relatively few employers from service industries (such as hotels and restaurants) in this group; employers in education, health, and social work do conspicuously well.

2. The Engaged (26 percent): “I overcome the skills gap by investing a lot to train new hires, and I work closely with education providers and other companies.” Members of this group are also satisfied with the level of skills in their business. That is notable because they start from a more challenging position. Unlike the Renowned, these employers tend not to focus so much on academic prestige and previous work experience, and they find it very difficult to attract the young people they need. So their hires tend to have average skills. To compensate, they invest strongly in training; indeed, this segment considers skills their top priority. The Engaged are the most likely to provide training, to monitor development outcomes and to update training curricula regularly. In short, they are convinced by the effectiveness of training, and they back up this commitment along every dimension. They are also the most willing to work with other employers and providers, to make sure their people get the skills they need.

Companies in this group tend not be as well-known as the Renowned; they are often medium-sized firms that supply larger ones, such as the *Mittelstand* in Germany, where this segment is strong. In France, however, and among small businesses, there are relatively few Engaged. Raw material industries, such as agriculture, mining, and quarrying, are well represented among the Engaged; public services are much less so.

3. The Stand-alones (34 percent): “I invest to address the skills gap, but I do this by myself.” This group reports below-average success in finding qualified recruits, in part because they are less willing to pay for trained talent. Businesses in this segment say that this lack of skills has had detrimental effects on their operations. They do invest in training to overcome skills problems—indeed, they are the most likely to do so—and they frequently update their training curricula. What they do not do, however, is build relationships with education providers and other employers to develop better training curricula or to pool resources. Perhaps as a result, the Stand-alones are less satisfied with the quality of their workforce than the Renowned and the Engaged groups.

Businesses of all sizes are represented in this segment; for example Portugal has comparatively little representation. There are many Stand-alones in real estate and the hotel and restaurant sectors, and far fewer in education and in health.

4. The Disengaged (21 percent): “I know that the lack of skills could hurt my company but it is not important enough for me to act now.” This group does not find it any more difficult to hire in the first place, but then is least comfortable with the quality of the workforce that they get. They find lack of skills has the most negative impact on their companies, but are also the least likely to train. Instead, they prefer just to hire older, experienced workers; there does appear to be something of a bias against taking a risk with young people. On the whole, the Disengaged have bigger worries than the skills of their workforce. The Disengaged are particularly represented in mining, construction, electricity, and water. This segment is less prevalent in the public sector, including health care and education.





Chapter 2:

A road with many barriers

Segmenting the youth population showed us that young people follow very different routes from education to employment; some travelling fast and some slow; some getting far, and others getting lost.

We can look at young people's transition from education to employment as a journey with three stages: enrolling in post-secondary education; building employment-related skills; and finding a job (Exhibit 9).

In this section, we highlight some of the biggest challenges that Europe's young people face in finding their way along this journey to employment. We have distilled our findings into six insights, linked to the three intersections on the education-to-employment pathway.

2.1 The first critical intersection: Enrolling in post-secondary education

Insight 1: Many young people do not believe they can afford post-secondary education

Young people would like to find rewarding work; employers are desperate for skilled and willing workers; and policy makers are acutely aware of the costs, both in the short and long term, of a large number of jobless young people. Surely this situation should create the conditions to help more young people get the education that could increase their employability?

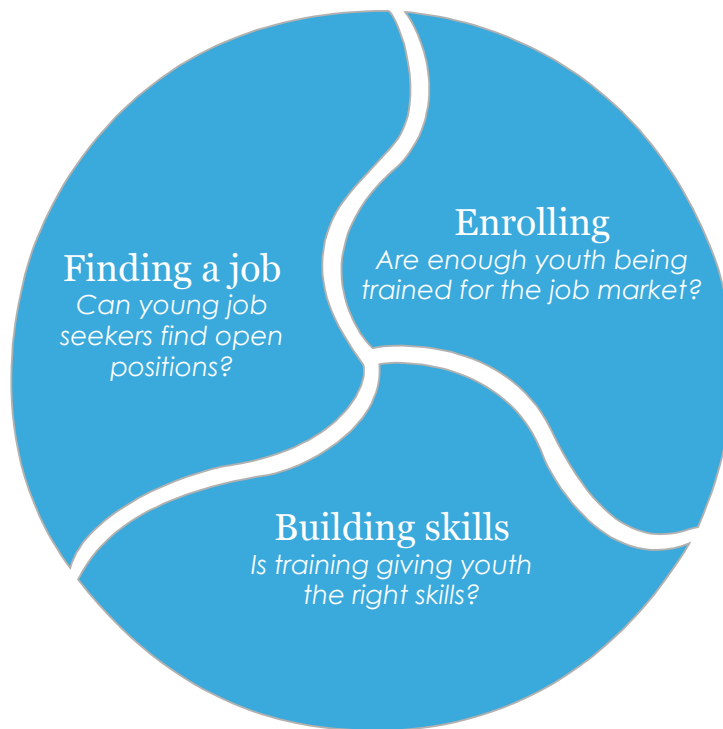
Yes. And no.

Yes, because most European countries offer a wide range of post-secondary courses with low or no tuition fees. And no, because young people and educators still identify economics as the single most important barrier to post-secondary education. This is true both for those who do not enrol at all, as well as those who enrol and then drop out.

For students undertaking an academic university course, 20 percent of those who did not finish said the reason was cost; 26 percent said needing paid work prevented them from completing their studies (Exhibit 10). Cost was an even greater barrier for students undertaking vocational training; 21 percent said their course was too expensive

Exhibit 9

Three main guideposts mark the road to employment



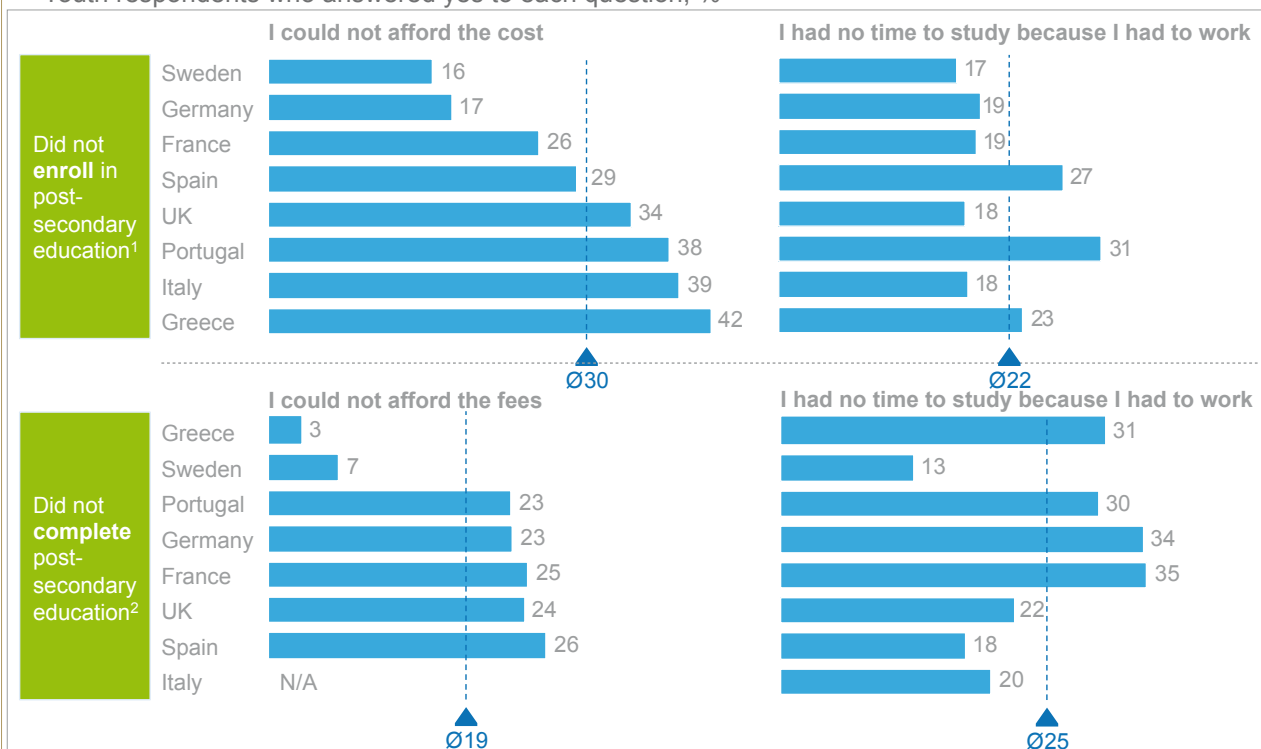
Source: McKinsey Education to Employment: Designing a System that Works, 2012

“Portugal, Italy, and Greece have the highest proportions of young people reporting that they did not enrol because they could not afford to do so. It is in these same three countries that the lowest proportion of young people (below 40 percent) graduate from post-secondary education.”

Exhibit 10

Cost is the highest barrier to enrollment and completion of post-secondary education

Youth respondents who answered yes to each question, %



1 Why did you not enroll in post-secondary education or training? 2 Why did you not complete your post-secondary education?

Source: McKinsey survey, Aug–Sept 2012, 2013

Portugal, Italy, and Greece have the highest proportions of young people reporting that they did not enrol because they could not afford to do so. It is in these same three countries that the lowest proportion of young people (below 40 percent) graduate from post-secondary education.¹ If governments want their committed and capable young people to obtain post-secondary education, they need to help to make it economically feasible (Exhibit 11).

Affordability looms particularly large among those students identified as Strugglers (20 percent of youth). Members of this segment (see Chapter 1) would like to study further but 35 percent said they couldn't because they needed to work, while 28 percent said they simply could not afford more school. As a result, the Strugglers, who tend to come from the poorest family backgrounds, often start work at a young age and then get stuck in jobs they loathe. This hints at a larger problem: even among those who reach the post-secondary stage and have the desire to succeed (the High-achievers, Persisters, and Dreamers), significant minorities fail to complete their course for lack of money.

The academic dimension

Nevertheless, in most countries tuition costs do not appear overwhelming. University tuition is free in Greece and Sweden, and typically below €1,000 per year in Germany, Portugal, Spain, and France.² Of the countries surveyed, only the UK makes students responsible for the majority of

tuition costs—between €8,500 and €11,000 annually for the majority of courses (Exhibit 12). However, these fees can be covered by a state-supported loan, and paid back over 30 years.³ In spite of the wide availability of low-cost tuition, in every country surveyed except Sweden, more students cite cost as the reason they did not enrol in an academic course than any other factor.

The economic stress comes from the limited support provided to full-time academic students to help them meet living costs and those associated with studying, such as books and materials. The proportion of students who live away from home while studying varies widely by country—over 60 percent do so in Britain and Germany compared with fewer than a third in Greece—and appears to be correlated with the availability of financial support.⁴ This suggests that in several countries there are young people who are able to take a post-secondary course, but only at an institution that they can commute to from home; young people may be restricting their ambitions because of financial pressures.

For example, in Greece, young people do not typically have access to a need-based grant from the government. This leaves many reliant on family or a state-guaranteed loan to cover living costs. For many in Spain, the situation is similar. Students pay up to €2,000 annually for a public university course, and although there are grants of up to €6,000 plus a waiver of tuition fees for young people from lower-income backgrounds, most receive far less than this maximum

figure.⁵ Consequently, many Spanish students rely on support from family or paid work. Several countries offer needs-based grants to help with non-tuition costs, but the combined funding typically does not exceed €6,000. This leaves students reliant on parental support, savings, or part-time work, particularly if they are living away from home or studying in a city with higher living costs (Exhibit 13). Sweden is the most generous, with grants of up to €3,200 per year of study available to the majority of students, and low-interest loans of up to €7,000 to cover the cost of living.⁶ It also has the lowest proportion of students citing cost as a reason not to start, or finish, their education.

In the UK, Sweden, and France, state-backed loans—often at low interest rates—are available to young people for university education. In Germany, loans are available depending on the student's family situation. However in Spain and Portugal, there is no such system, meaning many students rely on commercial lenders. Loans can help to reduce cost pressures and provide up-front funding for students to follow the path of their choice. Students who received loans or were funded by their government or employer, were around half as likely as students relying on other funding sources to cite money as a reason to drop out. The downside is that, with young people facing uncertain employment prospects (and often high consumer debt), relying on loans carries its own risks; and these risks put many young people off further study.

The economic dimension

Along with the law of supply-and-demand and the law of unintended consequences, there is one principle that no economist challenges: there is a long-term financial benefit to society when young people complete further studies and so gain higher skills. However, given Europe's economic difficulties, it is unsurprising that some young people in a number of countries are not enrolling in post-secondary education because they question its value.

In most countries, unemployment tends to be lower for people with higher educational attainment (and higher for those with the least schooling). However, during the current economic crisis, university graduates have suffered badly too, leading more than a few of them to wonder whether they have spent their time and money to no purpose. In both Greece and Portugal, for example, youth unemployment is as high among university graduates as for those with only a lower-secondary education. While this is likely to be because many of the latter

gained a foothold in the job market before the worst hit, it is a poor advertisement for those considering further education (Exhibit 14).

So it is hardly surprising that some young people are turning away from post-secondary education because they say they do not see the value of it. This was more often the case in countries with high tuition fees or where support comes in the form of loans rather than grants. In the UK, for example, where most students take out a loan to cover university tuition fees, 14 percent of those surveyed did not enrol in post-secondary education because they thought that it would not pay itself back. Where tuition is free (Sweden) or almost free (France), or where financial support is available in the form of grants, a much lower proportion of young people (fewer than 6 percent) cite money as a reason not to enrol.

Given the reality of austerity and slow growth, it is understandable that many countries cannot fully support young people through post-secondary education. However, there is a significant lifetime financial benefit, across all of the countries that we surveyed, in completing upper secondary education or vocational training. There is also further lifetime financial benefit (net present value) to the individual from completing tertiary education, ranging from €50,000 in Sweden (averaged across the sexes) to €120,000 in Portugal and the UK (Exhibit 15). Furthermore, the benefit not only accrues to the individual; there is also an economic benefit to society.

By 2020, the EU projects that there will be a 10 percent increase in the number of jobs that require some form of post-secondary training, compared to 2010. Over the same period there will be a 20 percent decrease in the number of jobs available that do not require any form of training after secondary school (Exhibit 16).⁷

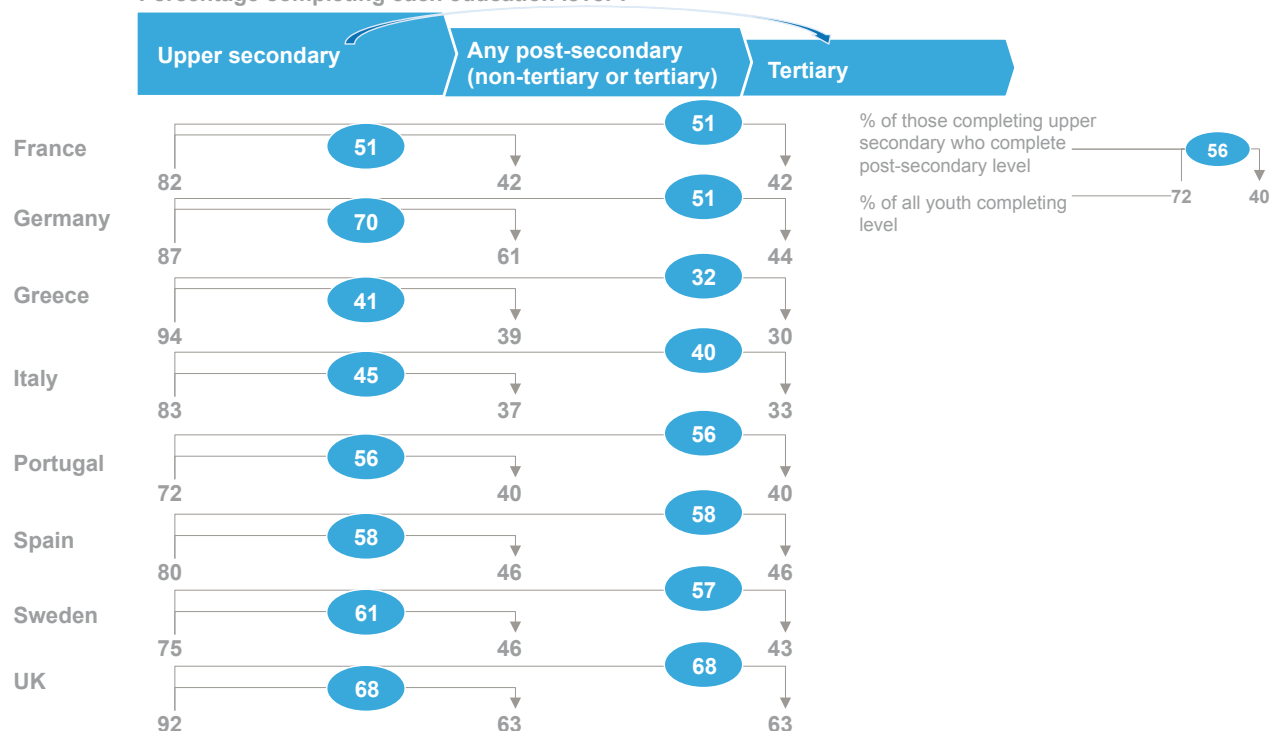
Insight 2: Young people are making critical E2E decisions without the information they need.

In most of the countries we surveyed, young people have to choose between academic and vocational tracks at age 15 or 16, or even earlier. And once they make their decision, it is difficult to turn back. Vocational high-school qualifications often cannot be used to gain access to an academic post-secondary institution, without further secondary academic qualifications. There are exceptions: in the UK, vocational courses carry points that can be used to enter university.⁸

Exhibit 11

Proportion of young people completing each level of education varies between countries

Percentage completing each education level¹:



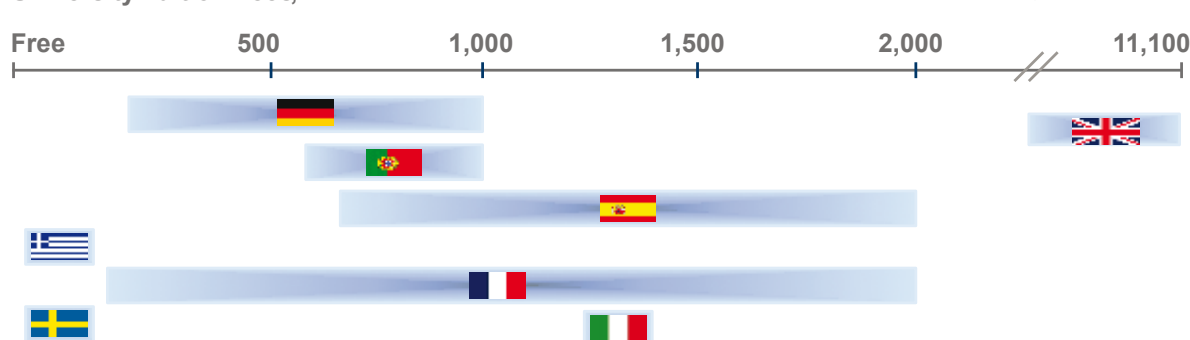
1 Upper secondary - The final stage of secondary education in most countries; Post-secondary non-tertiary - Level between upper-secondary and tertiary education, typically between 6 months and 2 years long; Tertiary - University education or equivalent

Source: Organisation for Economic Co-operation and Development, 2010 (except France: *Quand l'école est finie Premiers pas dans la vie active d'une génération, enquête 2010*, Cereq; Portugal PORDATA 2010 and Greece, Organisation for Economic Co-operation and Development, 2007)

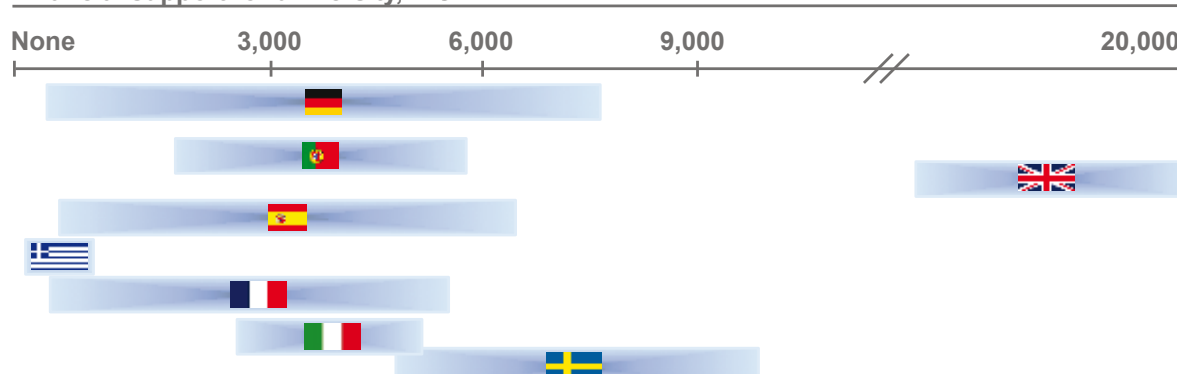
Exhibit 12

Fees and financial support available vary between countries

University Tuition Fees,¹ €



Financial support for university,² €



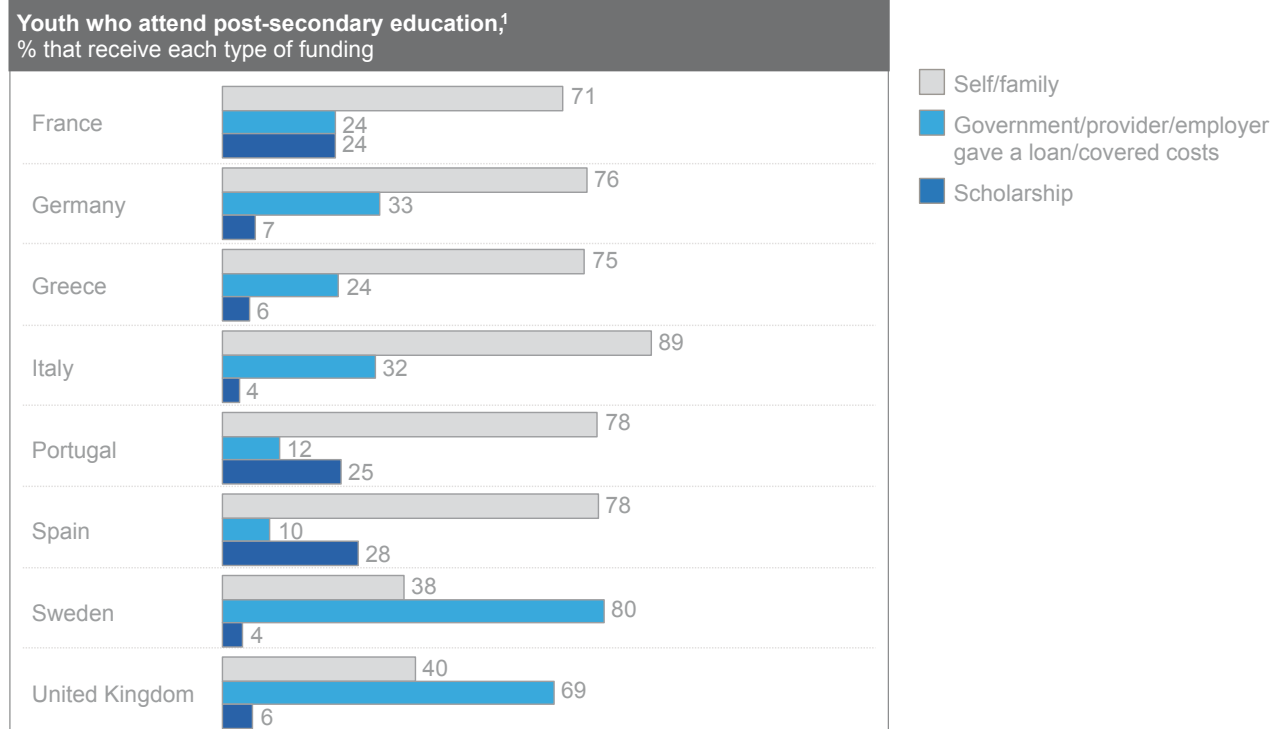
1 UK figures are for England different financial systems exist in Northern Ireland, Scotland, and Wales.

2 Financial support comprises state-provided needs-based grants and loans. 3. Italy, fees data shown is median only

Sources: Eurydice National Student Fees and Support Systems, 2012/13; The Office for Fair Access, Student Loans Company (The Swedish National Board for Student Aid); Swedish National Agency for Higher Vocational Education;

Exhibit 13

Apart from those in Sweden and the United Kingdom, most youth report self-funding or family support for their financial needs



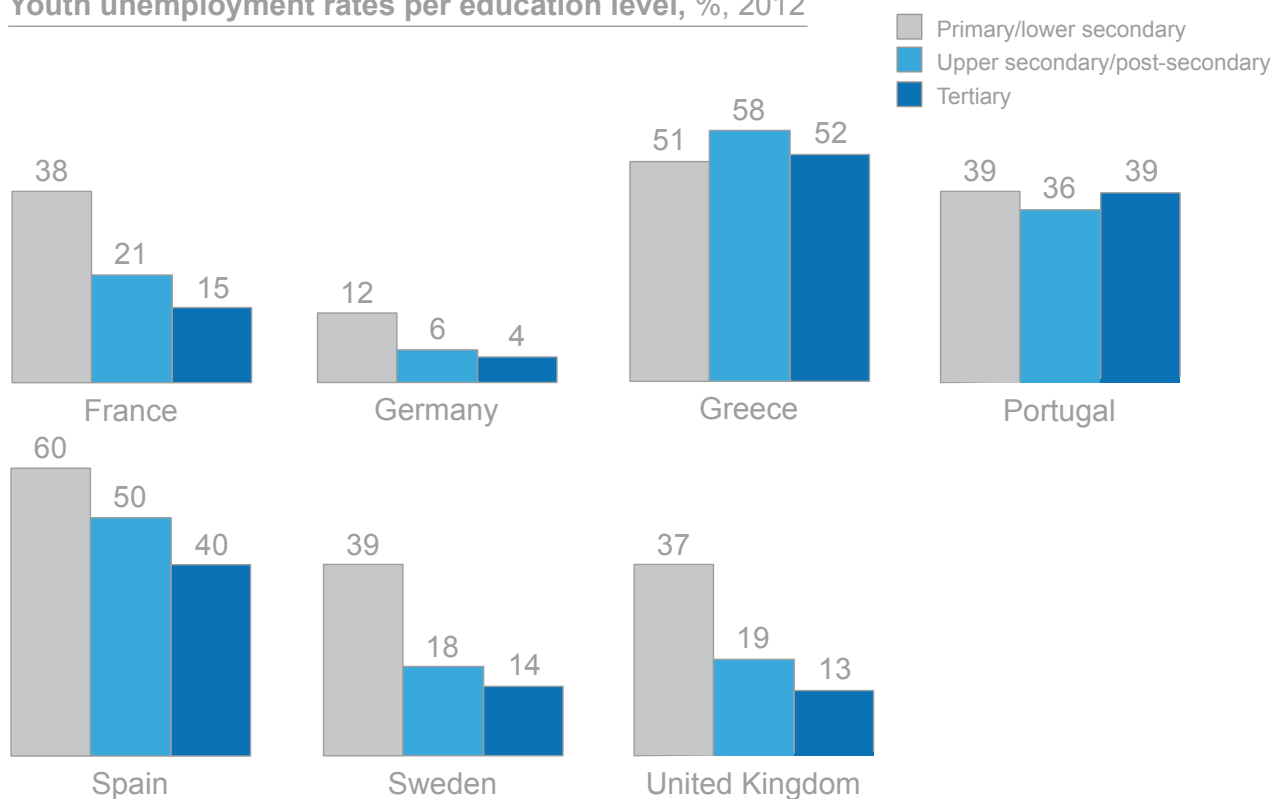
¹ How did you pay for your education or training? Select all that apply.

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 14

Unemployment rate varies by education level and country

Youth unemployment rates per education level, %, 2012



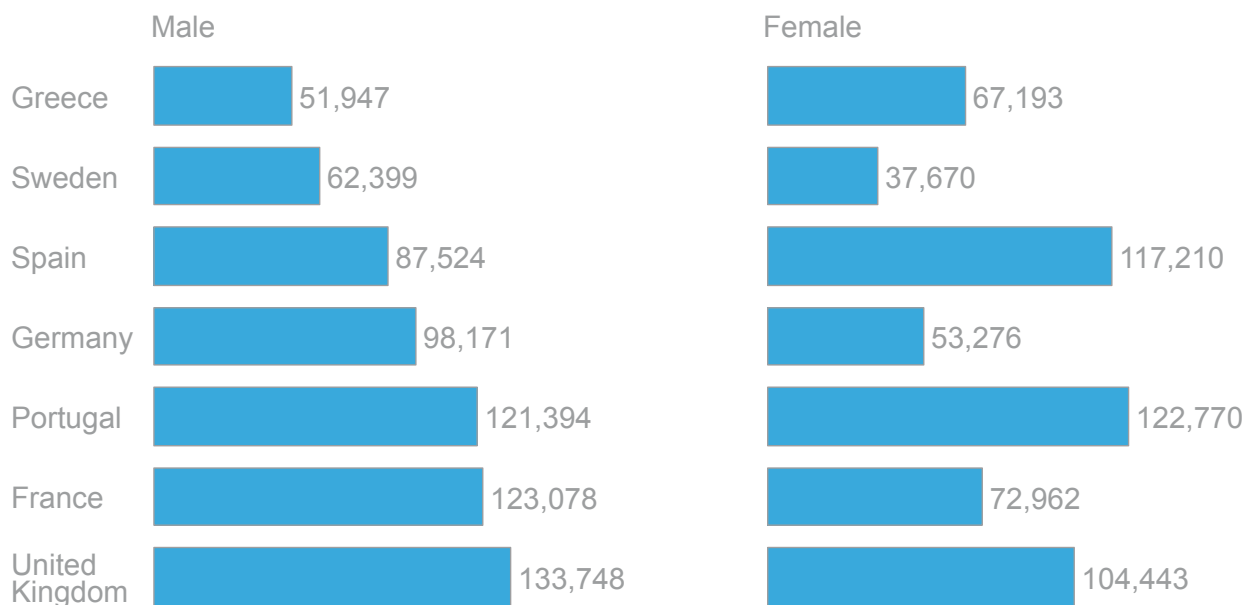
Source: Eurostat

Exhibit 15

Tertiary education offers a significant lifetime financial benefit over upper secondary education

Private lifetime net present value of attaining tertiary education vs. upper secondary or nontertiary post-secondary education

€

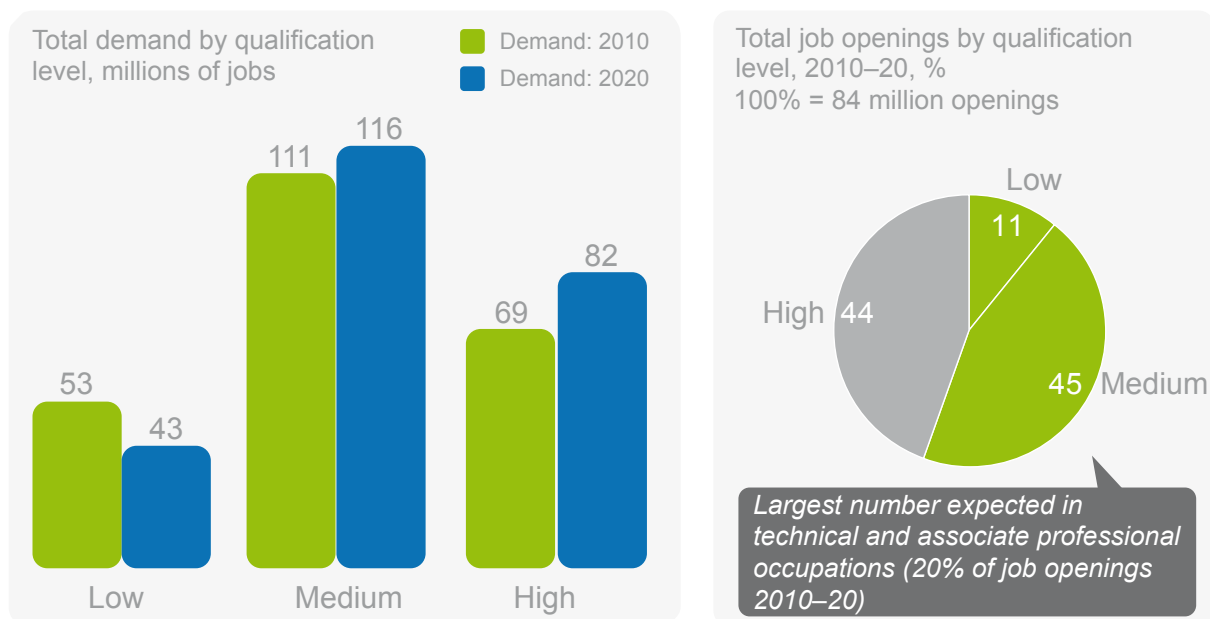


Source: *Education at a Glance 2013: OECD Indicators*

Exhibit 16

Across Europe, demand is greatest for medium-level qualifications (secondary and post-secondary vocational)

Projected demand by qualification level,¹ 2010–20, EU-27 countries



¹ Low = below post-secondary (ISCED 0-2); medium = secondary or post-secondary vocational (ISCED 3,4); high = tertiary (ISCED 5, 6); expansion and replacement demand.

Source: Cedefop skills forecast, 2013

In Germany, different state's regulations determine the conditions under which vocational education can be used to gain access to university.

Broadly, however, it remains the case that young people often have to make life-defining choices at or before age 16. Yet the ironic truth is that teenagers, as a whole, are not exemplars of sound judgment: 16-year-olds cannot be expected to know—without relevant information and objective support—what their options are, and how to connect their skills and passions to a choice of career and a path to get there.

Some young people do try to gather pertinent knowledge. For example, members of the Dreamer segment say they have little objective information at their fingertips on jobs, wages, and education providers, but they are acutely aware of what their families think. The problem is that, if their families do not have the right information, the student can inherit these misconceptions.

Sound information and advice is therefore vital; poor choices at high school can have a long-term influence on a young person's future. But such information is, all too often, conspicuously lacking, both for young people and their families. Beyond making a choice between vocational and academic training, students also have to decide whether and what to study after secondary school. Most are uninformed on this decision. Except in Germany and Italy, fewer than a quarter of young people surveyed said they received sufficient information at high school on the types of educational opportunities available and (again excepting Germany) fewer than a fifth received sufficient information about the careers that such studies could lead to. Even in Germany, only one third of those surveyed were impressed with their career advice (Exhibit 17).

In short, most young people decide their future without knowing which disciplines help to build skills in sectors where jobs are available, the wages available in particular careers, or the success rates of educational establishments in helping their students into work. Of the young people who do continue on to post-secondary education, only the High-achiever and the Persister segments, accounting for 27 percent of those surveyed, say they have a good idea of job availability and career options before deciding what to study (Exhibit 18). When asked to rank 13 factors for selecting a post-secondary course of study, only young people in Greece ranked job placement in their top three; the number of jobs available in the proposed field of study is not a top three factor anywhere.⁹

Young people who follow different paths of study also report very different levels of knowledge of job placement rates in their field. Students of manufacturing (50 percent) and law (48 percent) were most likely to have an idea of which providers did well at job placement. Journalism/media and liberal arts students had very little idea—14 percent and 15 percent respectively (Exhibit 19). This disparity is due in part due to the students' motivation to find the information, but it is also a reflection of the different priorities students have depending on their chosen field of study.

Making such major decisions with incomplete or poor knowledge increases the chance that students will take courses in fields where there is low demand for labour. Thus, in countries where course availability is driven by student demand, this makes a difference to whether providers respond effectively to the needs of the labour market. It is not surprising to find that more than a third of young people in our survey end up regretting their choice of institution; a similar proportion wish they had followed a different field of study.

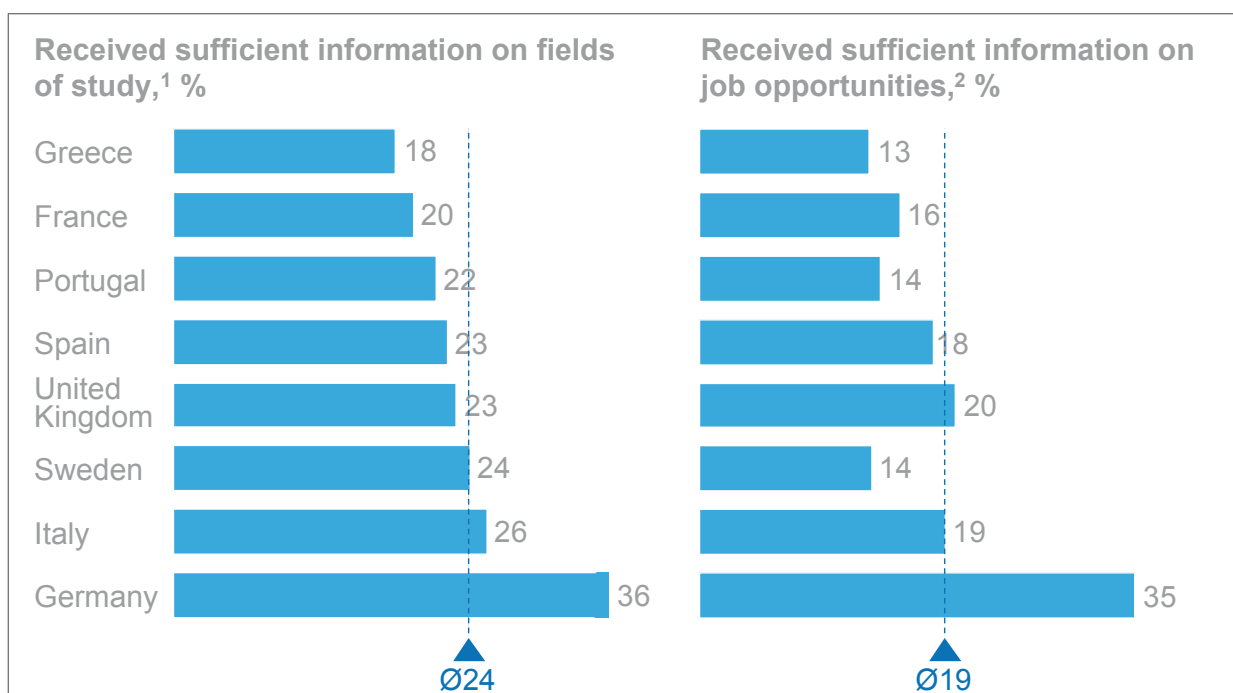
Insight 3: Social bias and unclear pathways limit vocational enrolment, though there is demand from both employers and young people.

Young people in Europe believe that there is a stigma against vocational education. In five of the seven countries (excluding Italy and with the exception of France and Germany), students taking an academic course said they believed society valued that kind of education more than vocational training. The interesting thing, however, is that even these students stated that they believed vocational education was probably more useful in finding work. In four of the countries surveyed, more than half of young people who followed an academic course say they would have preferred to take a vocational course (Exhibit 20). At the same time, there is increasing demand from European employers for vocational skills, given that the labour market is shifting towards higher-skilled jobs.

The bias against vocational education appears to be dissuading young people from following pathways that can lead to jobs they want. When we asked young people which types of jobs they considered desirable, we found they preferred jobs that require advanced skills; however, there was no noticeable preference for jobs requiring academic rather than vocational training (Exhibit 21). The level

Exhibit 17

Fewer than a third of young people think they are getting good career advice at their secondary school



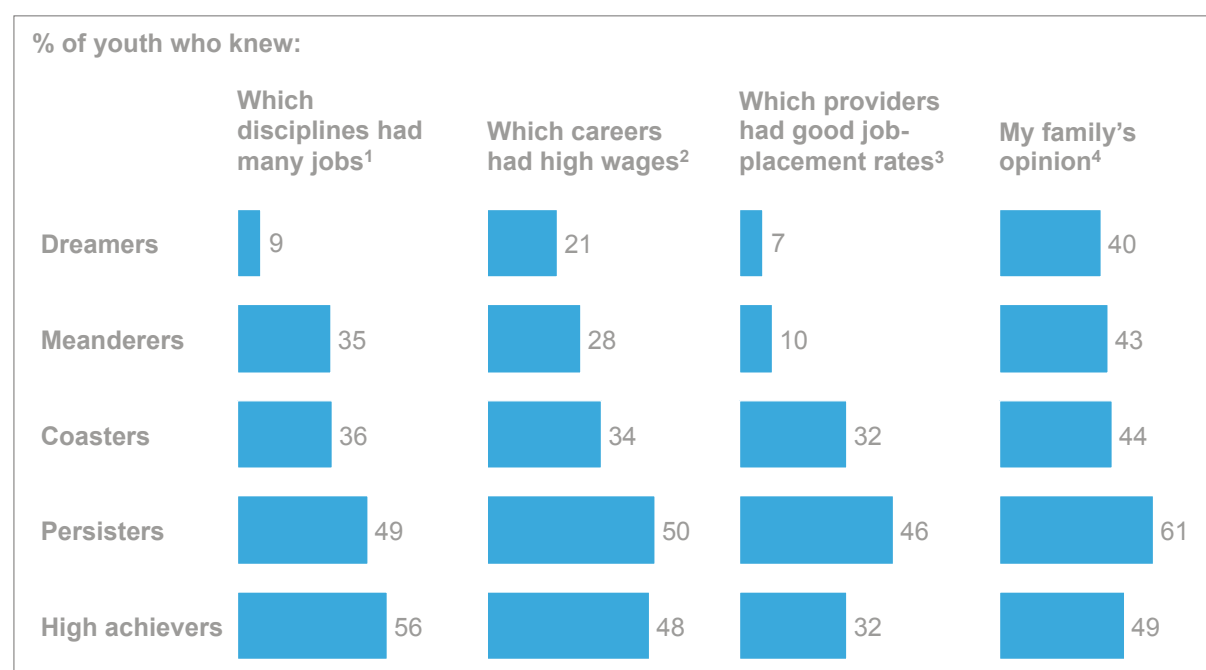
1 I received sufficient information about disciplines/fields of study prior to deciding what to do/study following high school.

2 I received sufficient information about job opportunities related to various fields of study prior to deciding what to do following high school.

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 18

Knowledge on labour market opportunities varies between segments who continued to post-secondary education



1 I knew which disciplines had many jobs when I was choosing what to study.

2 I knew which careers had high wages when I was choosing what to study.

3 I knew which education providers had successful job-placement rates when I chose where to study.

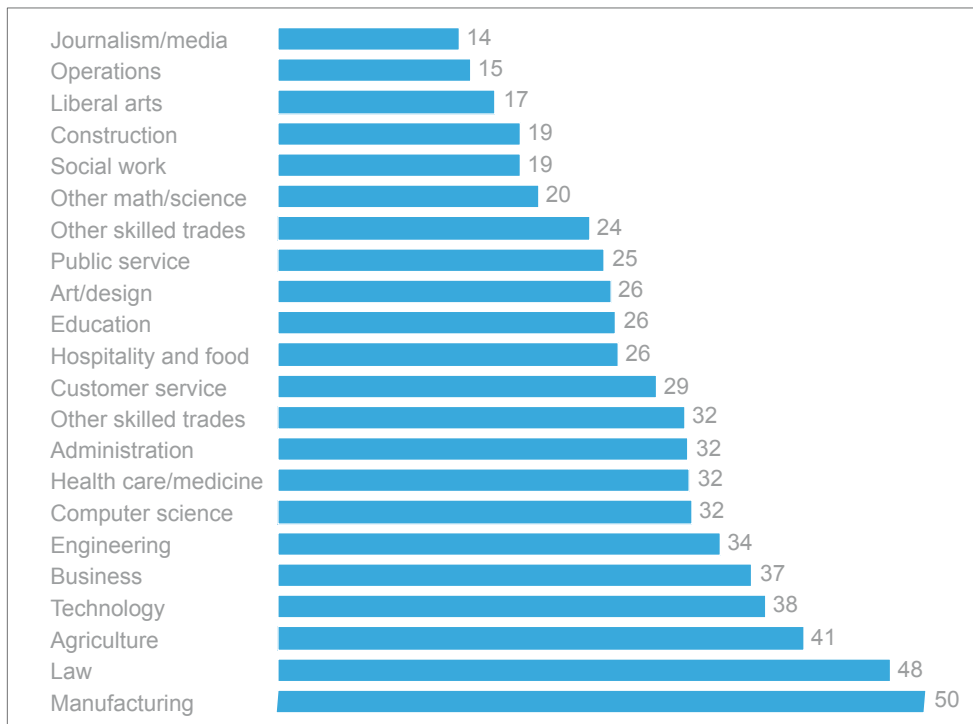
4 I knew my family's opinions of various options when choosing what to study.

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 19

Across Europe, understanding of job-placement rates varies widely between students in different fields of study

Students in each field of study who knew which education providers had successful job placement rates when choosing where to study,¹ %



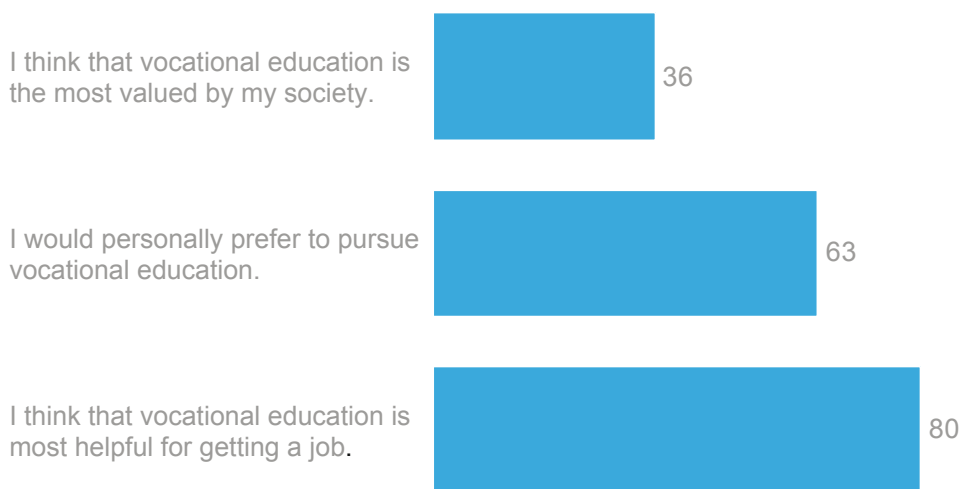
¹ I knew which education providers had successful job-placement rates when I chose where to study.

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 20

Students pursuing academic subjects see strong benefits in vocational education, but poor recognition by society

Students studying academic subjects who answered yes to each question, %



44% of students who would prefer to pursue **vocational** education did so at post-secondary level

82% of students who would prefer to pursue **academic** education did so at post-secondary level

Source: McKinsey survey, Aug–Sept 2012, 2013



Education

in sales

Exhibit 21

Young people are attracted to several post-secondary and professional degrees

Youth who are attracted to each occupation,¹ %

	Occupation	Germany	France	United Kingdom	Spain	Italy	Greece	Portugal	Sweden
Professional degree	Engineer	59	61	41	57	46	51	58	50
	Doctor/surgeon	51	59	40	47	46	54	49	37
	Lawyer	55	50	41	42	40	41	44	38
	Accountant	49	42	38	52	52	40	50	26
Master's	School teacher	48	45	45	60	51	56	45	29
Bachelor's	Financial analyst	55	39	41	56	54	48	42	27
2-3-year post-secondary	Web developer	58	57	43	67	61	62	60	45
	Graphic designer	57	54	36	63	56	52	54	44
	IT technician	60	53	46	58	58	64	58	45
	Social worker	48	46	36	54	42	50	45	33
Certificates	Police officer	50	47	36	51	49	34	46	42
	Medical assistant	53	49	38	46	45	37	47	30
	Teacher assistant	44	41	38	57	50	41	43	24
	Health-care technician	44	43	31	54	42	37	53	25
	Secretary	44	45	38	57	57	54	61	35
	Electrician	44	40	31	41	43	41	41	35
	Mechanic	48	35	28	49	42	46	41	31
	Construction worker	40	37	25	41	42	26	32	35
Services	Sales representative	48	39	40	46	45	48	44	40
	Customer service	49	43	51	58	54	56	55	38
	Food-service worker	51	43	38	54	59	46	47	42
	Hotel staff	40	43	37	60	58	51	60	42

¹ % who find the field attractive or have applied for a position in it/% who are familiar with it.

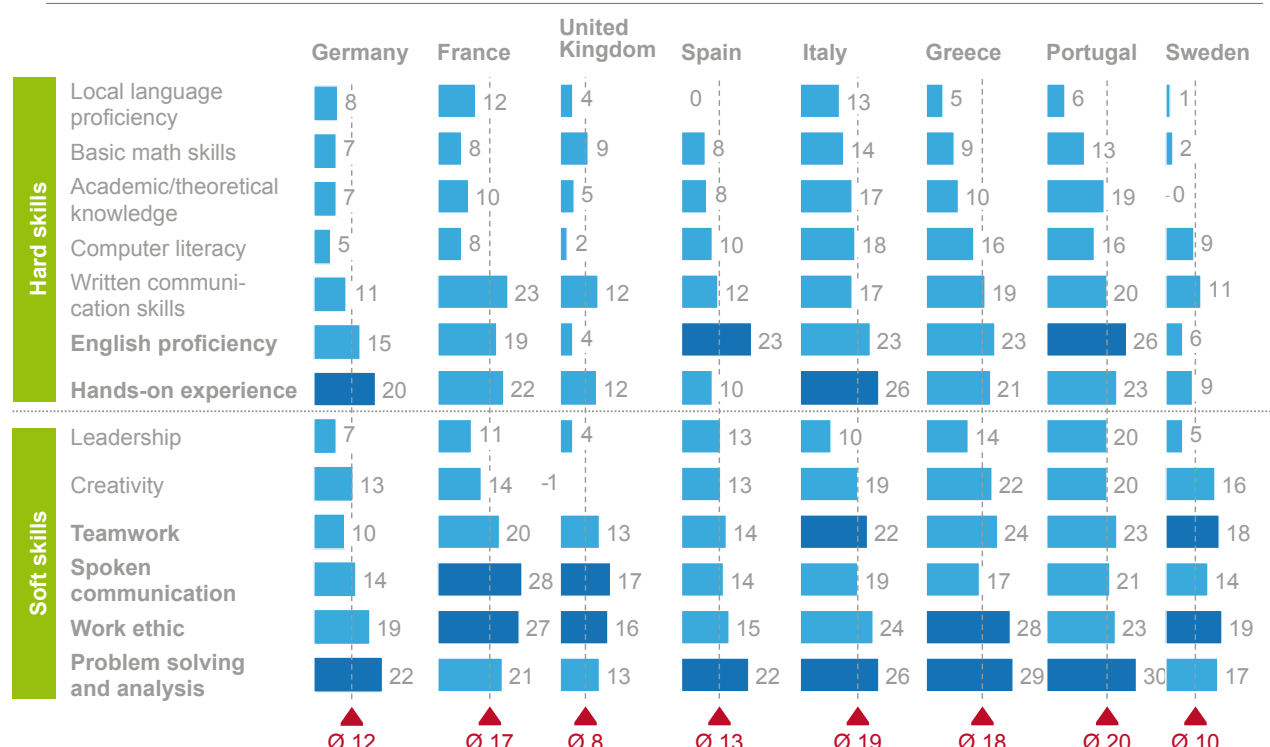
Source: McKinsey survey Aug–Sept 2012, 2013

Exhibit 22

Employers across Europe have a similar view on where skills are missing

■ Greatest differences

Difference between employers who rate skill important and youths' competence in each skill,¹ %



¹ "Below is a list of a number of skills regarding entry-level employees you have hired in the past year or so. For each skill, please rate how important they are for new hires to be effective at your company" minus "For each skill, please rate how competent, on average, they are."

Source: McKinsey survey, Aug–Sept 2012, 2013



iam
an interior
designer

of expertise appears to be the most important factor. So advanced academic qualifications (such as engineering or medicine) are attractive; but so are professions that could be entered with either a high-skilled vocational qualification or a focused academic qualification, such as web development or graphic design.

There was considerable variation in the attitudes towards different career paths. In Germany, enthusiasm was particularly strong towards jobs requiring a professional degree or a two- to three-year college degree. In comparison with other countries, proportionally more young people in Spain and Greece reported being interested in jobs requiring a Masters or Bachelors, such as teaching or financial analysis. Young people in the Mediterranean countries were also highly positive about jobs in IT or graphic design.

However in two countries, the UK and Sweden, there is evidence of a motivation problem across the board. Young people in these countries appeared less interested than their peers elsewhere in almost all of the occupations they were surveyed about. Perhaps surprisingly given the strength of the UK's creative industry, this was as true in "hot" fields like graphic design, as it was in traditional ones such as secretarial or police work.

Social bias is not the only barrier to students taking up vocational courses. In most countries, this pathway was less clearly marked, and often much more poorly funded, than the academic one.

Well-developed vocational training systems do exist in several European countries. Germany operates a dual system where the academic and vocational tracks run parallel to each other from high school through post-secondary education. There are clear entry points into the vocational track and a well-understood hierarchy of qualifications.

France also offers vocational training from high school onwards. There are multiple entry and exit points and the five main qualifications cater for differing levels of skill. About a quarter of French students enter a two-year professional qualification post-secondary programme. However, secondary-level vocational studies are less well regarded, and often the subject of social scorn. Indeed, there is no smoke without fire: those who undertake a secondary-level vocational qualification are twice as likely to be unemployed after three years than someone who undertook a post-

secondary vocational qualification.¹⁰ At the same time, whilst it is relatively common for someone who followed the academic track at high school to switch into France's highly regarded post-secondary vocational training, it is less common for someone who has followed the vocational track during secondary school to attend a university.

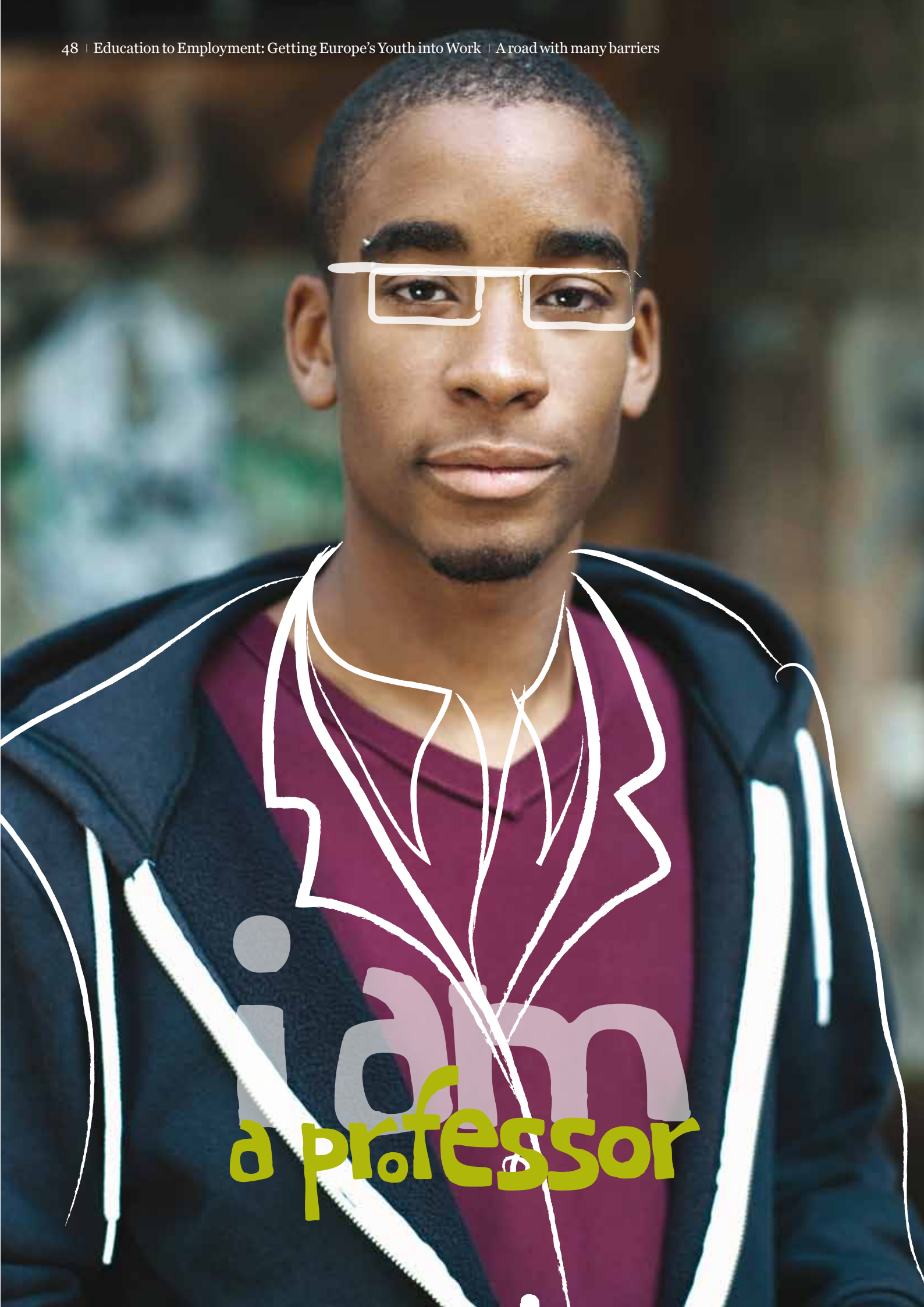
In many countries, there is a problem with confusion. The UK now has more than 20,000 qualifications—triple the 2008 figure—offered by almost 150 different organisations, including public agencies, trade groups, voluntary organisations, uniformed services, health and care services, professional education establishments, and trade unions.¹¹ It is often unclear what qualifications are needed for which skills or how qualifications progress. The fees charged to students depend on a number of factors, including: the level of the course applied for and whether a course at the same level has been completed in the past; age; whether the course is being undertaken to improve employability; and a number of measures of vulnerability.¹²

In Sweden, the pathway for students who have completed a vocational track at secondary school varies across the country. The country has an established secondary vocational training system, but the post-secondary vocational track is relatively new. Qualifications offered depend on local labour market needs and vary in length from six months to two years. However, the offering is not yet consistent across the country and there is low take-up—only 10 percent of post-secondary students are in vocational training.¹³

2.2 The second critical intersection: Building skills

Insight 4: Young people are not being trained in the skills employers need.

Employers have a list of skills that they want and need; to a significant degree, this list is consistent across industries. Specifically, employers of all kinds are eager to hire people with general professional skills, such as problem-solving, as well as basic mathematics and writing ability. They are also looking for qualities such as a good work ethic alongside "soft" skills such as teamwork and interpersonal skills—employers across every country and every sector consistently believe that not nearly enough young people show basic competence in these areas.

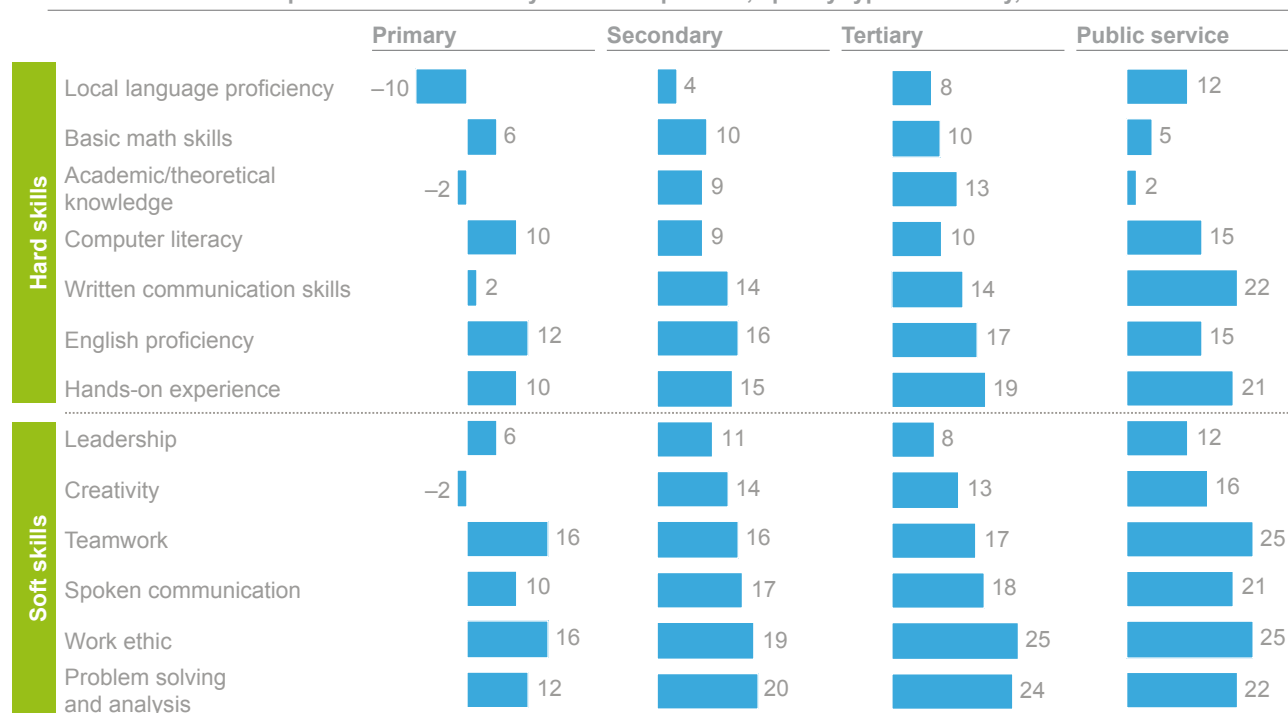


idm
a professor

Exhibit 23

The largest skills gaps are in the service (tertiary) sector and public service

Difference between importance of skills and youths' competence, split by type of industry,¹ %



¹ Below is a list of a number of skills regarding entry-level employees you have hired in the past year or so. For each skill, please rate how important they are for new hires to be effective at your company, minus For each skill, please rate how competent, on average, they are.

Source: McKinsey survey Aug–Sept 2012, 2013

Looking in more detail, employers report larger skills gaps in France, Greece, Italy, and Portugal than in the United Kingdom, Germany, or Sweden, with Spain in between. Complaints about work ethic appear most widespread in the United Kingdom, France, Greece, and Sweden, while employers are most concerned about lack of analytical skills in Germany, Greece, Portugal, and Spain. The Mediterranean economies seem to have the biggest problem with proficiency in English (Exhibit 22).

Employers from different sectors also identified particular gaps in young people's skills, and these differed both in degree and in kind. To understand this better, we divided employers into four groups: primary industries (such as agriculture and mining), manufacturing, services, and the public sector. Services and the public sector reported the biggest difference between what they need and what they are finding (Exhibit 23).

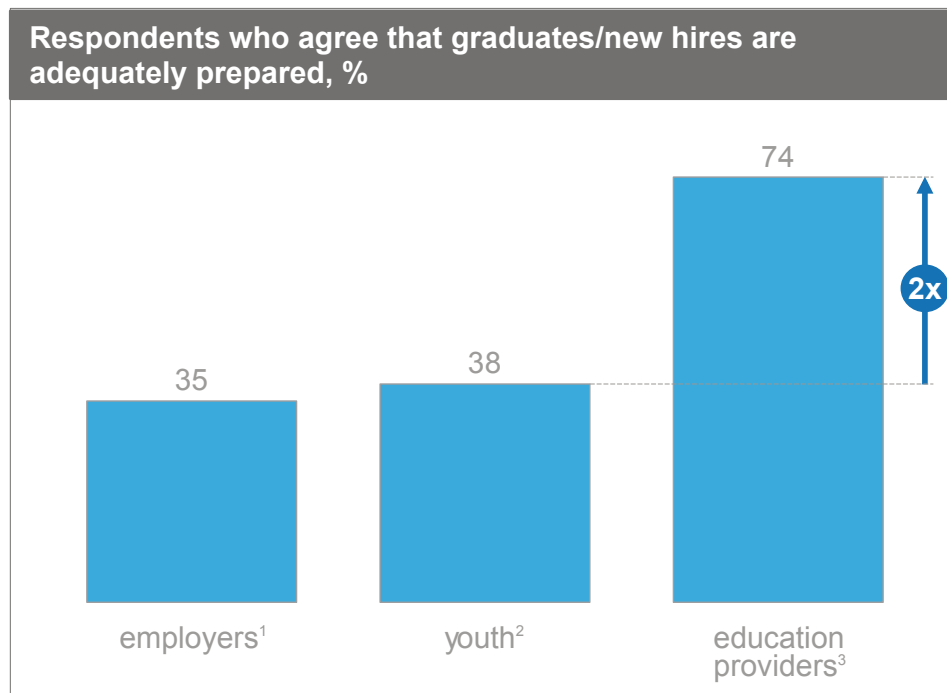
One likely reason for these mismatches is that students are not building the qualifications that employers need. In several countries, the economic crisis has led to a significant change in the level of demand in particular sectors—but the pipeline keeps filling with talent that then has nowhere to go. For example, in Spain there has been a 170 percent increase in students graduating in architecture since 2005, even though the construction sector has lost 60 percent of its jobs since then.¹⁴ In Greece, France, Italy, Portugal, and the United Kingdom there are similar stories, with rising

numbers of people completing qualifications relating to construction, even though the number of jobs in the sector has fallen sharply. In Italy, Greece, Portugal, and the United Kingdom, more students are taking courses in areas related to manufacturing and processing, despite sharp drops in demand. Of course, there may be situations where more graduates are needed, even when overall employment in a sector is stagnant or falling, for example if large numbers of retirements are expected. But in general, it cannot be a good thing to see large numbers of young people betting their futures on faltering industries.

A second reason for the mismatches is that educators and employers are not communicating with each other. Without this dialogue, providers often underestimate or overplay what businesses want and thus emphasise the wrong things. Education providers appear to overrate young people's preparedness for the workplace: they are more than twice as likely to state that their graduates are ready to succeed in an entry-level position compared with employers, a finding that was similar across all eight countries (Exhibit 24). This gap was 30 percent larger than the countries covered in our global survey, with employers significantly more pessimistic. Providers also appear to misjudge the type of learning that young people find most effective. Young people overwhelmingly prefer hands-on lessons and on-the-job training, but they don't get it: 62 percent of their time is spent on theoretical learning, and only 38 percent on practical.

Exhibit 24

Providers are twice as likely as employers and youth to rate youth as prepared



¹ Overall, the entry-level employees we hired in the past year have been adequately prepared by their prehire education and/or training.

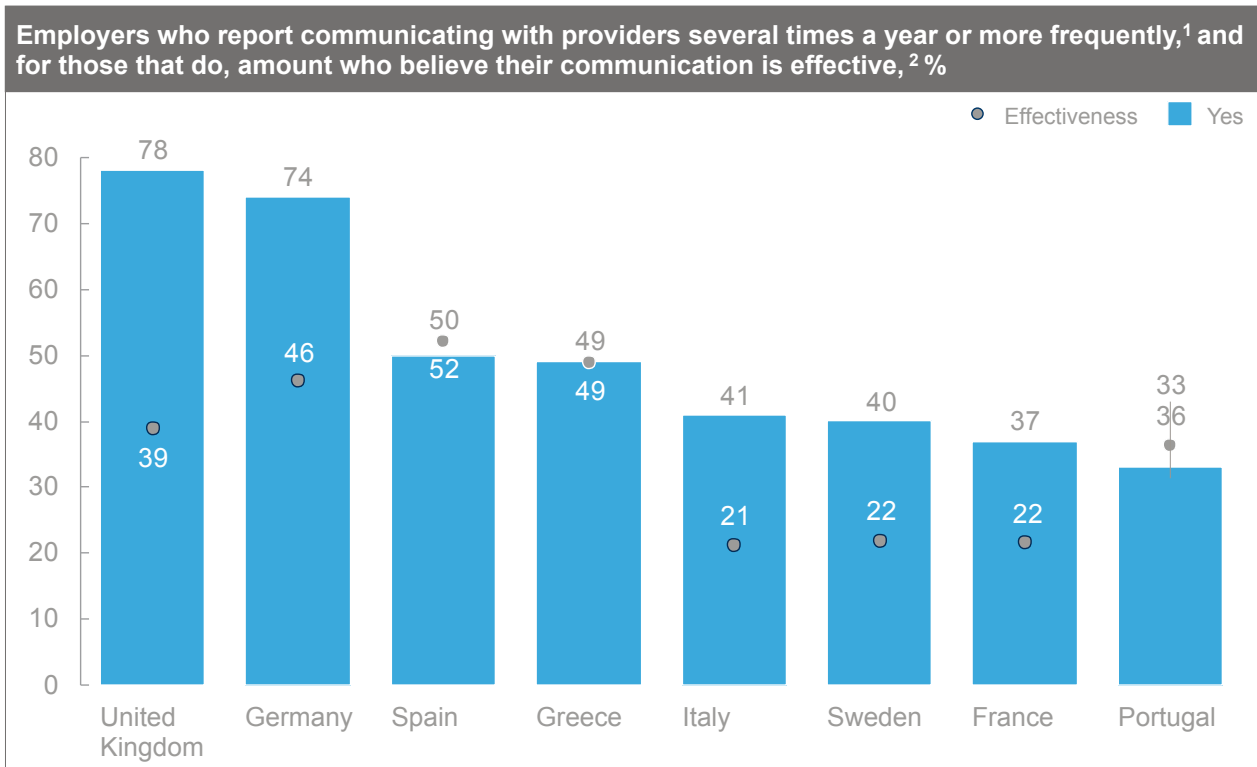
² Overall, I think I was adequately prepared for an entry-level position in my chosen career field.

³ Overall, graduates from my institution are adequately prepared for entry-level positions in their chosen field of study.

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 25

Employers report communication with providers to be either infrequent or ineffective



¹ How frequently does your company communicate with education providers? ² In your opinion, how effectively does your company coordinate with education providers when it comes to preparing trainees to be productive employees in your sector?

Source: McKinsey survey, Aug–Sept 2012, 2013

The extent to which employers and education providers engage with one another varies. What can be said is that in most countries, the majority of providers report that employers are involved to some degree in setting curricula, and also in ensuring that trainers have up-to-date industry experience. An exception is in Greece, where a combination of cultural and other restrictions appears to discourage private companies from working with public organisations in this way.

Some providers also report that they interact regularly with employers, with this practice being particularly common in the United Kingdom, Italy, and Germany. In the other five countries, the majority of employers only communicate with providers once a year, if at all. However, in the United Kingdom, Italy, Sweden, and France, most employers said that such communications weren't very effective even when they did happen (Exhibit 25). Clearly, much more can be done, and done better.

Another important form of collaboration is among employers themselves. Although businesses are competitive, working together often makes sense. This is especially the case where there is a local or regional hub of activity in a particular sector, or where independent companies work together at different points on the same supply chain. In the United Kingdom, employer-run Sector Skills Councils agree on vocational qualifications, and then businesses cooperate with providers to develop relevant programmes. There is no exact equivalent to these councils in Sweden, but employers there also define skills requirements where there is a clear need for standards, such as with electricians.

While 71 percent of Italian employers say they work with other companies on skills and qualifications, only 41 percent do so in Greece (Exhibit 26). This matters because small businesses in Greece employ the majority of people—and report the greatest difficulty finding skilled employees.

More worrying is employers' assessment of their partnerships with other businesses on skills. Fewer than half of respondents called such interactions "highly effective"—only 26 percent in Italy, as Exhibit 26 illustrates. This is important, because many of the most innovative and successful interventions depend on such partnerships.

2.3 The third critical intersection: Finding a job

Insight 5: Young people do not get enough career support

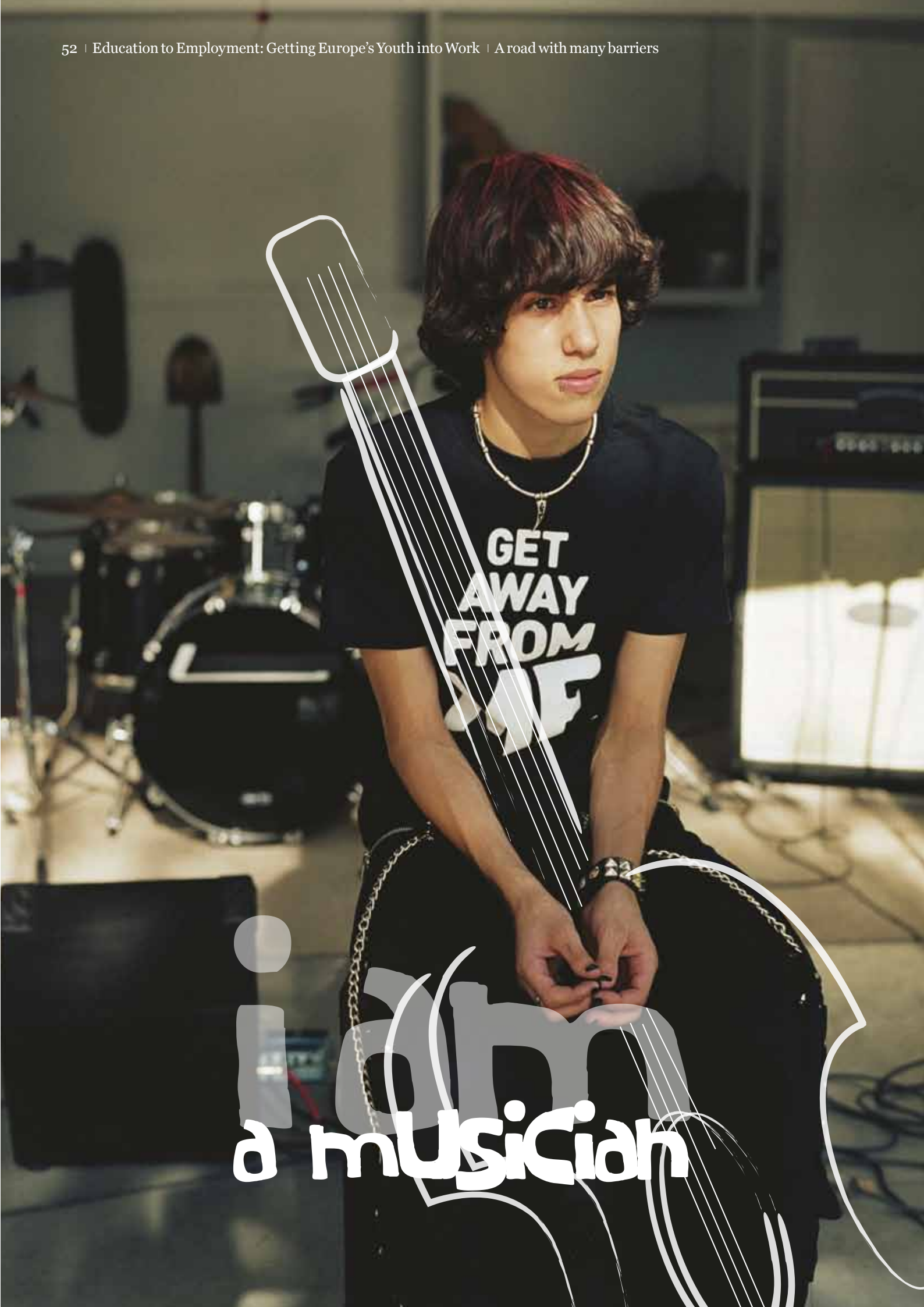
We surveyed education providers on their top ten priorities, ranging from specific institutional needs such as raising money and attracting students to those related to the success of students, such as completion rates and employment outcomes.¹⁵ Across Europe, 60 percent of providers described helping students to find jobs as a key priority (a much higher rate than in our global survey). The greatest proportion of employers who made jobs a priority was across the countries where youth unemployment is highest. For example, in Portugal providers said helping students to find jobs was their top priority. However, in several countries—Germany, Spain and the United Kingdom—helping students find jobs ranked near the bottom. Part of the issue is that, even in the current economic climate, providers appear to be underestimating the scale of the challenge their students face. Asked to estimate the percentage of their graduates who find employment within three months, providers in all countries overestimated their students' success, often by large margins, those in France, Portugal, Germany, and Sweden, get overestimate the percentage by 10-20%.

Lack of career support

Fewer than 40 percent of students surveyed said they could easily access information about jobs, wages, applications, interviewing, and résumés at their post-secondary institution. Only in the United Kingdom were more than half of young people able to say they could obtain such data.

And even where advice was provided, the quality was considered dubious. Young people in Sweden were particularly dissatisfied; fewer than half found the application, interview, and résumés services helpful. But in France, even though careers services are less common, 70 percent of those who did have access to them found them useful (Exhibit 27). There is an interesting wrinkle to this result. The Meanderer segment is least likely to find careers services helpful, and the High-achiever most likely. This suggests that part of the problem may be in the motivation of the young people who use these services.

The uneven quality and lack of career support services is particularly unfortunate because these appear to make a noticeable difference. Students who were offered application and interview support, for example, were 17 percent less likely

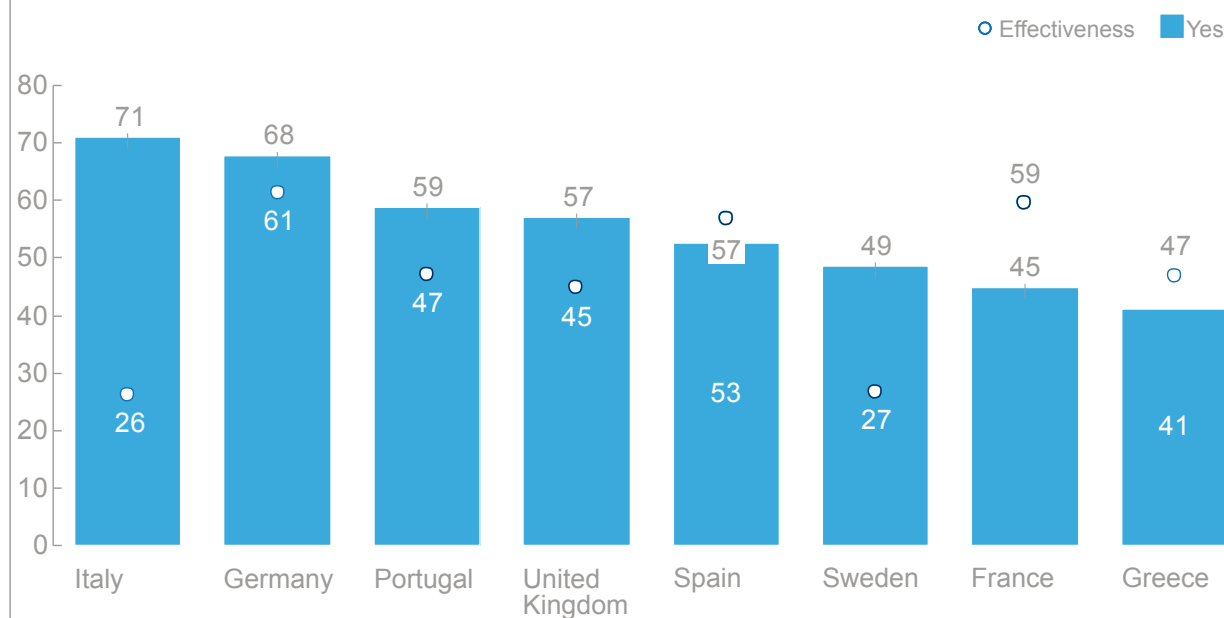


i am
a musician

Exhibit 26

Many employers work with companies on skills and qualifications, but few describe these interactions as highly effective

Companies that coordinate with other companies on the topics of skills and qualifications,¹ and, of those who do, how many find it effective,² %



1 Does your company coordinate with other companies on the topic of skills and qualifications?
2 If so, how effective is your company at promoting coordinated industry efforts on skills?

Source: McKinsey survey, Aug–Sept 2012, 2013

to be unemployed after six months. Assistance with preparing résumés is similarly effective, also reducing unemployment six months after graduation by 15 percent and by 50 percent after a year. Finally, students appear to benefit from visiting companies; those who had the opportunity to do so through their post-secondary institution were 20 percent less likely to be unemployed.

In a challenging job market, replicating such improvements could make a real difference.

Insight 6: There are not enough work study opportunities.

Internships, apprenticeships, or an appropriate work placement can provide a large boost to a young person's chances of employment, by helping them develop the skills needed in the workplace, and by strengthening their relationship with potential employers. (In general, internships are more associated with academic courses and apprenticeships with vocational ones).

Internships can help young people find a job relevant to their field of study—something that is relatively uncommon. Across Europe, only 40 percent achieve a job relevant to their field of study within six months of graduation; students who complete an internship or apprenticeship during their studies do better. Three factors determine the extent to which young people benefit from internships and work placements: availability, accessibility, and quality.

Availability: In some European countries, work placements are built into post-secondary education. For example, in France post-secondary providers are required to leave time during the course for students to undertake a full-time work placement. And financial incentives are given to employers to offer these. As a result, in France, more than 85 percent of post-secondary students reported undertaking a work placement, typically lasting one to three months. Although these are not designed to lead directly to full-time employment—and indeed, there has been criticism that employers use this as a source of free or cheap labour—most are paid (Exhibit 28). In Germany, where there is a well-established apprenticeship system, young people routinely work for an employer throughout their course of study. Most young people on vocational courses undertake a work placement; so do more than three quarters of students on academic courses. In other countries, paid work placements are less common. In Sweden for example, fewer than half of young people on academic courses take part in a work placement. In the United Kingdom, fewer than half of vocational students, and less than a third of academic students, undertake one.

The availability of work placements also varies depending on field of study. However, young people across Europe would benefit from an opportunity to experience the workplace before they graduate. This is a low-cost, low-risk way for them to learn workplace skills, build links to employers,

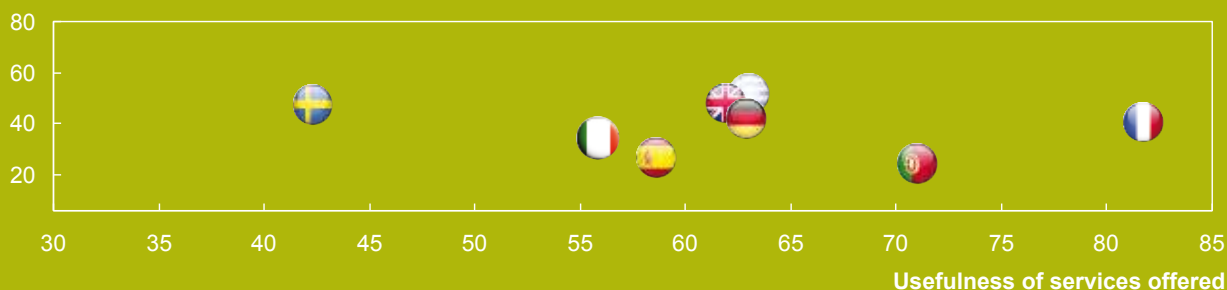
Exhibit 27

Efficacy and availability of careers support varies across Europe

% of respondents who said each service was offered and was helpful¹

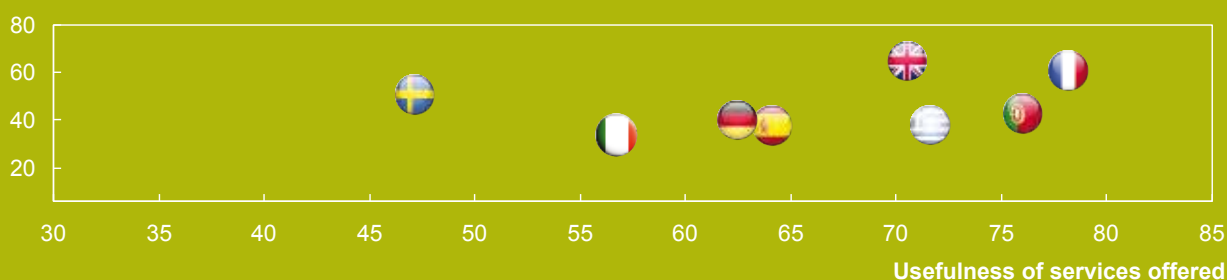
Information about wages and job prospects in different fields

Services offered



Résumé preparation and review

Services offered



¹ Below is a list of services that some programmes provide for students. Please indicate "yes" or "no" as to whether or not your post-high school institution had this service and whether or not you used it, and Below is the same list of services; this time, please indicate whether or not this service was helpful to you.

Source: McKinsey survey Aug-Sept 2012, 2013

European trends vs. global trends

There were several areas of difference between answers from Europe compared with those in our global survey. Most notable was the even greater difference in views among education providers, employers, and youth in Europe regarding young people's preparedness for work. Education providers were even more positive about their students' work readiness—74 percent vs. 72 percent found them ready for work—while young people and employers were even more negative.

There were also differences along the E2E pathway:

Enrolling: In our global survey, we found a plethora of reasons for youth not enrolling, or dropping out, of post-secondary education. Affordability, lack of capacity, not seeing the value in education, and lack of interest were all big issues to a varying degree, depending on where you looked. However, in Europe, affordability is the overriding issue. The only outliers were Sweden, where free education and ample support for cost of living mean affordability is trumped by lack of interest in further education, and the United Kingdom, where rising tuition fees have led some young people to question the value of further education.

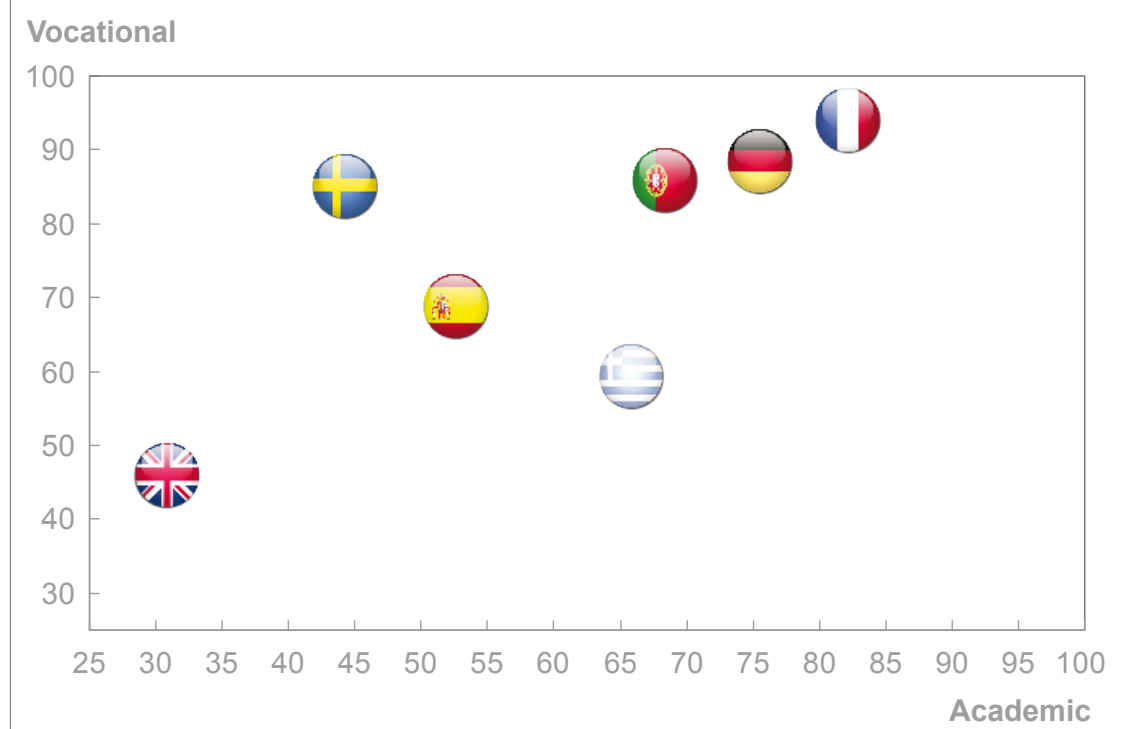
Building skills: Employers were discontented with youth skill levels both in our global and EU research. In both surveys employers rated Work Ethic, Teamwork and Local language proficiency as the three most important skills. However in the European survey, employers reported a larger gap between the importance of these skills and youth' competence in both work ethic and teamwork. And across the range hard and soft skills they were asked about, employers gave a lower rating to youth's competence in the EU survey, than they did in the global survey.

Finding a job: Only 39 percent of young people in Europe were aware of career support services at their post-secondary institution, compared with 50% in our global survey. This is perhaps surprising, given the existence of established universities and also vocational training systems in some countries.

Exhibit 28

Work placements are not easy to find in several countries

Students in academic/vocational post-secondary education who completed a work placement,¹ %



¹ Did you participate in an internship, apprenticeship, or co-op placement with an employer during your education? Note: data for Italy not collected for this question. Source: McKinsey survey, Aug-Sept 2012, 2013

and to make a more informed choice about their future. Governments and education providers should support employers to provide these opportunities, but should also be careful of providing incentives that encourage employers to take on interns in place of graduates to entry-level positions.

Accessibility: One factor that can affect whether a young person can accept an internship is whether it is paid or not. There are risks to young people associated with unpaid or low-paid internships.

First, not everyone can afford to take unpaid work in order to build skills or experience. Indeed, there is a risk that, by providing unpaid internships, companies exacerbate socio-economic differences—by ensuring that the best work experience opportunities go to young people from wealthier backgrounds. Vocational students have a harder time finding paid work placements than academic students; this is a particular issue in Spain and Greece.

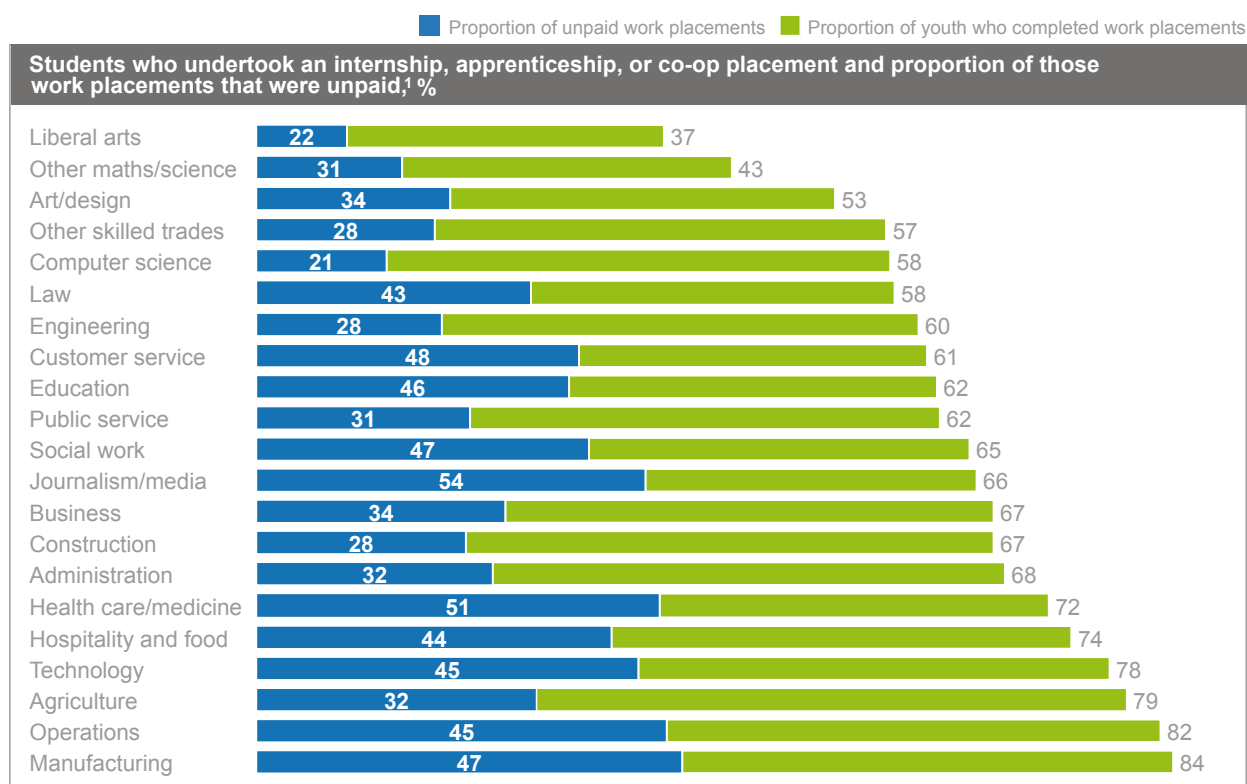
Second, unpaid internships present a risk to those looking for full-time entry-level jobs. Employers offering internships may be tempted to use this form of cheap or unpaid labour as a substitute for employing a young person full time on an entry-level salary.

The proportion of internships that are unpaid varies by country, from 48 percent in Greece to 76 percent in Sweden.

“In France, more than 85 percent of post-secondary students reported undertaking a work placement... in the United Kingdom fewer than half of students take one.”

Exhibit 29

Take up and remuneration of work placements differs by field of study



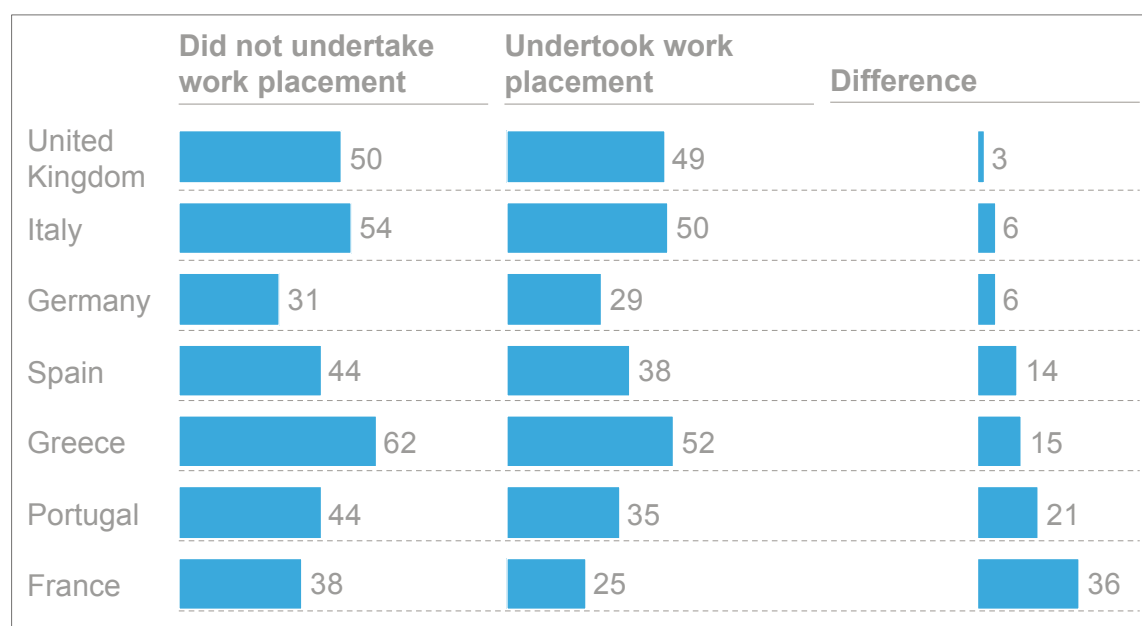
¹ Did you participate in an internship, apprenticeship, or co-op placement with an employer during your education? and What was your primary field of study? Note: data exclude Germany, Italy, and the United Kingdom, as this question was not asked of them.

Source: McKinsey survey, Aug–Sept 2013

Exhibit 30

The effect of internships varies between countries

Youth who had not entered employment within 6 months of leaving education having or not having undertaken a work placement,¹ %



¹ Did you participate in an internship, apprenticeship or co-op placement with an employer during your education? And Following completion of your education programme, how long did it take to get a job after you started looking?

² Sweden numbers not included as sample not representative of population.

Source: McKinsey survey, Aug–Sept 2012, 2013



i am
a city planner

Meanwhile, the culture around internships also appears to differ, depending on the type of employment and the course of study that young people are coming from (Exhibit 29). In seven fields of study, the proportion of unpaid internships was 45 percent or above.¹⁶

Quality: In Germany the system of dual apprenticeships ensures a consistent, long-term placement for vocational trainees. In many companies, internships serve as a practical testing ground for potential employees, who may be hired at the end of their work placement.

Nonetheless, internships can also be ineffective. As discussed above, they can be used by companies as a recurring source of cheap labour, rather than leading to employment opportunities. Sometimes they can be poorly designed and fail to provide young people with challenging tasks that prepare them for the workplace.

Completing a work placement or internship has a markedly different effect on employability across the various countries (Exhibit 30). In France, Portugal, and Greece a young person who undertook a work placement was 15 to 35 percent less likely to be unemployed six months after graduation than a peer who did not.

However the effect of work placements on employability in Germany and the UK was less marked; it even had a small

negative effect within the survey group. This could be due to the design of the work placement or to the value that employers place on it. For all that, it can be said that well-designed internships appear to provide a significant boost to a young person's ability to compete for a job.

This chapter has highlighted the potholes along the E2E pathway. Across Europe, costs, a lack of information, and problems with vocational education systems are holding young people back from enrolling in post-secondary education.

For those who do enrol, a lack of communication between employers and providers and little emphasis on student's future employability mean they are not being taught the skills they need. When they come to look for a job, many young people do so without the support or work experience that they should have been able to take advantage of during their studies.

Fixing these problems may seem a mammoth task. But many places around the world have faced similar situations, and have found ways to be successful (see sidebar "European versus global trends"). The next chapter shows how employers, education providers, and governments can make the education to employment journey a smoother ride for young people in Europe.

Country summaries

This section gives a brief summary of the main strengths and challenges along the education to employment journey for each of the eight countries included in this report.

The summaries for each country are structured along the three intersections on the pathway from education to employment, where we believe it is essential that young people have access to support and information.

The country summaries highlight the major findings that emerged from the proprietary Education to Employment surveys conducted by McKinsey & Company in each country, and additionally draw on publicly available third-party data such as Eurostat and the OECD (see Bibliography for full list of sources); in particular on unemployment and educational attainment across Europe.

We have not attempted, in these summaries, to recommend specific solutions for each country. Chapter 3 of this report presents a range of solutions to the problems highlighted here, that employers, governments and education providers in each country can think about to tackle the biggest challenges in their country.

France

Youth unemployment in France was running at 26 percent in 2013, higher than in the United Kingdom, Germany, or Sweden, and the economy has barely grown since 2008.¹ Although there is an obvious need for brisker growth to stimulate demand for young talent, there is also a structural skills issue at work: 28 percent of employers report a lack of skills as a common reason vacancies remain unfilled. Youth unemployment has hovered around 20 percent for more than a generation.²

Many French youth struggle on the E2E pathway. In the segmentation outlined in Chapter 1, France has one of the lowest proportions of “High-achievers” (8 percent), the most successful group. Conversely, it has large percentages in the least successful segments, the “Strugglers” and “Non-believers” (a combined 58 percent); these consist of those who do not continue onto post-secondary education because they do not want to or are not able to do so.

A. Enrolling in education

Highlight 1: Information gaps are significant.

Only 20 percent of French youth say they have enough information on study options after secondary school, and only 16 percent received enough on related job opportunities. With little information to go on, many feel that they make the wrong decision; two-thirds say that, if they could do it again, they would not choose the same post-secondary path—the lowest satisfaction rate of the countries surveyed. In the language of our segmentation, of those who have gone onto post-secondary education, France's largest cohort (16 percent) is the “Persisters”, those who have the will to succeed but lack the access, in this case in the form of useful guidance.

Highlight 2: A significant minority appears to lack interest in training or education.

Not only do French youths not have enough information, they also appear to lack inspiration. Almost a third of those who did not enrol in post-secondary training said it was because they had lost interest, second only to Sweden. This could be a reflection of the relatively low numbers of youth who enrol on the course that they want; only 69 percent do so, the lowest of the countries surveyed.

Highlight 3: Education is generally affordable, but cost remains a factor for a significant minority.

France has the third-lowest percentage of students who do not enrol in post-secondary education because they do not believe they can afford it (26 percent), below the survey average (30 percent). This is a reflection of the low fees, generally less than €200 a year for public university students (but sometimes as much as €2,000), and the relatively generous support that is available; 35 percent of students receive a needs-based grant of up to €5,500 a year.³

Highlight 4: French youth have positive attitudes to vocational training.

The French system stands out for the opportunities it provides and the social attitudes around hands-on experience at post-secondary level. Half of those who wanted to study a vocational track actually did so, higher than in much of Europe. About a quarter of French students undertake a well-regarded two-year course. However, vocational training at secondary-level does not have the same reputation and positive outcomes. Of those who undertake it, almost a quarter are still unemployed three years after leaving education, more than twice as many as those who graduated from a post-secondary vocational course.⁴

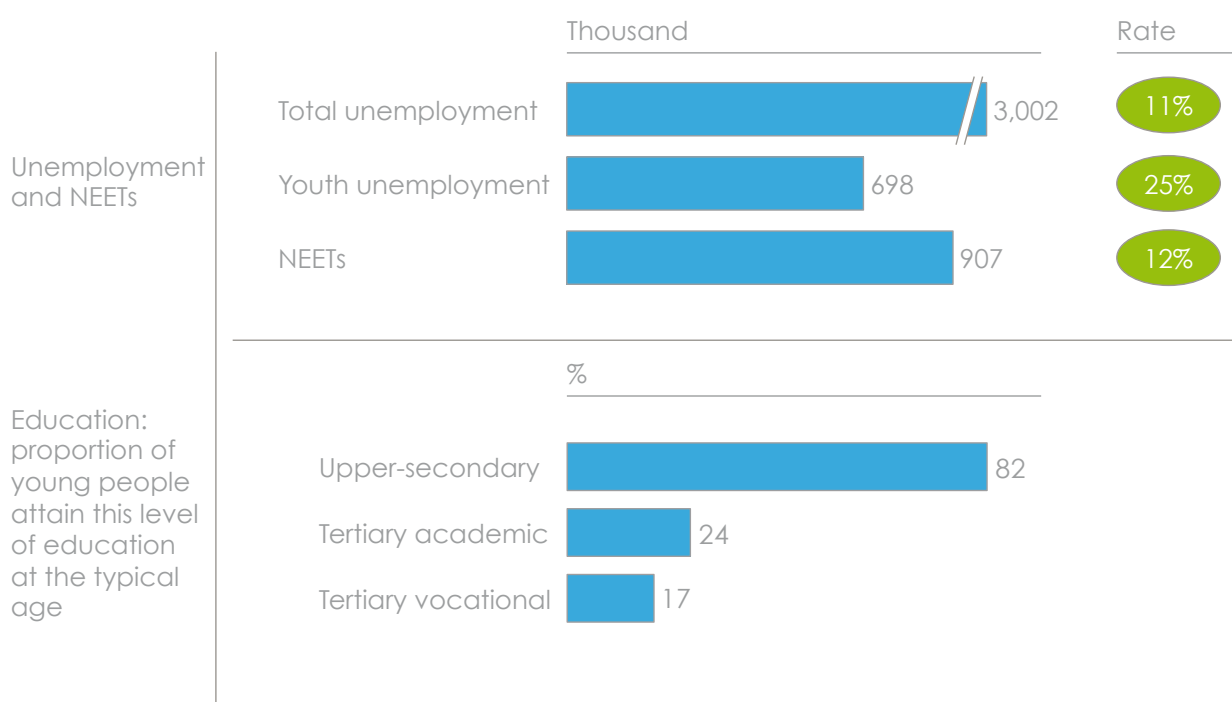
B. Building skills

Highlight 5: Lack of skills is a serious business issue.

French employers cannot find the skills that they need. More than a third (35 percent) report that a lack of skills causes significant problems for their business; 28 percent cite this as a common reason for vacancies remaining unfilled. As in other countries, French employers report that young people have particular deficiencies in soft skills, particularly in their confidence and capabilities in spoken communication and their work ethic.

France

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: *Quand l'école est finie... Premiers pas dans la vie active d'une génération, enquête 2010*, Cereq

Highlight 6: There is a communication problem.

Communication is vital to ensure that education providers are aligning the curriculum with employers' needs, and to connect students to the job market. However, only 37 percent of French employers say they communicate with education providers several times a year, significantly less than the survey average (50 percent).

Employers that work together on defining the skills and qualifications they require can have greater impact on embedding these into the education young people receive. However, as with employer-provider communication, there is little communication between employers in France. Only 45 percent of employers communicate with other employers on the topic of skills, also well below the survey average (55 percent).

C. Finding a job

Highlight 7: Work placements are widely available.

Not only do French youth view post-secondary vocational education highly, almost all of them (87 percent, more than any other country) take part in a work placement. This does seem to make a positive difference. Those who complete a work placement are 36 percent less likely to be unemployed six months after graduating than those who do not. They are also almost three times as likely to be employed in their field of study within six months. Nevertheless, problems remain: young people are often left to arrange work-placements without support from education providers, so their opportunities may be limited by their social networks; in addition, youth reported that 45 percent of academic and 49 percent of vocational internships were unpaid. Although these are both below the survey average (55 percent), unpaid internships prohibit young people who lack financial support from gaining useful experience.

Highlight 8: Career services are generally available and well rated.

France scores relatively well on the provision of post-secondary careers support: 60 percent said they had access to assistance with résumé preparation and, of those, 78 percent found it helpful; more than half (53 percent) had access to application and interview support, and 83 percent found that helpful. Such services can have a discernible effect on young peoples' ability to find a job. Across the European Union, assistance with résumé preparation decreased youth likelihood of being unemployed six months after graduating by 15 percent, while application and interview support resulted in a 17 percent decrease.

Germany

Germany has weathered the recession relatively well. Demand for labour is strong and youth unemployment (8 percent in 2013) has actually decreased since 2008. On skills, Germany also appears to be doing well compared with other countries. Only 26 percent of employers report that lack of skills causes significant problems or is detrimental to their business; this is the second-lowest figure of the countries surveyed. However, even though Germany does better than most, there is still room for improvement, particularly in terms of availability and effectiveness of information, as well as in soft skills and the success of work-placements.

A. Enrolling in education

Highlight 1: Affordability is generally good, but remains a factor for a significant minority.

While post-secondary education in Germany is largely free of charge, just under a fifth (17 percent) of German youth who did not enrol in post-secondary education said the main reason was that they could not afford the cost of living; 19 percent did not enrol because they had no time to study as a result of having to work. Although this is the second-lowest figure of all the countries (behind Sweden), it still seems that a critical minority of one in five young people in Germany cannot fully develop their talents and employability through post-secondary education.

Highlight 2: Information gaps are smaller than in most countries, but still too large to accept in absolute terms.

Compared with other countries, Germany does well in terms of communicating with young people on their future careers; more than a third (36 percent) reported receiving sufficient information at high school about disciplines/fields of study prior to deciding what to do, the highest of the countries surveyed. Nevertheless, 36 percent is not a high score in absolute terms; it still means that almost two-thirds of students were not receiving the information they need to make good decisions. The choices that youth make also suggest that this support is not equally available across the country. For example, 17 percent of youth in Mecklenburg-Vorpommern do not finish high school, compared with 6 percent in Baden-Württemberg.

B. Building skills

Highlight 3: Employers report a lack of skills by job applicants, in particular softs skills around work ethic and problem-solving ability are often insufficient.

Germany has the second-lowest number of employers, 26 percent, reporting that a lack of skills causes problems for their business. However, that figure is nothing to be complacent about; moreover, there appears to be a substantial gap in particular areas. German employers see the largest gaps in soft skills, in particular in work ethic and problem solving and analysis. This may reflect an education and attainment gap: around 7 percent of youth leave secondary school without any formal qualifications; 12 percent do not complete their apprenticeships; and up to 30 percent who start university do not graduate.⁵

Highlight 4: 'The vocational system is well developed, but drop-out rates are high and it is not always possible to transfer between post-secondary systems.

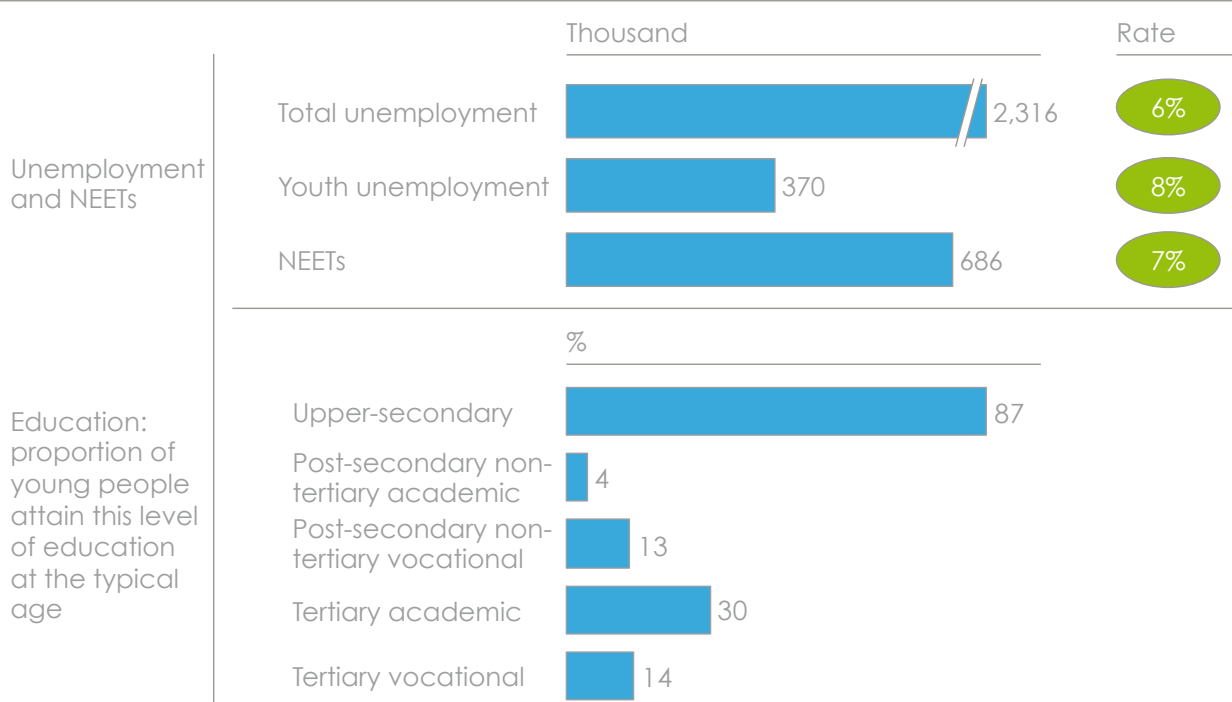
On the face of it, Germany has a well-developed vocational system, with the highest percentage of young people completing vocational post-secondary education (27 percent). Employers are closely involved and vocational students receive training that prepares them for the workforce: 89 percent find a job within six months of graduation.

However, less than a third (32 percent) of those who undertake vocational post-secondary training would choose the same field of study again. One in five apprenticeships are terminated early, most often due to conflicts with trainers and other supervisors; half of those affected do not start a new one. Identifying issues early and addressing these drop outs through focused support will help to make the system even stronger.⁶

For students, one great advantage of the German system is that academic and vocational tracks (both at the secondary levels and

Germany

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: OECD 2010 age-specific graduation rates

above) operate side by side, so that moving from one to the other is simple. For example, vocational upper-secondary students are in theory able to pursue academic post-secondary education without an academic qualification if they have a successful vocational qualification and some years of professional experience. This is not, however, consistent across all the states.

Highlight 5: While intensity of interaction is commendable, the information is often ineffective.

Frequent communication is necessary to help ensure that education providers teach youth the skills they need. The good news is that 74 percent of German employers communicate several times a year or more with education providers on the topic of skills. However, only 46 percent rate this communication as effective. Also, as in other European countries, there is a lack of understanding between employers and education providers of just how great the skills gap is. More than four out of five providers (83 percent) considered their graduates adequately prepared for the workforce—only 43 percent of employers agreed.

C. Finding a job

Highlight 6: Work placements are common but don't seem to boost employability.

In Germany, 89 percent of academic students and 76 percent of vocational ones reported undertaking work placements, the highest figure after France. The difference, however, is that work placements in France are much more successful in helping French students to find work; in Germany, those who completed an internship were no more likely to be employed in their field of study six months after completion than those who had not.

This is, to some extent, a reflection of the job market; because so many Germans do manage to move into employment those left behind are the hardest to help. However, it does signal that work placements are not working as well as they could on both a relevant skill and relationship-building dimension.

Highlight 7: Smaller businesses face bigger recruitment difficulties.

Only 11 percent of small businesses (fewer than 50 employees) surveyed said they found it easy to recruit new hires, last by a large margin of the countries surveyed. Only 26 percent believed there were enough graduates from relevant education programmes to meet their needs, still leaving them with the challenge of actually attracting them. Medium-size enterprises (50 to 249 employees) do not fare very well either. Almost a third (31 percent) said that a lack of skills causes significant problems for their business, 50 percent more than large employers. Considering that SMEs employ six in ten Germans and train 73 percent of apprentices, opportunities to employ young people will be missed if this mismatch is not addressed.⁷

Greece

The Greek youth unemployment rate was 57 percent in 2013, the highest of all the countries surveyed. However, lack of demand is only part of the reason; lack of supply, in the form of relevant skills, is also a serious problem. One-third of employers in Greece, the most of any country surveyed, said they could not fill vacancies because they couldn't find candidates with the right skills. With a job vacancy rate of less than 1 percent, it is all the more startling that employers cannot find the young people they need.

A. Enrolling in education

Highlight 1: Affordability is an important issue.

Forty-two percent of young people who do not enrol in post-secondary education say that they cannot afford to do so. Although tuition is free, there are few grants or loans to cover living costs. Only around 1 percent of students receive a grant of up to €1,500 a year.⁸ Not only does this prevent students from studying, it limits their ability to relocate to study the courses they want to, at the institutions that are the best at the chosen discipline—68 percent of Greek students live at home during university, much higher than the survey average (38 percent).⁹

A related issue is that, in the past, universities have allowed students to remain on the university registry and repeat courses indefinitely; many students end up repeating years and, accordingly, it often takes Greek students longer to graduate. In 2004, for example, 35 percent of Greek youth were enrolled in an undergraduate university course, but only half (18 percent) had completed it three years later.¹⁰ Recently, the Ministry of Education has passed a law limiting the number of years students can remain in study. However, those currently registered still have six years to complete their education, which raises costs for both the government and for students.

Highlight 2: Information gaps are significant.

Students need to know the full range of options open to them: what trade-offs are likely; what their earning prospects will be; how competitive it is to secure a job; and what skills are required. But in Greece, there is a glaring lack of careers guidance. Only 18 percent of secondary-school youth reported receiving sufficient information on fields of post-secondary study and only 13 percent said the same of job opportunities—the lowest performer of the countries surveyed. Instead, young Greeks tend to turn to their families for advice, but reliance on family for this kind of information means that it's even harder for young people to break out of their given social circles: they can only know as much as their families do.

This lack of guidance shows in the decisions that Greek youths are making. Although the number of people employed in the construction industry has dropped by more than half since 2005, for example, the number of architecture graduates in the same period increased by half. That is a sign that education providers are not providing effective direction and guidance relative to the job market.

Highlight 3: There is considerable social bias against vocational training.

Young people are not only limited by their knowledge but also by their attitudes. There is a strong social bias against post-secondary vocational training, which is often seen as a last resort for academic failures. Only 28 percent of youth believe that vocational training is more valued by society, and only 42 percent of youth who wanted to pursue it did so, compared with 78 percent of those who wanted to pursue an academic education. At the same time, almost three-quarters (72 percent) believed that vocational education is more helpful for getting a job.

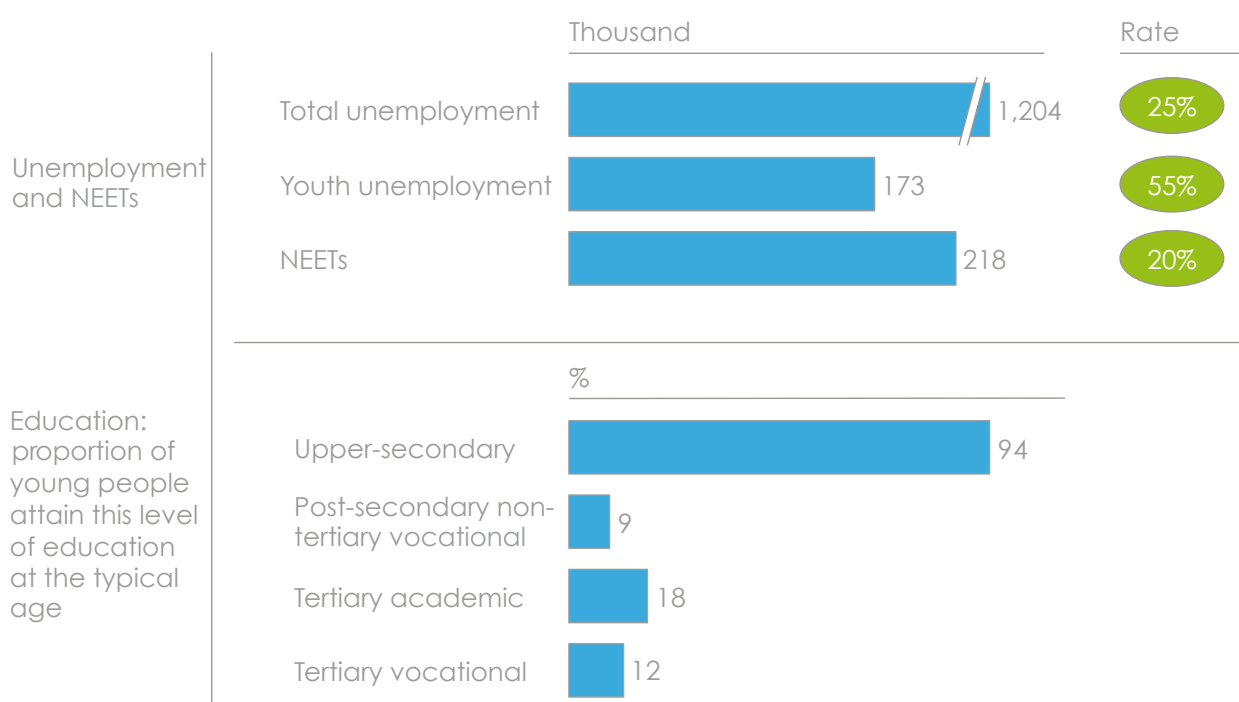
B. Building skills

Highlight 4: Lack of skills and poor work ethic are serious business issues.

Clearly, too many young people are leaving the education system without skills to equip them for work. Fewer than a quarter of Greek

Greece

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: OECD 2010 age-specific graduation rates except for Tertiary from 2007

employers report that graduates are prepared for entry-level jobs and almost half (45 percent) report that a lack of skills is causing significant problems for their business. There is a sizable gap (18 percentage points) between the skills Greek employers are looking for in employees and their perception of potential job candidates. This gap is largest for problem solving and analysis, and for work ethic.

Highlight 5: Employers and providers have very different perceptions.

Education providers and employers are not just operating in separate spheres, but “on different planets”. While 79 percent of education providers in Greece believe their graduates are prepared for an entry-level position, only 23 percent of employers agree, the largest discrepancy among the surveyed countries.

This breakdown is a symptom of the lack of communication between local employers and providers. Fewer than half of employers communicate several times a year or more frequently with education providers on recruitment or skills provision. Greece also has no sector skills councils or similar bodies to provide a way for them to connect in a structured way.

C. Finding a job

Highlight 6: Careers services are limited but effective.

Greek youth report having limited access to post-secondary careers services; only 38 percent report they can get help with résumé preparation and 34 percent with application and interview support. However, the support they can get appears to be of good quality: 72 percent found résumé preparation useful, and 66 said the same of help with application and interview. In the European Union, such services noticeably improved the likelihood of finding work six months after graduation.

Highlight 7: Internships are particularly useful.

Only 67 percent of academic students and 58 percent of vocational ones in post-secondary education undertake an internship. However, in Greece the likelihood of a young person being employed in a job relevant to their field of study after six months is 60 percent higher if they have taken an internship. Their likelihood of being unemployed after the same time period is 15 percent lower.

Italy

Youth unemployment in Italy has doubled since 2007, reaching 40 percent in 2013. However, this figure is only partially due to the economic crisis—the problems run much deeper. Italy's employers report the biggest issues of all countries with respect to employability of job entrants; almost half (47 percent) report that their businesses are being hurt by their inability to find the right workers.

The overriding theme in Italy is that communication and information needs to improve, to allow youth to make good decisions and to encourage education providers to teach the skills that employers require.

A. Enrolling in education

Highlight 1: Information gaps are significant.

Only 26 percent of Italian secondary-school students say they receive sufficient information on post-secondary fields of study; only 19 percent say they receive sufficient information on career opportunities related to fields of study. This has consequences: Italy has the lowest number of students who studied vocational subjects (34 percent) and only 45 percent of those who studied academic subjects would with hindsight have followed the same field of study. Few consider future prospects when it comes to selecting what to study; of a list of 13 possible factors that young people would consider when choosing their post-secondary option, the number of jobs available ranks fifth.

Highlight 2: Affordability is an important issue.

Although university tuition is heavily subsidised (costing on average less than €1,500 a year), almost four in ten (39 percent) of young people who do not enrol in post-secondary education do not do so because they cannot afford the cost. The great majority of young people (78 percent) report a heavy reliance on their families to fund related living costs. This creates a knock-on effect. If family members lose their jobs—and the national unemployment rate is above 12 percent—students will not be able to turn to them for support.

B. Building skills

Highlight 3: Lack of skills is a serious business issue.

Given that Italian young people do not have the information to make strategic decisions about how to prepare themselves for work, it is unsurprising that almost half (47 percent) of Italian employers say that a lack of skills causes significant problems for their business. This is the highest figure among the countries surveyed. Italian employers are also the second-most negative in their assessment of what skills are important and to what degree youth have these skills. The greatest gap employers reported is in hands-on experience.

Highlight 4: Employers and providers have very different perceptions.

Seventy-two percent of education providers in Italy think that youths have the skills they need when they finish school; only 42 percent of employers agree. The perception gap reflects a basic lack of communication between employers and providers. Only 41 percent of employers said they communicate regularly with education providers and, of them, only 21 percent considered this communication effective.

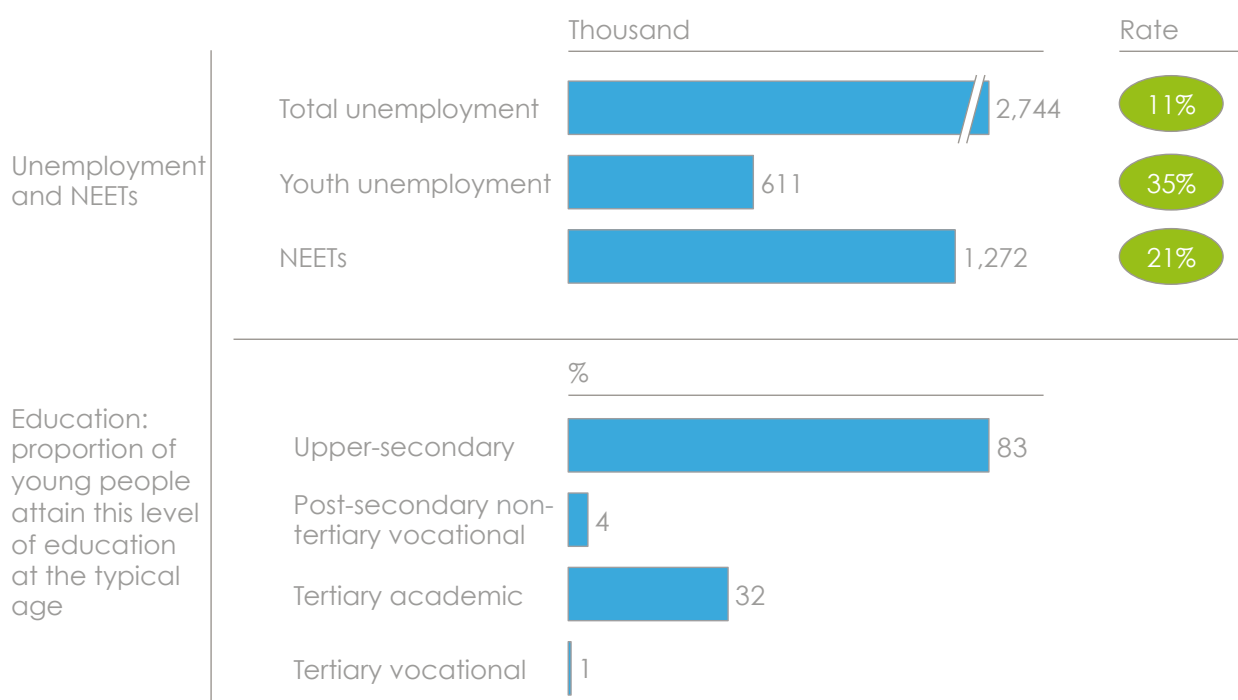
C. Finding a job

Highlight 5: Careers services are limited but somewhat effective.

Only 31 percent of Italian youth report access to résumé preparation, application, and interview support; only 34 percent have access to information on wages and job prospects in different fields. Of those who did have access, a little more than half (56 to 59 percent) found such services helpful.

Italy

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: OECD 2010 age-specific graduation rates

Highlight 6: Internships are limited and ineffective.

Fewer than half (46 percent) of Italian youth completed a work-placement, well below the survey average (61 percent). And these internships did not prove all that useful; there is only a 6 percent decrease in the likelihood of a young person being unemployed six months after leaving education if they have undertaken one; compared with a 36 percent decrease in France. Our conclusion is that internships in Italy are not providing young people with the skills they need most.

Highlight 7: Young people rely to a large degree on personal networks to find work.

The communication gap is not just between employers and education providers, but also between employers and youth. Young people rely heavily on their personal networks to find jobs. Education providers generally do not prepare and support young people in the job search, and coordination with employers is rare.

Portugal

Portugal has suffered greatly during the recession, with the overall employment rate dropping by almost 8 percentage points and youth unemployment rising to 37 percent. Beyond the general economic conditions, problems with its education-to-employment system are not helping: only 47 percent of young people believe that their post-secondary studies improved their employment prospects. As an example, employers are not finding the skills they need: 30 percent report not filling vacancies because they could not find a candidate with the right skills. Things are obviously broken along Portugal's E2E pathway.

Enrolling in education

Highlight 1: Affordability is an important issue.

Even though tuition is heavily subsidised (fees are less than €1,000 a year), there is little provision to assist with living costs. Almost a third (31 percent) of Portugal's young people reported having no time to study because they had to work, the highest figure among the surveyed countries. Portugal also had one of the highest percentages (38 percent) of youth who wanted to take further education but weren't able to afford it. Another cost factor may be that 45 percent of youth have to move away from their hometown to continue their studies.¹¹

Highlight 2: Information gaps are significant.

The vast majority of students (86 percent) did not agree they received sufficient information on job opportunities before leaving secondary school; almost as many (78 percent) say the same about post-secondary disciplines or fields of study. It is safe to assume that they are not well informed on how to manage the costs of studying or the support available to them, which further accentuates the cost issues.

The social stigma against vocational education is not helping either. Only 44 percent of students who would prefer to pursue vocational education do so, despite 85 percent believing that vocational education is most helpful to find a job.

Building skills

Highlight 3: Lack of skills is a serious business issue.

Employers report that they are facing a skills shortage in two respects. First, only 46 percent believe there are enough graduates from the relevant education/training programmes. Second, not only are youth studying the wrong things, they are not being taught the skills they need in the process. Three in ten Portuguese employers report not filling vacancies because they can't find candidates with the right skills. This is a particularly critical issue for small businesses. When we looked at how employers gauge the importance of particular skills, we found Portugal has the largest skills gap in both problem-solving and English proficiency. In addition, employer dissatisfaction with the level of hands-on experience of Portuguese youth was second only to Italy.

Students share employers' dissatisfaction. Less than half (47 percent) think their post-secondary education improved their employment opportunities. Although this is slightly better than the survey average, it is still a low number. The disparity in unemployment levels between university students is another sign that many students are not learning the skills that will equip them for the workforce. As an example, university graduate employment rates vary from close to 100 percent in medicine and top engineering and economics courses to below 50 percent in some social services and education courses, with significant regional variations (for example, there is higher unemployment in the interior).

Also 40 percent of young people who are working are in an interim job that they see as a stopgap until they find more suitable employment:

Portugal

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24, Education: OECD 2010 age-specific graduation rates, PORTDATA

Highlight 5: Portuguese employers have the least communication with education providers.

Few Portuguese employers communicate several times a year with providers (33 percent), markedly fewer than survey leaders, such as the United Kingdom (78 percent) or Germany (74 percent). One result is that employers and providers have completely different views on how prepared young people are for work: 80 percent of providers believe that young people are adequately prepared for entry-level positions but only 33 percent of employers agree.

Finding a job

Highlight 6: Information gaps are significant.

Only 24 percent of young people surveyed report they had received information on post-secondary job prospects and wages. This is the lowest figure among the countries surveyed, even though Portuguese young people are second only to the French in considering the information they do receive to be useful.

Done right, careers services can have substantial impact. Data from all countries shows that providing application and interview support leads to a 17 percent reduction in unemployment six months after graduation, while a positive impact of up to 20 percent can be achieved when young people visit companies, or through résumé and interview assistance.

Highlight 7: Work placements are effective but limited for academic students.

Work placements appear to work in Portugal; taking a work placement leads to a 21 percent decrease in the likelihood of being unemployed six months after graduating, a result second only to France. Opportunities are common on the vocational track: 88 percent of students take some form of work placement, but much less so for the academic one (68 percent).

Spain

Lack of demand is clearly a major factor in Spain's high youth unemployment rate (57 percent in 2013). But it is not the only one, and Spain cannot rely solely on economic growth to get its young people into stable and satisfying work; there is significant room for improvement in its E2E system.

A. Enrolling in education

Highlight 1: A critical percentage cannot afford post-secondary education.

Almost one in three young people (29 percent) report being unable to obtain post-secondary qualifications because of cost. That is fewer than in Greece (42 percent) or Italy (39 percent), but is still much too high. Separately, 27 percent of students say that they don't have time to study because they have to work.

Young people are also distanced from post-secondary education by a lack of information. Only 23 percent said they had received enough information on post-secondary fields of study; even fewer received information on job opportunities (18 percent). These figures are well below average.

Highlight 2: There is considerable social bias against vocational training.

Many young people say they would like to follow the vocational path, yet only 40 percent of those who want to follow this track do so (compared to 86 percent of those who prefer an academic track). One reason is that vocational training is regarded as a lesser option; only 28 percent of Spanish youth believe that society values vocational training more than academic.

Incredibly, 77 percent of students at university believe that vocational education is more helpful than a college degree when it comes to finding a job. Students also express a desire to go into professions where technical vocational training is valued; more of them say they are attracted to professions like web developer or graphic designer (67 percent and 62 percent respectively) than to become lawyers or doctors (47 percent and 42 percent). In short, social stigma means that vocational education is not as strong as it could be. In this regard, it is encouraging that Spain started creating a dual apprenticeship programme in November 2012 to increase the amount of vocational training on offer to young people.

B. Building skills

Highlight 3: Lack of skills is a serious business issue.

In many professions there appears to be a misalignment between labour supply and demand. This misalignment may be a consequence, in part, of the large and sudden shift in Spain's economic profile since the financial crisis. For example, the number of people employed in construction has dropped 62 percent since 2005, but the number of students graduating in architecture and building increased 174 percent over the same period.¹²

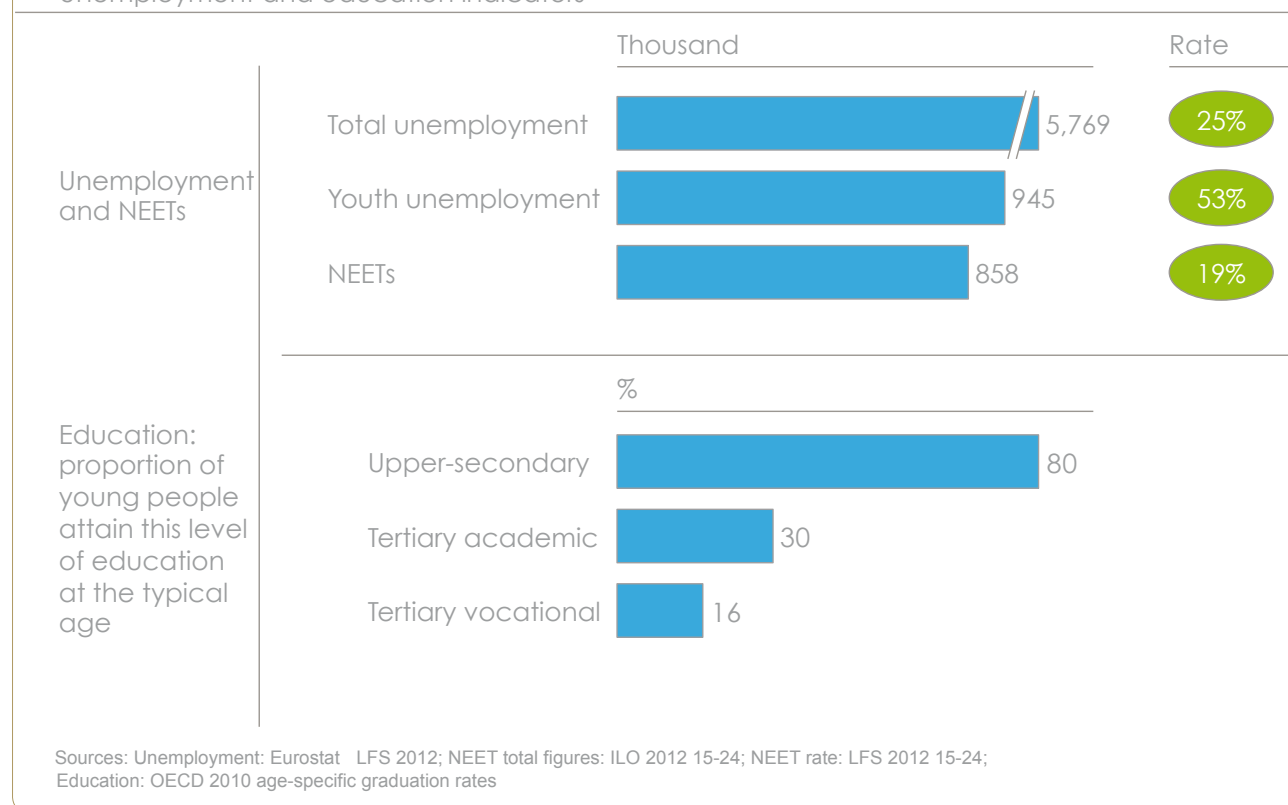
Education providers, it is fair to say, have been slow to adapt to post-crisis economic realities. This is not helped by the structure in which they operate. In part because of Spain's highly regionalised (and fiercely defended) education system, providers have little incentive to coordinate their offerings nationally.

Young people are also not learning the general skills that employers need. There are large gaps between the number of employers rating certain skills as important compared with the number who rate youth as being competent, particularly in problem solving (a gap of 22 percent) and English proficiency (23 percent). A third of employers report that a lack of skills is causing significant problems for their businesses.

Business, however, must also bear some of the blame. There is evidence that employers fail to communicate effectively with providers: only half of employers surveyed communicate with education providers on the topic of skills several times a year or more;

Spain

Unemployment and education indicators



of those that do, only 52 percent consider this communication effective. Improved communication would help providers to better understand how to create courses that match the job market.

C. Finding a job

Highlight 4: The smaller the business, the bigger the problem.

SMEs are struggling. Only 31 percent report they find it easy to identify and recruit high-quality hires to entry-level positions, compared with 38 percent of large companies. However, it is the smallest (micro) companies who are not only having the most problems, but whose struggle has a substantial impact on young people.

In Spain, small firms cannot or will not dedicate resources to training young people, shutting off an important element of the economy. Very small businesses (fewer than ten employees) represent more than 20 percent of Spanish employment in 2011, but 70 percent of them prefer to hire experienced employees (compared with 31 percent of larger businesses).¹³ With an overall unemployment rate of 27 percent, they have a big enough pool to recruit from not to have to engage with young people.

Highlight 5: Post-secondary students are getting too little career support.

Only 27 percent of students said their education providers offered them information on job prospects and wages; only 36 percent had help with services such as résumé preparation. This matters because our research found that these services have a substantial impact on how quickly students find work. For example, providing information on job prospects and wages reduces the unemployment rate six months after graduation by 4 percent, and supporting with résumé preparation and review yields a 15 percent reduction.

Highlight 6: There are not enough work placements.

Although work placements are associated with significantly lower unemployment, only a little more than half (54 percent) of academic students, and 66 percent of vocational ones, took internships during their education.

Sweden

As in most of the eurozone, youth unemployment in Sweden has been stubbornly high for years. Except for a brief dip in 2007, it has stuck at more than 20 percent since 2005, peaking at 28 percent in 2009. On the other hand, only 8 percent of young people in Sweden are not in education, employment or training (NEET), a very low figure.

There are two main reasons for this. The first is that vocational education in Sweden follows a school-based rather than a workplace-based apprenticeship model. Young people on workplace-based models, such as that found in Germany, are generally counted as employed, pushing the unemployment rate down. Secondly, students on academic courses in Sweden frequently search for work in the summer (or as extra work during the semesters), leading many to be counted as unemployed, even though they are studying for a full-time degree.

Nevertheless, Sweden still struggles with E2E challenges familiar to countries elsewhere in Europe. In particular, access to information about careers is poor for many young people, both at school and in tertiary education. And for those who want to pursue a non-academic path to employment, the path to follow is not clear.

A. Enrolling in education

Highlight 1: Information is a big gap.

Sweden had the lowest percentage of young people reporting that they were well informed when making decisions on what to do after secondary school. Only 24 percent said they received sufficient information about different fields of study at secondary school, and only 14 percent of Swedish youth knew enough about job opportunities. That percentage is lower than all other countries surveyed except Greece, even though every high school in Sweden is mandated to have a guidance counsellor.

The problem of poor information continues into post-secondary education. Only 42 percent of youth reported that they had access to careers services and fewer than half of those (42 percent) found the services to be helpful. That was significantly below the European average (61 percent).

Highlight 2: There are significant barriers to pursuing vocational education.

There appears to be unfulfilled demand from young people in Sweden for opportunities leading to a vocational profession. Only 36 percent (the lowest proportion in Europe) of those who wanted to follow a vocational path did so, compared with 88 percent of young people who wanted to follow an academic path.

One driver may be social bias: Swedish youth reported the strongest social bias against vocational education of any country surveyed. Only 17 percent believed that vocational education is more valued by society than academic education, even though 70 percent considered vocational training more helpful in getting a job.

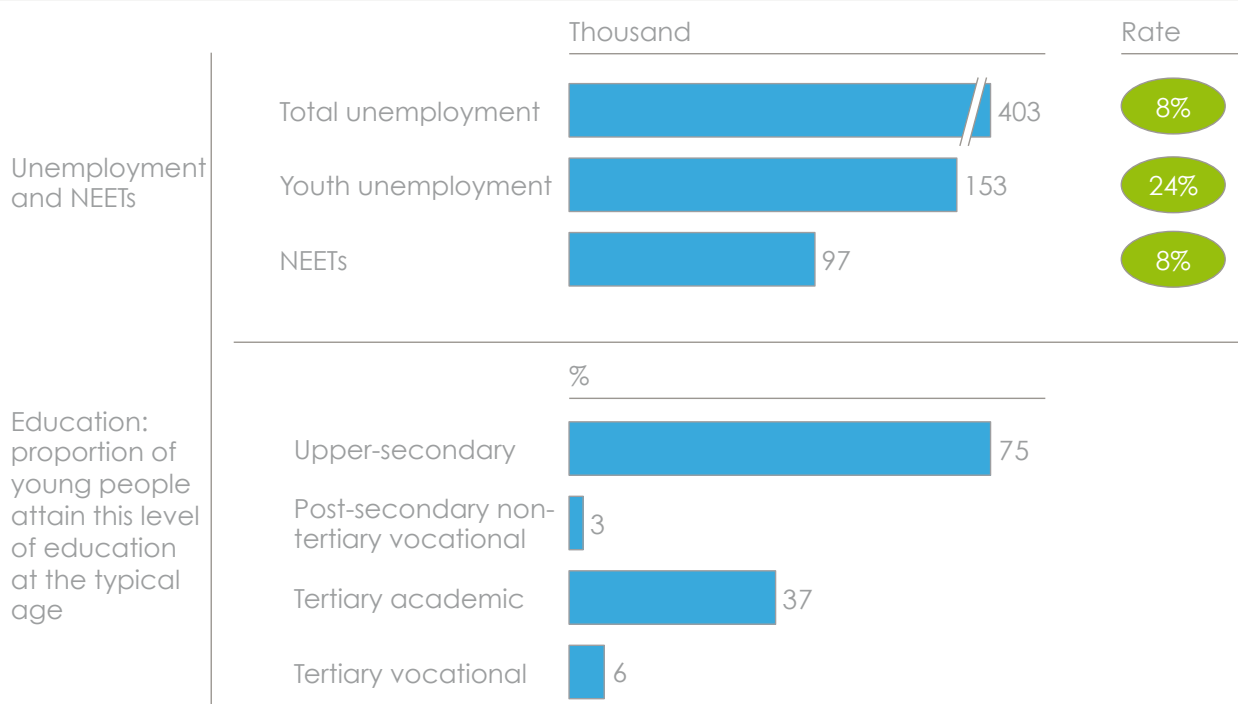
Despite social bias, there is demand from employers for more graduates of technical or vocational education. For example, at current rates, Sweden expects a shortage of 50,000 technical college and engineering graduates, and a 38,000 shortfall in those with a manufacturing education by 2030. Some of these shortages could be filled through more students following a vocational training pathway.¹⁴

Highlight 3: There is a problem of motivation.

Fewer young people in Sweden see cost as a barrier to post-secondary education than elsewhere—16 percent compared with an average of 30 percent across Europe. This reflects Sweden's generosity: tuition is free and, because of substantial grants and loans, living costs are not crippling either. That's the good news. The bad news is that Swedish youth were the most likely (41 percent) to spurn post-secondary education due to lack of interest, the highest of the countries surveyed.

Sweden

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: OECD 2010 age-specific graduation rates

Of all the countries surveyed, Sweden has the highest proportion of young people in the “Meanderer” segment—those who have support but limited desire to improve their employability. This may be a reflection of lack of suitable information, the difficulty of pursuing a vocational track, and many of the courses available to young people not providing a clear path to employment.

B. Building skills

Highlight 4: Lack of skills is a serious business issue.

One in five (21 percent) Swedish employers reported that a lack of skills is a common reason for entry-level vacancies, and 31 percent that a lack of skills caused significant problems. However, the problems are not consistent across all types of skills. Young people largely met employers’ needs in maths, knowledge of their discipline, and English proficiency. But the number of employers who rated youth’s competence in a skill as highly as the importance of the skill was wider in soft skills, such as work ethic (19 percentage-point gap) and ability to work in teams (18 points).

The trend in the PISA (Programme for International Student Assessment) rankings for Sweden suggests skills will become more of an issue for the next generation entering post-secondary education. In 2013, Sweden’s maths, reading, and science scores dropped by 16, 15, and 10 points respectively, leaving it performing worse than the OECD average in all topics.¹⁵ Declining attainment at secondary level combined with substantial lack of interest in continuing beyond upper secondary school, means fewer young people attain their potential.

Highlight 5: There is a problem in communication.

Only 40 percent of employers in Sweden report communicating with providers a few times per year or more, fewer than in any other country surveyed except for France or Portugal. And even where employers and providers did interact, only one in five employers found the interactions effective—fewer than anywhere else except Italy. It is no surprise, then, that the perceptions of employers and providers are seriously misaligned: whilst 74 percent of providers responded that their graduates were adequately prepared for the workforce, only 33 percent of employers agreed.

C. Finding a job

Highlight 6: Many youth doubt the value of their education.

Barely half (51 percent) of Swedish youth believed that their post-secondary education improved their employment chances, better than average but hardly encouraging. While 57 percent of university graduates and 61 percent of those who had undertaken vocational training considered their education useful, only 31 percent of those who had not finished college or held an associate's degree agreed.

United Kingdom

In late 2013, there were 940,000 unemployed 16 to 24-year olds in the United Kingdom, putting the United Kingdom's youth unemployment rate at 21 percent.¹⁶ Almost one in three (29 percent) of those unemployed had been without work for more than a year, and young men were conspicuously more likely to be jobless (23 percent) than women (18 percent).

Relative to the other countries surveyed, United Kingdom employers are generally satisfied with the skills they see available from potential hires. The university system is strong and young people have access to good sources of career information.

Even so, the United Kingdom could do more to turn this potential into higher achievement. First, too few young people are persuaded of the value of technical and vocational qualifications. Second, most young people graduate without completing a work placement. Third, many young people are disappointed with their employment opportunities after completing post-secondary education.

A. Enrolling in education

Highlight 1: There is an imbalance in course enrolment between academic and vocational courses

Only 12 percent of United Kingdom young people gain a post-secondary vocational qualification; in contrast, more than four times this number go to university. However, more than a quarter (27 percent) of young people with an academic degree reported being unemployed six months after leaving education, compared with only 21 percent of those with vocational training. The United Kingdom is the only country surveyed where recent graduates of vocational courses are more likely to be employed than academic graduates. This indicates that the United Kingdom is not necessarily achieving the balance between young people with each type of qualification that employers are seeking.

Part of the problem is the stigma attached to vocational education. Two-thirds of young people said that society values academic education more than vocational training. Perhaps because of this perceived stigma, only a bare majority (53 percent) of those who said they would prefer vocational education

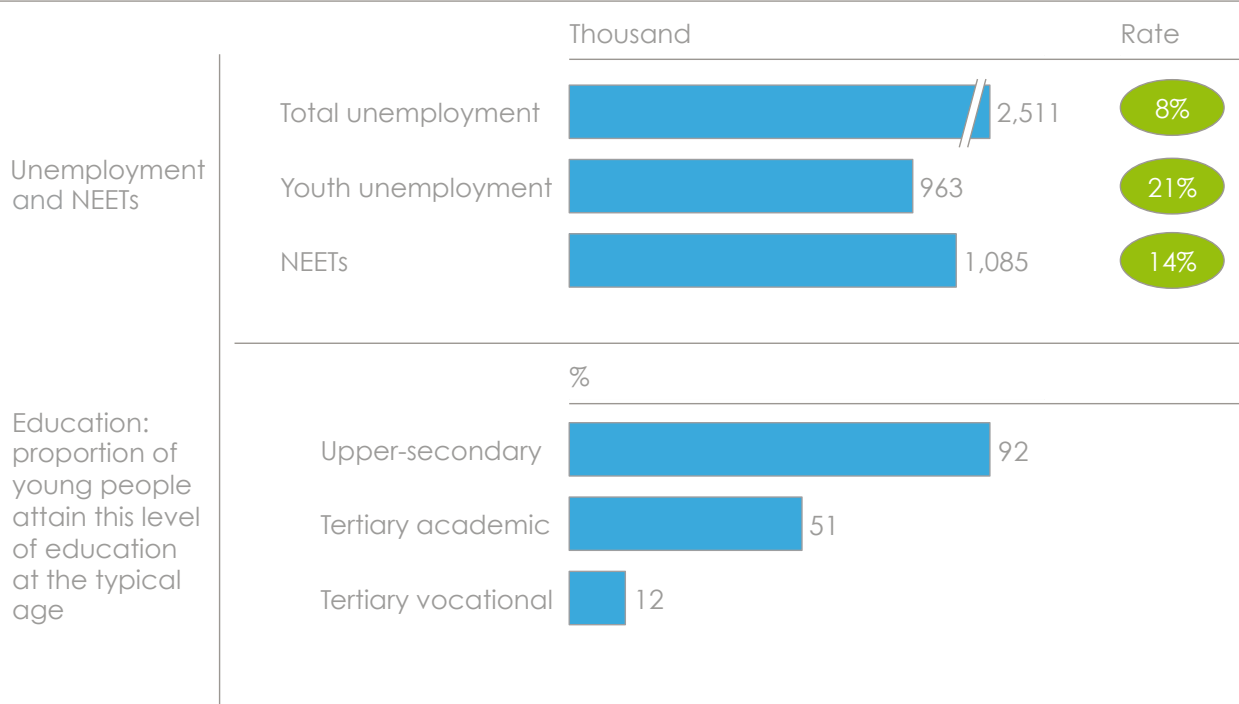
B. Building skills

Highlight 2: United Kingdom employers are positive about skills levels, compared with others in Europe, but a shortage of STEM skills remains a problem Compared with the other countries surveyed, the United Kingdom does well on skills. This, at least, is the view of business. Fewer than one in five employers (18 percent) said that lack of skills caused them problems, the fewest of any country in the survey, and well below the survey average of 33 percent.

The strength of the United Kingdom university system may be a part of this. According to the annual QS survey, the United Kingdom has 19 of the world's top 100 universities, almost as many as the rest of Europe combined (22).¹⁷ The university system also serves a large number of secondary-school leavers (51 percent). Nevertheless, the United Kingdom faces a skills crunch in areas related to science, technology, engineering, and maths (STEM). Projections suggest the United Kingdom needs 40,000 more STEM graduates each year in the next decade—an increase of almost 50 percent—to meet demand.¹⁸

United Kingdom

Unemployment and education indicators



Sources: Unemployment: Eurostat LFS 2012; NEET total figures: ILO 2012 15-24; NEET rate: LFS 2012 15-24; Education: OECD 2010 age-specific graduation rates

C. Finding a job

Highlight 3: There is a gap between ambitions and outcomes.

In our segmentation of young people (Chapter 1), the United Kingdom had relatively high proportions of two segments, the 'Dreamers' and the 'Persisters'. These segments are comprised of young people who had access to post-secondary education and had a strong desire to succeed, but did not receive much support in terms of information about possible jobs and what to study, and were dissatisfied with the quality of their education.

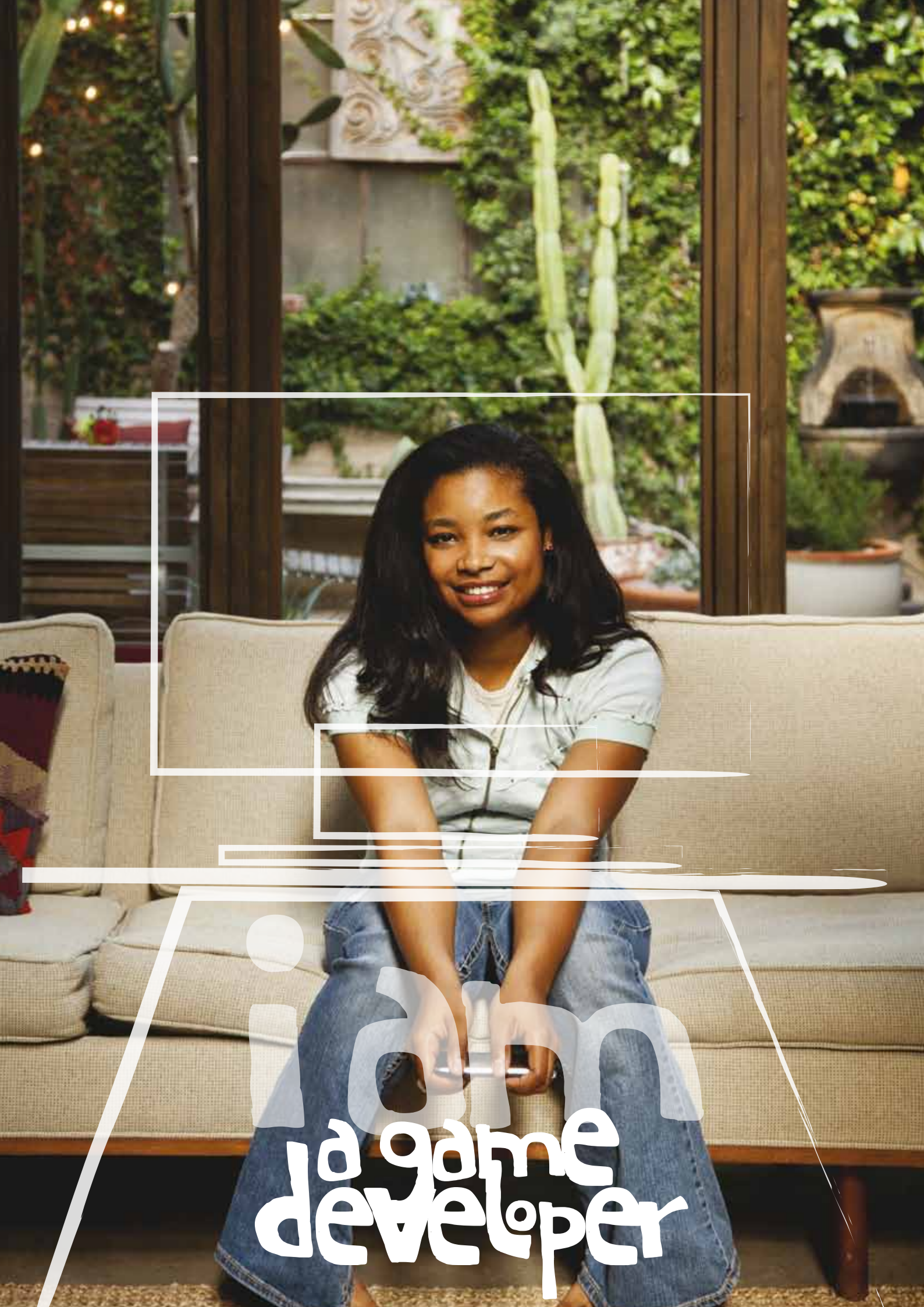
Part of the problem for young people may be in knowing what they want. Many United Kingdom youth seem less motivated toward specific professions compared with other countries. When asked whether they were attracted to working in a selection of 22 professions, ranging from high to low-skilled, United Kingdom youth ranked in the bottom three countries (of the eight surveyed) in 19 of them.

Highlight 4: Access to career information is improving, but work placements opportunities remain limited.

Only in the United Kingdom did over 50% of young people report access to career support services at their post-secondary institution. Graduate employment rates are published, so prospective students can make decisions based on which institution will help them find a job. In addition, a National Careers Service launched in 2012 brings together careers information for young people and adults in a single website.

Practical experience is less easy to come by. Compared with the other survey countries, the United Kingdom reported the lowest number of young people undertaking work placements (45 percent of vocational students and 33 percent of academic ones, compared with a combined average of 61 percent). There is no work placement requirement in most academic courses and there is little financial support available for unpaid placements.

In vocational education though, the situation is gradually improving. The number of young people completing apprenticeships in the United Kingdom has risen. Between 2009 and 2012 there was an increase from 280,000 to 521,000 apprenticeship starts. However, younger people are seeing only part of the benefit: three quarters of the increase was attributable to apprentices aged 25 and over.¹⁹ Meanwhile, the work-based element of the apprenticeship also varies widely depending on the programme framework.



i m

à game
developer



i am
an entrepreneur

Chapter 3:

Building a system that works for everyone

Tolstoy famously opened *Anna Karenina* by noting that “each unhappy family is unhappy in its own way.” The same is true of countries that are trying to cope with unhappily high levels of unemployment: the extent of joblessness varies widely; so do the underlying causes.

What can be said, however, is that there are common problems—and common principles can help to address them. In the research for our 2012 global report, *Education to Employment: Designing a System that Works*, we looked at how more than 100 programmes in 25 countries approached the three critical intersections of the education-to-employment journey (enrolling in post-secondary education; building skills; and finding a job).

One important conclusion of this research was that the best E2E systems work because they can count on the strong involvement of governments, educational institutions, industry associations, individual companies, nongovernmental organisations, students, and parents. Another was that comparatively few meet this standard. In this section, therefore, we look at how to get more stakeholders more involved.

Part I, considers how to improve the affordability of higher education and better prepare students for the choices they must make.

In Part II, we look at how the stakeholders should understand their place in the E2E journey. We start by discussing ways to improve the information available to young people, how they obtain it, and how to encourage them actually to use that information. Then we consider what education providers can do if they shift their focus towards ensuring their students find employment as the most important outcome, and how employers can get involved in helping young people to prepare for employment earlier in their education.

In Part III, we provide ideas on how to create education-to-employment systems that work on a national level. We examine the importance of “system integrators” that track the E2E journey, provide information, and form labour-market strategy. We look at how collaborations between employers and providers can be set up at a national level, making it easier to organise and scale partnerships. And we look at how technology can provide skill-building solutions accessible to a wider range of employers, education providers, and young people—not just the lucky few. Finally, we suggest how the European Union can develop common strategies to identify and then replicate success.

“We have identified four ways to make education more affordable: 1) instructional models that allow shorter and more flexible course options; 2) delivery methods that enable students to learn from home and at convenient times; 3) alternative financing options; and 4) employer-payment solutions.”

3.1. Part I: Improving affordability

Most European countries offer subsidised tuition for higher education and they are generally successful in this; only 19 percent of the young people surveyed said they could not afford tuition. Nevertheless, almost a third (30 percent) still said affordability was an important factor in not enrolling; in Greece, Italy, and Portugal, the figure is closer to 40 percent. The burden has to do with paying for living costs, and forgoing possible income.

We have identified four ways to make education more affordable: 1) instructional models that allow shorter and more flexible course options; 2) delivery methods that enable students to learn from home and at convenient times; 3) alternative financing options; and 4) employer-payment solutions.

1. Instructional models: If students can take courses that provide essential skills at less cost while getting them into the job market faster, more would be able to take up training. That is the thinking behind many of the courses provided by TAFE (Technical and Further Education), the government-established vocational provider that serves about 1.6 million Australians a year. TAFE offers numerous short-duration courses that enable students to accumulate qualifications bit by bit and eventually lead to higher qualifications.¹

Modular courses like those developed by TAFE or AMTEC (Automotive Manufacturing Training and Education Collective—see Part III) help students to custom-design

their learning. They can combine, sequence, and time their learning in the way that makes the most sense for their circumstances and personal goals: for example, they may choose to take two modules to enable them to find immediate employment, then return a year later to take additional ones to upgrade their skills or complete a degree. One significant advantage of this approach is that trainees can work as they study—if they need or want to—or between periods of study. This is more difficult in conventional courses, which tend to have more rigid requirements. Another advantage is that modular courses show employers the specific skills acquired. Finally, it is easier to adapt modular courses to changes in demand; modules that are no longer relevant are simply dropped and new ones can be readily designed to suit the needs of specific employers. All in all, modular courses reduce the burden of investment and improve the attractiveness for young people to invest in education.

2. Delivery models: Lowering cost in a way that makes education more broadly affordable may require more disruptive models, such as distance learning. This is not a brand new idea—there have been distance-learning experiments since the 1970s. The UK's Open University began its first courses, via television, in 1971. FernUniversität in Hagen, Germany opened in 1975, as a public distance-teaching university where students and professors sent assignments back and forth via the postal system.²

The FernUniversität now has 88,000 students and has continued to innovate, developing both an online and a physical presence. Today, it has an extensive programme with lectures, support, libraries, and research; all administrative tasks, such as registration and exams, are available online. It has 38 study centres across Germany and neighbouring countries (including Austria, Russia, and Hungary). FernUniversität charges a credit-hour-based fee, which offers the student a more flexible pay-per-use scheme.³

More recently, the advent of streaming technologies has boosted interest and experimentation in online learning, such as Massive Open Online Courses (known as MOOCs). MOOCs can be accessed from anywhere with an Internet connection, and some have racked up enormous numbers of students. Prestigious institutions and universities are getting in on the action: MIT and Harvard are developing edX; its first course—on circuits and electronics—in March 2012 attracted almost 155,000 students in 194 countries. While MOOCs clearly enhance access, the jury is still out on whether they effectively support student learning, let alone whether they enable students to find better job opportunities. It is very much an open question whether students who take MOOCs have the same commitment as those enrolled in more traditional forms of learning. For example, only 5 percent of those who signed up for the 14-week edX course finished it—a rate that is typical.⁴ The University of Pennsylvania recently analysed the results of 16 MOOC courses with one million students; it found a completion rate of just 4 percent, with participation dropping sharply after a week or two. One of the earliest MOOC providers, Advance Learning Interactive Systems Online (ALISON) has registered 2.5 million learners since 2007, and a 12 percent graduation rate. That is very low compared with conventional classroom courses (68 percent in the OECD).⁵

This kind of comparison may be the wrong way to look at MOOCs. One of their important characteristics, in fact, is that students can readily drop one and add another as they refine their learning and career journey.

A survey published by Qualtrics and Instructure Partner in July 2013 found that 29 percent of the students who dropped out of MOOCs said the main reason was the learning experience didn't match their expectations, the same percentage as those who said they were too busy to finish. If students are treating enrolling in a MOOC as they do attending an open day, lower completion rates are to be expected.

It is simply too soon to say how MOOCs can best be deployed for the widest population. The early evidence suggests that it is those with the greatest ambition and keenest desire to learn—such as the High-achiever and Persister segments (see Chapter 1)—who are likely to benefit most from the MOOC model's facility to provide the skills they need at low-cost. Members of the other segments, who struggle more with motivation and direction, will need support to use MOOCs well, either in the form of opportunities to work face-to-face with peers or tutors off line, or by combining MOOC learning with attendance at a local study centre, along the lines of the FernUniversität model.

One way to help people who need a closer link to their educational establishment is to combine face-to-face and distance learning via Small Private Online Courses (SPOCs). These are restricted-access online courses with associated collaboration tools, such as discussion boards. For example, HarvardX's first SPOC, a law school course on copyright, debuted in January 2013 with 4,100 applicants worldwide being screened to form the 500-student online class.⁶

3. More and better financing options: Besides reducing costs for students via flexible and online courses, students may also be supported with structured low-interest and long-term financing. This does not by itself reduce the cost of tuition, but it does lighten the one-shot burden that students and their families incur to fund post-secondary education, along with the associated living costs.

Strengthened state-financing may involve government-supported loans as is the case in Sweden and the UK. For almost a century, Sweden's student-aid authority—Centrala Studiestödnämnden (CSN)—has offered study grants and long-term loans to cover tuition and living costs; in 2013, it supported more than 900,000 students from certified universities. Students are granted funds upon enrolment and continue to receive these if they successfully continue their courses; the level of support makes it economically feasible to complete further education. The CSN also has a “study now, pay later” programme that offers low-interest student loans that may be repaid over a period of up to 25 years. On the one hand, this system ensures that socioeconomic position is not a major barrier to access to university in Sweden: the country has fewer students citing ability to pay as a factor and a relatively large percentage in the ‘High-achiever’ segment. On the other hand, the ‘Meanderer’ group is also over-represented, suggesting that some young people get



i am
a reporter

through post-secondary education without fully appreciating the value of the opportunity it is giving them. In 2012, only 13 percent of those with repayment plans were granted (temporary) payment reductions during the year because of low income or other repayment difficulties.⁷

In the UK, the non-profit Student Loans Company (SLC) has run a loan programme since 1989. The SLC is owned by the government's Department for Business and Skills, and regional governments in Scotland, Wales and Northern Ireland. Its remit is to pay loans and grants to students, and tuition fees to universities, and to subsequently collect repayment. Maintenance loans are available to all students attending a UK university, covering tuition fees and living costs, and are applied for at the start of a college or university course. The loans are offered at a below-market interest rate, with up to 30 years to repay, and with payments only required once the borrower is earning above a minimum threshold.

According to an SLC report from June 2013, close to two-thirds of graduates from 2000 to 2011, with one tax year processed, are either paying or in a position to do so.⁸ About three in 10 (29 percent) are not currently required to repay because of low income or unemployment.

Another option is to have students repay loans and/or fees with voluntary faculty work. Pratham, India's Institute for Literacy Education, provides skills training to young people who then volunteer to tutor and mentor primary school students. Since April 2011, 60,000 young people in 17 Indian states have been trained in digital-literacy skills with the support of voluntary faculty; this is being expanded to include foundational employment attributes, such as business language, English, and social skills. This model could be replicated in Europe.

Financing programmes can help improve access to education while limiting the costs to taxpayers. However, there is a balance to be struck between guaranteeing young people have enough financial security to allow them to concentrate on learning and building skills, and ensuring that they fully evaluate and appreciate the opportunities offered to them by post-secondary education.

One idea currently being considered in the United States is to tie student loans to university ratings: this, among several metrics, ensures that students are financed for courses that lead them to employment. "We need to rate colleges on who's

offering the best value so students and taxpayers can get a bigger bang for their buck," President Obama said in August 2013.⁹ If this idea comes to fruition, the United States will have a university rating system in place by 2015 and adjust financial aid to provide more support for universities with better rankings. Even though the system is not defined yet, the debate and outcomes are surely worth watching.

4. Employer-payment solutions: Another way to improve affordability for young people is for employers to assume more of the costs of post-secondary training; in return, the companies get first shot at a pipeline of qualified and willing workers. Two examples, from Egypt and the United States, illustrate how this can be done.

Americana—Egypt's leading restaurant, food processing, distribution, and retail company—was having difficulty finding the right people to meet its standards.¹⁰ So it worked with government and academic bodies to create external training programmes specifically for this segment of the hospitality industry. Programmes offered range from a five-year hotel secondary school diploma to a four-year Bachelor of Sciences degree in related fields (restaurant management and agribusinesses). Americana pays the tuition and all programmes follow an "earn and learn" model whereby students gain practical work experience while studying. Graduates are given employment opportunities within the Americana Group, but can also go elsewhere.

Employers can also be called to pay for training upon hiring skilled graduates. For example, at Dev Bootcamp, a for-profit nine-week intensive course for code developers, employers pay a fee for each graduate they hire as soon as the employee completes 100 days in a job. At that point, Dev Bootcamp also reimburses a significant portion of the tuition back to the student. The course provides a practical, hands-on training programme—it calls itself an "apprenticeship on steroids"—that pays close attention to the needs of local labour markets (San Francisco, Chicago, and in 2014, New York).¹¹ Instructors are working practitioners in the field. In 2012, Dev Bootcamp said over 90 percent of those who finished the course found a job within two months, with an average salary of more than \$80,000.

3.2. Part II: Better mindsets, better results

In an increasingly competitive global labour market, all the players need to raise their game. Students need to accept

responsibility for their careers from an early stage; that means learning the basics of the qualifications, pay, conditions, and prospects for the professions they are considering. Education providers should accept their own share of responsibility, and make a point of understanding what employment rates are for their students after graduation, and take action to increase them. Governments, in fact, could require that information. As for employers, they ought to get involved long before the hiring stage, supporting educators in curriculum and practical training design, providing internships and work placements to students, and working with other companies to create industry-wide partnerships to develop standard industry curricula and reach scale in hiring and training functions.

In the following pages, we examine how youth, education providers, and employers can support themselves—and each other—to create the conditions for a more robust and effective E2E system.

Youth

The power of information: In the Internet age, information is ubiquitous and cheap. Even so, many young people don't manage to find it, or if they do, are too overwhelmed by the volume to filter what is useful. When deciding their fields of study, for example, only 28 percent of those surveyed knew the successful job placement rates of the courses they choose. A quarter didn't believe that further education would advance their careers; another 16 percent said they did not know enough to make informed decisions. In part, these are youthful mistakes: many students in Europe have to make crucial decisions about their future around age 15, and teenagers, as a whole, are not known for long-term planning.

To help them out, here are some initiatives to consider:

- improving the quality and quantity of information available to young people, for example with a national online portal that contains data on careers, education pathways, and job and wage prospects
- encouraging young people to use the information available to them, early in their journey, and at the most important moments along the way

- creating marketing campaigns that attract students to professions that need their skills and make clear what they need to do qualify for them

To start, governments could make more and better data available about vocational and academic programmes and their results. An example is the UK's National Careers Service (NCS): this centralised online repository of labour-market information features comprehensive job profiles with information on salaries, hours, qualifications, industry trends, and training programmes. It also provides individualised counselling. From its launch in April 2012 to March 2013, the website has received more than seven million hits and enabled more than a million face-to-face sessions with qualified careers advisers. Of those who progressed into employment, almost half said the service had played a role in it. Currently, however, relatively few young people appear to be aware of the service; those 18-and-under are less than half as likely as adults to use it.¹³ That said, it is early days yet, and the NCS demonstrates one way to offer accessible, useful information and services.

Switzerland offers an interesting model for a related issue: engaging young people early and often. For many of those in pre-secondary or secondary school, career planning is not nearly as much of a priority as this week's exam or next weekend's activities. It is easy to put off because work seems so far away. Nevertheless, because European students need to make important life decisions at such a young age, it is critical to ensure that they have access to career planning and related materials before they do.

In Switzerland, students take advantage of the structured career counseling process in place to decide on one of three options to pursue after completing the 9th grade (14-15 years old): baccalaureate, upper secondary specialised school, or vocational education. In the canton of Bern, these conversations start at age 12, and include parent meetings.¹⁴ The following year, there are job forums, lessons on career choices, and "orientation internships" with local employers that the students themselves must arrange. In addition to all this, young people may also use the *Berufsinformationszentren* (BIZ) occupational and information centres, which are independent from schools and universities, for information and advice.¹⁵ And they do use them; 85 percent of vocational students said they have used these resources to learn about their options.¹⁶

“When deciding their fields of study, for example, only 28 percent of those surveyed knew the successful job placement rates of the courses they choose.”

Another critical decision point comes after secondary school. Information often fails to reach high-performers from poorer economic backgrounds, such as the Dreamer segment (see Chapter 2). Such students tend to make decisions based on proximity to home and parent's counselling and can miss out on better opportunities as a consequence. A recent Stanford Institute for Economic Policy Research discussion paper looked at precisely this issue.¹⁷ The intervention suggested by the study was simple and cheap: send personalised mail packages (including an applications guide, brochure with graduation rates and college deadlines, request forms, reminder magnets, financial aid guide, list of state merit and need aid, and fee waiver guide) to high-performing, lower-income students. Those who received the pack behaved differently, submitting almost 20 percent more applications and applying to more selective universities.

Selling qualifications toward professions: The professions that young people say they want to enter include many jobs that require vocational qualifications, not academic ones (Exhibit 31). The young people surveyed were at least as likely to be attracted to becoming a web developer as a financial analyst, engineer or lawyer. However, in most countries, they also feel there is a social stigma against taking up vocational education. In fact, a majority of those who said they would prefer vocational training still went into academic courses instead, as a result of these perceived social pressures. This matters: vocational training enables students to learn specific, job-oriented competencies and is part of the

solution to narrowing the skills gap that so many employers complain about.

A revamp of the image of vocational education is therefore required. The Institute for Technical Education (ITE) in Singapore shows one way of doing this. In the 1980s and early 90s, Singapore's national vocational and educational training (VET) programme was widely derided as a place of last resort for the not-so-intelligent¹. In order to overcome this unfair perception, ITE systematically transformed its image, upgrading its instructors and infrastructure and improving its curriculum. It put together branding campaigns with catchy slogans like “Thinking Hands Create Success” and “We Make You Shine” to reach youth, parents, and teachers. The idea was to present ITE as a different option, not a lesser one, and it appears to be working. In 2012, an ITE survey of employers showed that ITE students are well regarded and their employment rate is above 90 percent for the majority of courses. Also, in an independent image tracking study which is conducted every three years, public perception of ITE more than doubled from the benchmark 34% recorded in 1997 to 70%, measured in 2013.

In sectors where there is a shortage of labour—or likely to be one—more comprehensive measures may be required. In the US state of Alabama, for instance, the construction industry saw that there were lots of retirements looming, even as young people appeared to reject the sector as a career option: two-thirds of 18-to-26 year olds had very little or no interest in

an industrial construction career. So in 2010, the Alabama Construction Recruitment Institute (ACRI) collaborated with a public relations and advertising firm to launch a five-year campaign to improve the perception of the construction trades—tagline: “Go Build”.¹⁹ The campaign enlisted a well-known local TV host and aired ads statewide. The group also created a website with information on training options, salary, and career profiles, and distributed material at careers fairs and other venues. Within the first four months, the official website recorded 56,000 unique web users, 159,000 page views, and 3,500 registered users with 99 percent of users reporting the site as useful or very useful.

Education providers

With their central role in the upbringing of young people, education providers are well placed to work with them to provide the information they need to determine their career. Equally, their important role in the community means they are also well placed to work with employers in order to identify, and meet, the needs of the workplace. However, one of the interesting results of our survey was the extent to which this doesn't happen: almost three-quarters of providers thought their graduates were ready to work—a much higher rate than either employers (35 percent) or youth (38 percent).

Collapsing the “parallel universes”: In nearly all of the surveyed countries, employers and educators do not communicate all that often, and don't find it all that helpful when they do. The inevitable result is that educators fail to deliver what businesses want. This is consistent with the findings of our global survey, in which we said that providers and employers were operating in “parallel universes”. And yes, young people, too, inhabit a world of their own. Because there are so few points of connection, the players do not understand one another—and it is the young who are hurt most.

Because what gets measured gets managed, it would be helpful for education providers to commit themselves to tracking the employment rates of their students after graduation—perhaps in stages of six months, a year, and two years. They could also follow-up on the careers that graduates choose after leaving. Such metrics would encourage schools to work more closely with employers and provide helpful data for current and future students.

In Colombia, the Ministry of Education established the Labour Observatory for Education in 2005. The ministry started by tracking student movements over time—where they went to pursue their post-secondary education, what qualification they graduated with, where they obtained their first job, and so on. After nine years, those bits of data have become important metrics. Users can look up employment rates by qualification, programme, and city; they can also compare the performance of different institutions by graduation rates, employment, and salaries. This data is creating transparency that benefits students individually, but the information can also be used on a wider, more sophisticated basis. For example, if analysis showed that starting wages for a particular field were falling fast, that could indicate an oversupply of labour, which governments and providers could respond to by decreasing the number of training places.

Creating structured work opportunities: In the majority of the countries surveyed, internships increased the probability of students obtaining a job within six months of graduation, ranging from a 3 percent difference in the United Kingdom to 36 percent in France. Moreover, students and employers both reported that hands-on learning improved job readiness and concrete problem-solving skills. In short, bringing young people and employers closer together can help both, and providers can play a catalytic role in doing so. It is important that employers do not use internships merely as a source of cheap labour, but rather as an efficient way to test young people and retain the best. One possibility is to create a defined career track, so that high-performing interns are either hired or given a certificate of performance.

Launched in 2010, Turkey's UMEM programme sees students taking courses based on the specific needs of the companies that sign up to the programme. Teaching is provided by both academic teachers and master craftsmen from the companies. The programme sets priorities by surveying the needs and vacancies of 5,000 firms.²⁰ The results were shared in public meetings and discussed with industrial employers. The campaign included advertisements—posters, brochures, and TV—and a 24/7 call centre to respond to enquiries. UMEM began in 19 cities and is now operating in 81. It had conducted 4,682 courses, and trained and employed 31,125 students by the end of 2012.

Another way to bring companies and providers closer together is through “junior enterprises”. These are non-profit

organisations created and managed by students in higher education, through which they can test and implement their theoretical classroom learning, and also develop an entrepreneurial attitude through the concept of “learning by doing”. Junior enterprises connect academic knowledge and the business world, providing businesses—particularly SMEs (small and medium-sized enterprises)—with state-of-the-art knowledge. There are now close to 20,000 European “junior entrepreneurs” between 18 and 25 years old. According to a 2011 EU survey, 79 percent of junior entrepreneurs start work immediately after graduation vs. an average of 59 percent for all students—and they also get paid more.²¹

Preparing young people to enter the job market:

Finishing a degree does not mean students are necessarily ready for the job market; career services can help bridge the gap. Our survey found that students were more likely to find employment if they had been provided with services such as interview practice, résumé preparation, and workplace visits. At Ilshin Girls' Commercial High School in South Korea, a full-time career counsellor assists students who want to enter the workforce without going to university. The counsellors help with career planning and job search, including holding mock interviews with faculty; the school has created a simulated office space to help students learn how to function. The school also invites representatives from different industries to speak about career options and has established a room to display the workplace accomplishments of alumnae. The success rate, defined as those who find work: more than 99 percent.

Employers

Employers as partners: Employers who partner up tend to see conspicuously good results. Companies are happy with the quality of their young hires; the youth are happy to have landed in the area that interests them; and providers can take satisfaction in a job well done. That is the ideal, which means that it is not all that common. But it does exist.

One option is for employers to help providers set up mock workplaces where they can literally see that students learn job skills and confirm that they are ready to get to work quickly. India's IL&FS Skills Development Corporation, a joint venture between the private-sector IL&FS and the National Skills Development Corporation, operates 18 schools and 355 centres in 24 states with 200,000 trainees in 2011. IL&FS has formed strong partnerships with more than 1,000 employers

dentist
scientist
retail
hotelier
designer
consultant
web designer
secretary
model
psychiatrist
florist
driver



i am
a make-up artist

to secure placements for students and ensure that the curriculum fits their needs. IL&FS also relies on its corporate partners to provide infrastructure for training centres in some locations and runs mock workplaces, for example a simulated hotel or retail establishment, with support from its corporate partners. In fiscal 2012, IL&FS trained more than 100,000 students, and reported an 85 percent placement rate.

A similar approach is showing results in China. Almost 2,000 companies work with China Vocational Training Holdings (CVTH), the country's largest training institute for the automotive industry. CVTH's database, combined with student surveys, enables it to match graduates to jobs. Three months after graduation, the employment rate is 80 percent, and many of the rest are either pursuing further education or have changed industries. The companies get trained workers; the workers get jobs. Everyone benefits.

Employers can get involved even more directly, by setting up their own accreditation programmes. Cisco shows how this can work. In 1997, recognising there was a dearth of IT skills, Cisco set up Networking Academies. These offer online interactive programmes and assessments, gaming simulations, social media collaborative tools, and entrepreneurship case studies. Cisco defined the curricula and provided resources. Then it worked with local institutions, including secondary schools, universities, vocational schools, prisons, and second-chance programmes to meet local conditions. The courses range from elementary skills—network installer and basic IT support—all the way to large-enterprise networking. More than four million students in 165 countries have enrolled worldwide since 1997, with 69 percent saying they obtained a new or better job, increased responsibility, or a higher salary after completing the course.²²

Finally, employers can work with other players to create internships that provide opportunities for young people to gain experience of the workplace. In France, there is a nationwide apprenticeship programme for young people (16 to 25), without any prerequisites.²³ The programme alternates practical and theoretical training and includes an employment contract (from one to three years) signed between the student, the training centre, and the employer. The cost is financed through an apprenticeship tax paid by the participating company, which also pays the apprentice's monthly salary. The employer receives a training support bonus from the region as well as a tax credit. In 2012, the

programme ran nearly 420,000 apprenticeships. Almost 30 percent of the trainees obtained a job with the company they apprenticed, and graduates also had a better job placement rate.

Another example is Apprenticeship 2000, a small, specialised programme on “mechatronics” (a discipline that combines mechanical engineering, electronics, control theory, and computer science) training developed by local employers in cooperation with the state of North Carolina. Providers worked closely with the companies to create a curriculum designed to meet specific business needs as well as state standards. Apprentices are hired upfront by one of the partner companies, and spend about half their time in school and half on the plant floor, working with a designated mentor. They are guaranteed a job if they complete the three-year programme.

3.3. Part III: Creating the conditions for success

Big problems require big solutions, and youth unemployment in Europe is a big problem. There are four approaches that, combined, could deliver real and sustained improvements.

1. Develop “system integrators”

It's hard to know where you're going if you can't see the road ahead. In the case of education-to-employment, the role of “system integrators” is to work with governments, employers, and providers to see the whole road, and then to help young people at all three intersections.

Right now, in too many countries, the E2E road is more like a series of roundabouts, with traffic moving both ways: there is lots of activity, but it's tough to make progress.

In Greece for example, at least four ministries and multiple agencies, institutions, and secretariats are responsible for skills development and employment. The Ministry of Education and Religious Affairs (MERA) is primarily responsible for education, but there are also at least ten independent institutions with fragmented responsibilities; of these, five different institutions focus on vocational training and life-long learning. In cooperation with MERA, the Ministry of Labour takes the lead on the transition from education to employment, working closely with the Public Employment Service. The Ministry of Development manages much of the financing through EU funds. It is, to use a word derived from Greek mythology, a labyrinth. Greece is not

unique in having developed such a complex and difficult-to-navigate process.

To overcome this problem, several countries have created what we call “system integrators”. These organisations are responsible for gathering data on skills and the labour market, evaluating policies, developing recommendations, and overseeing the results. There are several different kinds of system integrators, which differ both in their scope of activity and in the stakeholders who lead or participate in them. A country does not need all types, but it is important that some such entity is at work.

Overall system integrators are responsible for overseeing the entire system. They bring together partners from educators and employers, and use labour-market research and information to create a unified strategy. Australia created the Workforce and Productivity Agency (AWPA) in 2012 to improve collaboration among industry, providers, and government. AWPA focuses on forming and monitoring workforce development plans in conjunction with the employer-led Industry Skills Councils, conducting research on skill requirements, developing growth scenarios to anticipate future needs, and providing independent advice to government.

For example, the AWPA has estimated that by 2015 the size of Australia's employed workforce could grow by 3.5 million people, with the largest increase being in the number of qualified workers in service industries.²⁴ This has significant implications for the entire economy—from ensuring there are enough of the right courses available in order to fill demand to planning immigration policy.

On the basis of this research, AWPA is preparing detailed reports on the future needs of critical industries. For the July 2013 study on the ICT (information and communications technology) workforce, AWPA consulted with industry, universities, vocational trainers, industry associations, and unions. The report includes a broad set of recommendations, with specific responsibilities and targets, including: introducing an online ICT learning module aimed at secondary-school students; creating targeted careers promotion products for different segments, such as youth, older workers, and women; and creating a national apprenticeship/traineeship model for ICT technicians.²⁵

It's too soon to know how effective AWPAs work will be. However, by collecting useful data, creating strong bonds with other stakeholders, and thinking ahead, the agency's integrated approach is going to be worth watching.

Employment services integrator: Most countries have public employment services, but few have a service with such a broad view of the labour market as Germany's Federal Employment Agency, the Bundesagentur für Arbeit (BA). BA delivers services to the country's 2.9 million unemployed. Europe's largest public entity, BA is a self-governing institution, which acts independently—albeit within a legislative framework—with two primary responsibilities: to manage the unemployment-benefits programme and to provide services, such as career counselling, job placements and retraining funds.

Beginning in 2003, BA transformed itself from a legalistic administrative body into a modern performance-driven service provider.²⁶ It outsourced non-core activities to focus on job placement and advisory services; it cut waiting times from more than an hour to a few minutes, and introduced targets for each local agency. Customer satisfaction is now measured with positive results from both employers and providers—2.1 and 2.2 on a scale from 1 (best) to 6 (worst)—and has doubled job placements from 240,000 to 510,000 a year. The Federal Labour Database, which includes job postings for all target groups, has 800,000 users and receives 16 million clicks a day.

More than an employment agency, BA also plays a system integrator role. By interacting with the different stakeholders—students, the unemployed, providers, and employers—and by conducting detailed regional labour market analyses, it keeps up-to-date with labour market trends and acts as a regional labour market monitor.

This monitor has allowed BA to build a comprehensive picture of the employment opportunities available in different regions of Germany, to work with job-seekers to encourage them to move to localities where jobs are available, and to work with regional providers to identify the skills gaps and figure out how to fill them. BA's ability to support individual job-seekers through exact data on the opportunities available, combined with its strategic view of distinct labour markets, makes a powerful combination.

Private-sector skills integrators are led by employers and operate independently of government. The UK's Commission for Employment and Skills (UKCES), founded in 2008, provides strategic leadership on skills and employment issues. Though it is a government-run organisation, it is led by a group of commissioners, who are CEOs and senior executives of businesses and employer organisations. UKCES has a broad remit. One element is to understand the level of employment skills in the workforce. UKCES runs the Employer Skills Survey, the largest in the world, which compiles data on training, vacancies, and skills shortages. Employers can see how they compare in terms of training and skills deficiencies, and identify key challenges and opportunities in their sector; individuals and careers advisers can see where shortages are; and providers can use the results to plan what programmes to offer.²⁷

UKCES also works with government to get employers involved in skills development. For example, it recently ran the government-funded Employer Ownership of Skills Fund, in which employers submitted bids containing proposals to raise skills standards and create new jobs. Employers were required to co-invest in the projects they submitted proposals for. The first fund, launched in 2012, distributed €285 million to such initiatives, including a partnership of 93 employers from the energy sector to develop new training programmes.²⁸

Finally, UKCES helps to build a stronger network of sector skills councils. It licenses and disburses funding to 18 sector skills councils and four sector skills bodies. These are the employer-led organisations that define skills needs, standards, and curriculum in major employment sectors.

Youth employment integrators work with individuals to ensure that they have a concrete development and career plan, and obtain a job offer or take additional studies that improve employability.

One example is Finland's Nuorisotakuu ("Youth Guarantee"). Finland has been running a youth programme since 2005, but in 2011 started to develop a more comprehensive one. This was launched in January 2013 and includes employment alongside an education guarantee; this ensures the programme is targeted not only at the unemployed but all NEETs.

The guarantee requires that each person under 25 and every recent graduate under 30 be offered work, training, study,

or other intervention within three months of becoming unemployed.²⁹ Upon registering as unemployed, young people work with the Public Employment Services—in cooperation with various entities and social partners—to complete a three-step process:

- 1 develop a personal development plan
- 2 carry out a needs-assessment of the support needed to find employment
- 3 undertake a job, study place, or some other measure, such as training or subsidised work

The programme runs a Private Public People Partnership (PPPP) model where all the different stakeholders meet in a national-level working group; this includes various ministries, employer associations and unions, education providers, and youth organisations. To ensure the involvement of civil society, a letter was sent to the various stakeholders to highlight the importance of youth employment and education, and describe the role each stakeholder can play in solving the problem. This was supported by a high-profile campaign involving three Finnish celebrities or "faces": a female singer, a heavy-metal rock star, and a Finnish entrepreneur who has created several companies including the most successful fast-food chain in the country. In addition, the programme has called on other notable entrepreneurs to support young people who want to start their own businesses, and also provides financial support.

The programme has the cooperation of the ministries of Employment and Economy, Education and Culture and Social Affairs and Health and Finance and is implemented by the 320 local municipalities. Defence is also involved. Since military service is compulsory in Finland, the defence forces identify the young people who are least prepared for the job market and try to use their compulsory army service time to give them skills that make them more employable, for example by assigning them to truck driving or health services. They also provide career guidance in cooperation with Public Employment Services.

In 2013, more than 93 percent of young Finnish job-seekers received a timely and successful intervention (having an employment plan and either a job or education offer within three months of registering as unemployed) and close to 75 percent accepted the offer.³⁰ More detailed results of the programme and implementation will be published in March 2014.



i am
a doctor

The Youth Guarantee ensures that young people take action sooner rather than later, that they establish a trusting relationship with the authorities, and that they make informed decisions. The initiative requires the cooperation of many ministries and local authorities, but it largely avoids muddle because there is a clear goal and well-marked pathway to get there. Most importantly, the Youth Guarantee is part of a comprehensive strategy that includes: raising the school-leaving age and creating the Education Guarantee (to ensure all students have a place in upper secondary education); improving vocational education via a skills programme aimed at young adults with more flexible courses; providing targeted support to immigrants; and offering wage subsidies. Meanwhile, additional legislation is set to be implemented to ensure that all NEETs have access to social support and healthcare.

As mentioned, the programme is new and faces many challenges. Other countries implementing a similar system need to consider creating a one-stop shop service targeted at young people; this should ensure coherent and integrated support, similar to the National Careers Service in the UK, which integrates the diverse set of services available to young people. Ensuring cooperation among different stakeholders—with their own distinct operating models—is also a tough challenge in light of the flexibility required for the Youth Guarantee. Creating a national body responsible for the programme may be useful to help reconcile agendas.

2. Create broad collaborations

There are few hard-and-fast principles when it comes to figuring out what works in terms of improving the E2E pathway, but the power of collaboration is one of them. Effective collaboration can create excellent outcomes for everyone concerned.

Sector-wide and regional collaborations can support young people in developing the skills necessary to work in a given industry and help companies within that sector to recruit the workers they need. Employers gain a voice in the creation of industry standards and credentials, while providers get a better picture of the kind of training to offer. Industry partnerships can be particularly beneficial to SMEs that may not be able to fund their own training platforms.

There are three main types of collaboration: across an industry sector, across a region, and between SMEs.

Sector-wide collaborations can take a number of forms, such as defining common industry curricula and credentials, certifying education providers and courses, developing apprenticeship programmes, and attracting young people to the sector.

Examples from the US automotive and energy sectors illustrate the power of such collaboration. In our global report, we examined the Automotive Manufacturing Training and Education Collective (AMTEC), an initiative between car companies and community colleges that worked together to meet the industry's current and future requirements.

To design the curriculum, employers listed every task they needed performed and the competencies required for each. Then they ranked these by importance and, in a series of iterations, developed a list of common tasks. Employers and providers distilled all this information into a curriculum composed of 60 three-to-eight-week study modules, spanning 110 core competencies, with each module focused on a specific skill set. Now, employers can choose to have their employees undertake training from providers in all or some of the 110 competencies. Providers can offer customised solutions to adjust to specific needs and, because the credentials have been created cooperatively, they are transferable and recognised among all the participants.

Another example is Brazil's Prominp, created in 2003 to address skills shortages in the energy sector. Prominp invited industry partners, associations, and unions initially to discuss relevant skills and then to work with education providers to design suitable programmes. Prominp established a three-step process. First, it divided skills into 189 "tracks" such as shipyard welding in four categories—engineering, civil construction, construction, and operations and maintenance—and several skills levels—basic, technical, and graduate. Then it gathered the big companies in each field to identify the required skills at the task level, for instance welding metals to a specific thickness. With that established, Prominp identified providers that were particularly strong in each track and developed a curriculum in conjunction with the selected companies. All the providers use the same curriculum for each track. Prominp also selects the 30,000 or so participating students and sponsors their education in the form of tuition payment and allowance. More than 80 percent are employed.

Regional collaborations typically involve education providers and local employers working together to ensure student employability in a specific area. The Mondragon Corporation, headquartered in the Basque Country in northern Spain, is a cooperative of 255 businesses, subsidiaries, and affiliated organisations. It provides an example of how corporations can support young people by establishing partnerships throughout a region.

Mondragon offers facilities for vocational training and management education designed to be relevant to people working for one of its affiliate companies. In 1997, it founded the University of Mondragon (MU) to provide courses with a strong professional emphasis to those wishing to work for, or already working for, one of its co-operative members. MU now offers 22 degrees and enrolls almost 4,000 graduate and post-graduate students.

During study there is a strong focus on providing work-placement opportunities at one of the Mondragon member employers. Over 500 students complete a work placement each year, with employers reporting a high level of satisfaction; encouragingly, 90 percent of Mondragon graduates are employed within two months.

Collaborations involving SMEs: Small and medium-sized enterprises account for a significant proportion of Europe's economy. However, because of their size, smaller firms can find it difficult to recruit talent or build it from scratch. The answer is to collaborate, in order to fill the skills gaps at reasonable cost.

In Australia, the number of apprenticeships has grown rapidly over the past ten years; there are now some 425,000 Australians in internship or apprenticeship programmes. One of the main drivers behind this success has been a willingness to support SMEs to enable them to take on an apprentice, who is often a young person at risk of dropping out of education.

Group Training Organisations (GTOs) are businesses—either for profit or not-for-profit—that hire and manage the administration and training of apprentices and trainees. GTOs maintain a close relationship with secondary schools to identify students who are either failing or do not wish to continue studying. The GTOs recruit, hire, and train those students and place them with an SME where they carry out the practical part of their apprenticeship. GTOs often also provide the training element of the programme—which may be subsidised by government—for the participants.

A typical example is the Group Training Association of Victoria. GTAV has more than 150 members and 8,000 apprentices and trainees employed in over 5,000 SMEs across a range of industry sectors. One of GTAV's core activities is to ensure that young people are trained to national standards.³¹ The association supports its members in several ways: it provides information on common topics, including safety and health; it runs the “needanapprentice” Web site to help companies find apprentices; and it provides e-learning training platforms to small businesses.

According to the 2010 “Looking Ahead” report by Australia's National Institute of Economic and Industry Research, GTOs represent over 15 percent of apprenticeship completions rising to close to 30 percent in cases where the apprentice is working for the first time.^{32/33} It has a particularly strong presence in the traditional trades, such as construction, electricity, and plumbing, but is also active in services such as business administration and hospitality. A survey of GTO clients found that companies rated the experience of hiring an apprentice at 3.8 out of 5, compared with 3.0 when they had hired an apprentice themselves. Small businesses value the simplicity and flexibility of the GTOs' service, because they often do not have the resources to recruit, interview, train, and monitor inexperienced young people themselves.

In addition, working with a GTO removes a perception of risk for small business.³⁴ Participating employers may “return” the apprentice at no cost, for any reason. GTOs typically pay regular visits to employers to ensure that both the apprentice and the company are satisfied. The apprenticeships and training programmes serve a high-risk population and the dropout rate is substantial (40 percent); nevertheless, the employment rate for those who complete the programme is between 85 and 90 percent.

An alternative approach is for larger companies to work with the SMEs in their supply chain to build up their capabilities. The SMEs receive lower-cost training; their partners gain better-quality goods and services. Two examples come from Korea and Morocco.

- SK Telecom created the SK Win-Win Academy in 2006 to provide training to its SME partners.³⁵ The organisation shares its resources, including an extensive eLearning library and traditional training courses, and is willing to adapt them to the specific needs of SMEs.

“In Australia, the number of apprenticeships has grown rapidly over the past ten years; there are now some 425,000 Australians in internship or apprenticeship programmes. One of the main drivers behind this success has been a willingness to support SMEs.”

- The government of Morocco funded the Institute for Training Automotive Professionals to attract Renault to set up a plant in the country. Renault developed the curriculum and trained the faculty. Operating costs will be subsidised until 2014; after that, the industry will pay. The target is to train 30,000 employees from Renault's 125 SME suppliers.³⁶

The non-profit sector can also play a collaborative role. WorkingRite, a growing charity in the UK, runs a programme that seeks to encourage SMEs to provide hands-on training for young people who are at risk of dropping out of education—for example the “Non-believer” segment identified in our survey. WorkingRite matches young people who are not in education or employment with an older mentor in the workplace. Following a trial day, the young person works with the employer as part of a work-based learning and mentoring programme.

The job placements last up to six months, and WorkingRite ensures that trainees are fully equipped: WorkingRite staff members pay regular visits to check progress and conduct reviews of the learning achieved. In lieu of a formal paid arrangement, employers fund a small weekly allowance for the trainee, typically around £60 (€70).

In order to make sure young people also progress in Maths and English and accredited employability skills whilst they are on their training placement, and to adapt to local requirements, WorkingRite has built the equivalent of one day per week tutoring into its programmes in England.³⁷

Since launching in Scotland in the mid 2000s, WorkingRite has proved that its model does in fact help to reconnect at-risk young people to the labour market. In the most recent cohort of about 400 trainees, across 14 United Kingdom locations (see below), 56 percent of those who started a placement finished it; of those who did, 88 percent moved on to full-time jobs, apprenticeships or further education.

3. Use technology to scale up solutions

“I think online learning is going to be transformative. Traditional education is never going to be the same again,” Anant Agarwal, the MIT computer scientist who leads edX, told the *Financial Times* in June 2013.³⁸ Dealing with the youth unemployment problem may need such a transformation. The use of online platforms in education has been limited so far, but doing so could be a game-changer.



By online education, we refer to structured courses, live or taped, which may include serious games, immersive learning (simulations of real-life situations and professions), collaboration forums, and online assessment.

Online education offers students access to low-cost courses that can be complemented with local training centres where students can work with others face to face (see Part I of this chapter). In addition to expanding access, online education can be an effective way to offer experience to large numbers of students in a realistic format. A further asset is the ability of online courses to capture data on students' performance, facilitating comparison with others. This makes it possible to tailor education precisely, helping to ensure that students stay on track.

Building experience online: Online education has tremendous potential to help students simulate hands-on experience via serious games—"gamification"—and immersive learning techniques that simulate work environments, and also in assisting them to develop problem-solving skills. One example is Kentucky Fried Chicken (KFC), which employs more than 140,000 people in the United States. Noticing that a significant proportion of its workers were young and technology-savvy, the fast-food giant replaced its paper-based training with a task-based virtual world that teaches the correct way to perform specific tasks such as taking client orders and receiving payments; this system also runs evaluations and identifies skills gaps. KFC has seen a high take-up rate among its franchises, positive feedback from the learners, and fewer on-the-job errors.

Another example is SimVenture, a game that simulates how an individual starts and runs a business from scratch. Students have to deal with all aspects of business and must make decisions on a monthly cycle. The game has four main areas covering finance, operations, organisation and sales and marketing, and choices made within one area affect all others. For example, students can carry out market, competition and customer research to inform strategic marketing and sales decisions, while money can be raised in various ways—for instance via a bank loan, overdraft, and equity—to help ensure the company has sufficient capital to thrive. Students see the effects of their choices once the "month is run" and all information is stored so that decisions can be reviewed at any future point. The game can be used by individuals or small groups of up to five, and also in class with one large group via a single projected image on a screen.

SimVenture has won several awards and is being used in over 150 universities around the globe. Research studies show a statistically relevant improvement in student attainment.³⁹

Some studies of serious games have shown them to be more effective than classroom or web-based tutorials on several dimensions. One of the more recent meta studies—from the University of Colorado Denver Business School, in 2010—found that workers trained using serious games retained 9 percent more information, had an 11 percent higher level of factual knowledge, and a 14 percent higher level of skill-based knowledge.

In terms of creating an effective online education system, everyone has a role to play. Employers, including industry skills councils or associations, can help to make the content pertinent and credible, and recognised as such. Providers can either create this themselves or collaborate with others to integrate online education within their standard curricula. Governments can ensure that there is wide access to the Internet. Young people may also take on responsibility and actively seek the various opportunities already available online

Tailoring education to different youth segments: Because online technology makes it possible, even easy, to compare data concerning a large number of learners, education can be adjusted to individual needs. This insight helps editors to identify the learning objectives and content students struggle with the most and enables them to create learning resources—such as videos and simulations—to assist students in mastering the most troublesome topics. And it shows promising results. A maths course at Arizona State University that implemented adaptive learning technology saw an 18 percent increase in pass rates and a 47 percent drop in student withdrawals.⁴⁰

Analysing student learning data has allowed some universities to adopt a "flipped classroom" model, whereby students learn course contents online individually and then participate in small group sessions with faculty to work on key development needs, for example understanding formulas and making the relevant calculations.

4. Encourage the European Union to take practical action. Europe knows it has a problem, and has responded to it by creating the Youth Guarantee, a promise to offer every young person a regular job or further education opportunity

within four months of finishing school. In 2013, the EC committed an extra €8bn to support the Youth Guarantee, on top of European funds already available to tackle youth unemployment.

Although the causes and conditions of youth unemployment vary country by country, there are also important commonalities, as well as pockets of best practice that can be replicated. Because it is a supranational organisation, the European Union is well placed to create transparency, foster mobility, and identify best practices.

Create transparency across the EU labour market:

Today there is no single network that clearly compiles labour market trends in a way that can be accessed and acted on by national labour agencies. Nor is there a single clear source for individual job vacancy data. EURES, the European Job Mobility Portal, is an attempt to address this. EURES lists job openings, provided by national Public Employment Services. It also contains the basic qualifications and personal details of those job-seekers who register. EURES does not, however, offer comprehensive information on the performance of regional or sectorial labour markets, job qualifications, or pay in different regions. Whilst EURES has its uses, the EU would benefit from a source of labour market data that can be used strategically by labour agencies, employers, and providers in the member countries and regions; this would facilitate a more strategic view of where skills gaps exist in Europe and promote greater insight into how to fill them.

It could be something along the lines of the German Federal Labour Agency's Regional Labour Market Monitor. This is an online platform for institutional users that provides information on trends in labour demand by region, qualifications, and compensation. It also encourages interaction between the users of the service. The monitor has around 10,000 users, including officials in local Chambers of Commerce, public employees, elected officials, and education providers. It is an important source of information for the more than 560 regional and local networks that help to ensure there is enough skilled labour in the different regions. The monitor provides a range of information to help its users make better decisions on labour market issues: for example, mayors who want to understand whether there is a problem relating to basic skills or qualifications in their city can see the specific data for their particular region and also make a comparison with other regions. Additionally, they can find and contact people in a similar position in other regions in order to swap

ideas. Almost three quarters (74 percent) of those who use the monitor recommend it to others.

An EU-level labour market monitor could synthesise labour market information from all across the region, and then publish it online. Making this information consistent and readily available would be an important contribution to the creation of a genuinely European labour market. It would help young people to make more informed decisions about when, whether, and where, to move in order to find work.

Improve transferability of qualifications: It can be difficult for employers in one EU country to understand how (and if) a qualification gained in one country applies to another, particularly in relation to vocational education. This impedes easy movement between countries, yet such free movement of labour could be a way of filling the skills gaps that some countries face where others face a surplus.

For academic qualifications, this issue has been addressed. The Bologna process, launched in 1999, sought to harmonise university qualifications. In effect, it created a single European academic market (the European Higher Education Area) so that a degree from Italy carries the same weight in, say, Belgium. One result has been to make it easier for students to study in different countries. For example, the number of German students completing a term abroad almost doubled, from about 50,000 in 2000 to more than 100,000 in 2008. Over the same period, the number of foreign students studying in Germany increased by 250 percent.⁴¹ The Bologna process, which began as an EU initiative, has now drawn in countries from outside the region, and has also inspired other areas—West Africa, Latin America and the Caribbean, and South East Asia—to develop systems of transferable qualifications.⁴²

There is no equivalent when it comes to vocational qualifications. This means that young people cannot start a course in one country and then finish it in another, and so prevents them from gaining the valuable cross-cultural experiences that many academic students enjoy. More importantly, the lack of a clear map of vocational qualifications between countries may hinder fully qualified young people from bringing their skills to countries where jobs exist. Developing a European vocabulary for vocational qualifications could foster mobility and substantially improve job opportunities for vocational workers.

Lawyer, construction
 artist, sociologist
 designer, editor
 chauffeur, police
 paramedic, town planner

Create incentives and institutions to involve employers

in vocational education: Employer involvement in vocational education is one of the most powerful ways to ensure that young people obtain the skills and qualifications that can help them find work. We have found a strong correlation between employer involvement in training and youth outcomes. In the OECD countries with the lowest youth unemployment, almost two-thirds of employers were directly involved in delivering training. In the countries with higher youth unemployment, only 9 percent of employers were.

As part of the Youth Guarantee, the EU could help SMEs to work together within their region or sector to develop joint training programmes. These could be delivered through dedicated, joint training centres along the lines of the Group Training Organisations described earlier.

Define what works and then share best practices:

Public employment services (PESs) in Europe differ in their responsibilities, scope, operational models—and performance. It would make sense for them to learn from one other.

One way of achieving this is through benchmarking and mutual learning. Building on existing exercises in comparing labour market outcomes and key performance indicators (KPIs), PESs should first analyse what drives performance—for example, specific practices in operations, customer orientation, use of information for operational processes

as well as for decision making, and networking with other institutions in the labour market. Secondly, they need to develop a common understanding of how these drivers should be designed and where best practice for each performance driver can be found. This will enable PESs to create a forum for mutual learning. Examples include peer-to-peer visits, conferences or project manuals.

A system that works

In 2013, the OECD said of youth unemployment: “Immediate action is needed to stop the crisis further damaging young people’s prospects.” Hardly anyone would disagree with that; the issue is to find the right solutions.

The additional €8 billion allocated by the European Commission to fund the Youth Guarantee is a sign that the European Union appreciates the urgency of dealing with this problem. But it will be wasted if this funding—and further investment by employers and local and national governments—simply fills in the potholes on the E2E road, rather than making it straighter and smoother. Europe’s young people deserve as much.



iam
a scientist

Bibliography

Bundesagentur für Arbeit, *Prospects for 2025: Skilled workers for Germany*.

Bundesministeriums für Arbeit und Soziales (BMAS, Ministry of Labour and Social affairs), *Actions to foster youth employment in the Member States*, 2013.

Bundesministeriums für Arbeit und Soziales (BMAS, Ministry of Labour and Social affairs), *Toolkit to fight youth unemployment*, 2013.

Cedefop skills forecast, 2013.

Cereq, *Quand l'école est finie... Premiers pas dans la vie active d'une génération, enquête 2010*.

European Commission, *Apprenticeship supply in the Member States of the European Union*, 2012.

European Commission, *Study on a comprehensive overview on traineeship arrangements in Member States*, 2012.

European Commission, *Preparatory action "Youth Guarantee"—Supporting partnerships for activation measures targeting young people through projects in the context of Youth Guarantee schemes at national, regional or local level*, 2012.

European Commission, *Proposal for a Council Recommendation On Establishing a Youth Guarantee*, 2012.

European Commission, *Working together for Europe's young people*, 2013.

European Foundation for the Improvement of Living and Working Conditions (Eurofound), *Effectiveness of policy measures to increase the employment participation of young people*, 2012.

Eurofound, *NEETs—Young People Not in Employment, Education, or Training: Characteristics, costs, and policy responses in Europe*, 2012.

Eurofound, *Youth Guarantee: Experiences from Finland and Sweden*, 2012.

Eurypedia.

Eurostat, Labour Force Survey.

Eurydice, *National Student Fees and Support Systems*, 2012/13.

German National Association for Student Affairs, 2012.

Gregg, Paul, and Tominey, Emma, *The Wage Scar from Youth Unemployment*, February 2004.

International Labour Organization, *Career Guidance*.

International Labour Organization, *Eurozone job crisis—trends and policy responses*, 2012.

International Labour Organization, *Global Employment Trends for Youth*, 2013.

International Labour Organization, *Working with youth—addressing the youth employment challenge*.

International Network of Sector Skills Organisations, *Think Global Act Sectoral*, edited by Phillipa Abbott and Tom Bewick, 2010.

McKinsey & Company, *Education to Employment—Designing a system that works*, 2012.

McKinsey & Company, *From austerity to prosperity: Seven priorities for the long term in the United Kingdom*, 2010.

McKinsey Global Institute, *The World at Work: Jobs, pay, and skills for 3.5 billion people*, July 2012.

Ministère De L'enseignement Supérieur Et De La Recherche, *L'Etat de l'enseignement supérieur et de la Recherche*, 2010 edition,

National Union of Students.

New York Times, “Out of Europe’s Long Jobs Crisis, Voices of the Young”, 2013, www.nytimes.com/interactive/2013/11/15/world/europe/voices-of-the-young.html?_r=0.

New York Times, “Young and Educated in Europe, but Desperate for Jobs”, 2013, www.nytimes.com/2013/11/16/world/europe/youth-unemployment-ineurope.html.

Organisation for Economic Cooperation and Development, *Better Skills, Better Jobs, Better Lives: A strategic approach to skills policies*, 2012.

OECD, *Education at a Glance 2013: OECD indicators*, 2013.

OECD, *Education Indicators*, 2010, 2007.

OECD, *Employment Outlook* 2012.

OECD, *Learning for Jobs: OECD reviews of vocational education and training—Switzerland*, 2009.

OECD, *Skills Outlook*, 2013.

Ofqual, *Vocational and Other Qualifications Quarterly*, April-June, 2013.

PORDATA.

Portugal Directorate General of Higher Education.

The ACEVO Commission on Youth Unemployment, *Youth unemployment: the crisis we cannot afford*, 2012.

The Economist, “The Future of Jobs: The great mismatch”, September 2011.

The Swedish Union of Tenants, *The living conditions of students*. 2013.

UCAS tariff tables.

UNESCO, *Youth and Skills: Putting education to work*, 2012.

UNESCO, *Opportunities Lost: the impact of grade repetition and early school leaving*, 2012.

Work Foundation, *International Lessons: Youth unemployment in the global context*, 2013

World Bank, *Skills Toward Employment and Productivity Measurement Study*.

World Bank, *The Right Skills for the Job? Rethinking Training Policies for Workers*, edited by Rita Almeida et al., 2012.

www.look4studies.com/default.asp?pid=19&langID=1&nwid=179.

www.902.gr/eidisi/festival-kne-odigiti/26513/tis-theseis-tis-gia-ti-stegasi-ton-foititon-kai-ton-spoystaston#/0.



i am
a hotelier

Appendices

Survey methodology

The survey consisted of three parallel questionnaires, administered to young people, education providers, and employers. These were administered from August to September 2013 in six countries: France, Greece, Italy, Portugal, Spain, and Sweden. The surveys for Germany and United Kingdom were administered in August and September 2012. McKinsey designed the three questionnaires, while Lieberman Research Worldwide did the recruitment and interviewing through a mixture of online surveys and face-to-face interviews.

The premise of the survey was to build an empirical fact base, describing the views of the most important education-to-employment stakeholders. We chose these eight countries because they include Europe's five largest economies (Britain, France, Germany, Italy and Spain); two countries greatly affected by the economic crisis (Greece, and Portugal); and one from Scandinavia (Sweden) where the education-to-employment model is distinctly different. Combined, these eight countries account for more 70 percent of youth unemployment in the European Union. The target sample size for each country was 500 young people, 300 employers, and 100 education providers. The Italian survey included 1,500 young people.

In questions that asked for agreement with a given statement, participants chose one of six options, as follows: agree ("strongly agree" or "agree"); neutral ("somewhat agree" or "somewhat disagree"); and disagree ("disagree" or "strongly disagree"). In questions where respondents rated an ability or characteristic, such as competence or importance, participants used an 11-point scale: 0 indicated "not at all" and 10 represented "extremely". Scores of 8 or higher were interpreted as "believing" or "agreement".

Youth survey

We surveyed 5,257 young people, aged 15 to 29. Recruited both online and in person, all were either in the labour force (whether employed or not) or in school and looking for work in the next six months.

We sorted the young people into five educational levels, and the distribution was roughly equal across each: less than high school, high school, vocational, some college or associate degrees, and college/university degrees. In terms of income, 46 percent said that their income was "about the national average"; 17 percent indicated they made more.

We then weighted the sample toward the gender and age distribution for the economically active population of 15-to-29-year-olds in each country. To account for varying sample sizes, we also weighted the responses to level out the number of respondents at 500 for each country. The weight of any one response was capped at a minimum of 0.2 and a maximum of 3.0 (Exhibits 1 and 2).

Employer survey

We surveyed 2,594 employers; they were relatively evenly distributed across sectors, with the largest concentrations in manufacturing (13 percent) and wholesale and retail trade (12 percent). Almost three out of four of the employer respondents were small (fewer than 50 employees) or medium-sized enterprises (50 to 249).

Employers interviewed for the survey were required to be responsible for at least one of the following three areas: defining hiring criteria, including skills and qualifications; implementing employee-training; or analysing skills gaps (Exhibit 3).

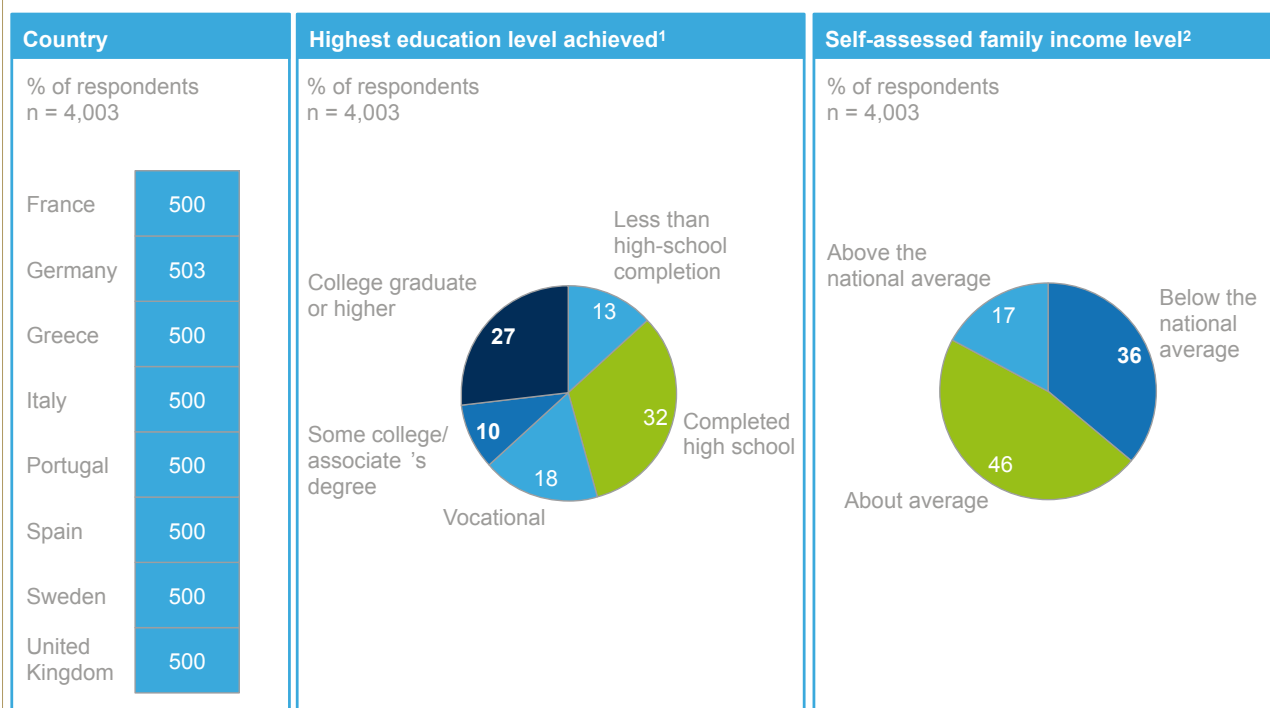
Education provider survey

We surveyed a total of 727 providers. Open-access public institutions and selective public institutions comprise 70 percent of those surveyed. The remaining 30 percent is split between for-profit and not-for-profit private institutions. Half of the providers sampled enrolled fewer than 1,000 students; the remainder split equally between those with 1,000 to 4,999 students and those with more than 5,000. A slight majority were academic; the rest were focused on vocational.

Provider respondents worked at post-secondary educational institutions in admissions, career and academic counselling, or academics. They had to have significant influence in one of the three following areas: admissions and enrolment criteria; quality-assurance and governance; or employer and recruiter relations (Exhibit 4).

Segmentation.

Segmentation is the practice of breaking down a population into smaller, distinct groups. As in the global survey on education to employment, we segmented the youths and employers to discern characteristics that went beyond demographics (Exhibit 5). (Italy was not part of this analysis.) We found seven segments of young people, divided between those who continued their education after high school, and those who did not (Exhibits 6,7,8 and 9). For employers, we created four segments, based on how easy it is to find talent and how willing they are to invest in it (Exhibit 10,11 and 12). We did not create a segmentation for providers, but found nothing significantly different from the demographic splits.

Exhibit 1**Youth survey sample, weighted data (1/2)**

1 What is the highest level of education you have received?

2 Roughly where do you think your family's annual income falls relative to the national average?

Source: McKinsey survey, Aug–Sept 2012, 2013

Education funnels

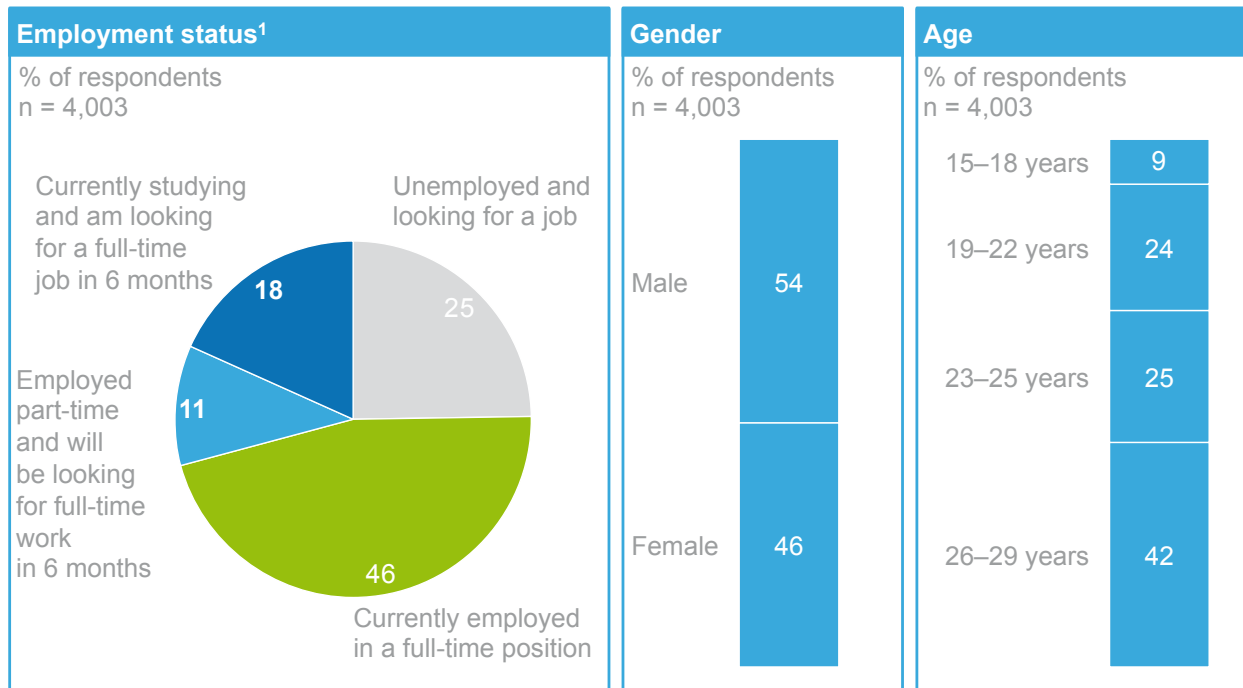
To understand how young people move from education to employment, we investigated the number of students at each stage. The data used was the OECD 2010 age-specific graduation rates for upper-secondary and tertiary for all countries apart from:

- France: A report by CEREQ, a national database: *Quand l'école est finie... Premiers pas dans la vie active d'une génération, enquête 2010*
- Greece: Tertiary statistics from the 2007 OECD report, as no data reported after 2007
- Portugal: Upper-secondary data was taken from the Portuguese national database: PORDATA. This is because of the “Novas Oportunidades” programme that opened up post-secondary education to a wider pool of students inflating the OECD data. Tertiary education data was taken from the 2010 OECD report.

Definitions of key terms:

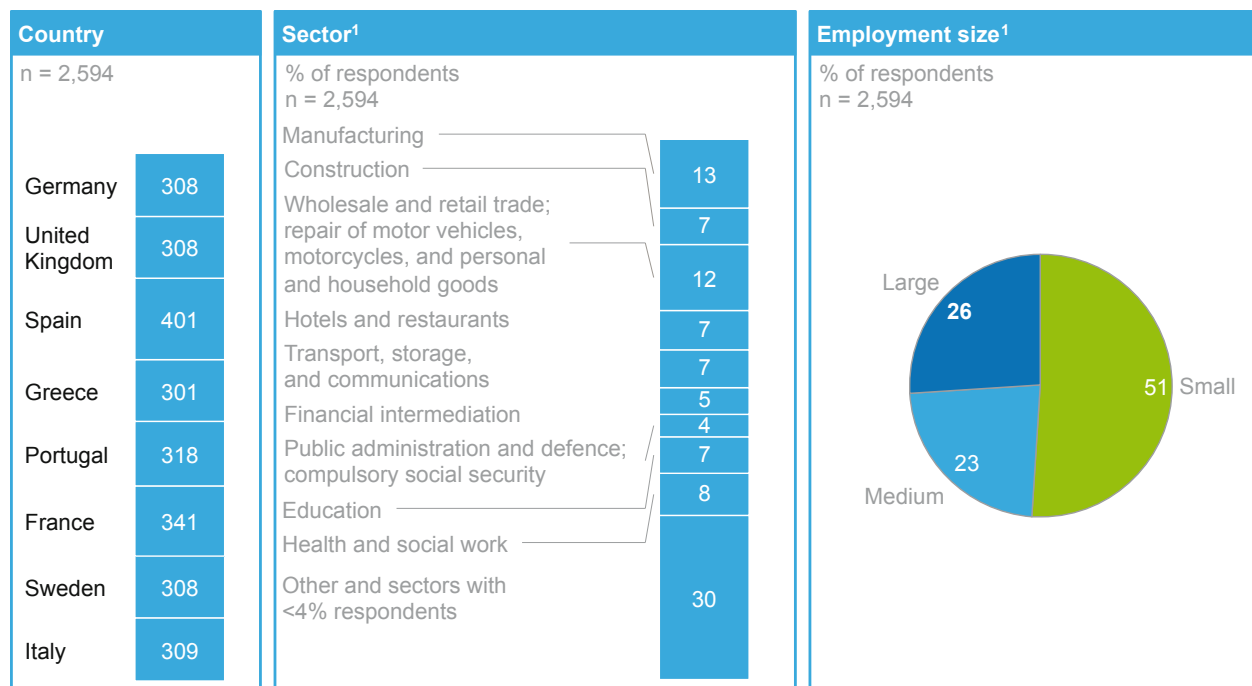
Throughout this research we have used standard definitions of unemployment and young people not in education or employment (NEETs) as used by the International Labour Organisation.

We have used OECD definitions of main stages of the educational path: ‘upper secondary’, ‘post-secondary non-tertiary’, ‘tertiary’ (Exhibit 13).

Exhibit 2**Youth survey sample, weighted data (2/2)**

¹ Which of the following best describes your employment status?

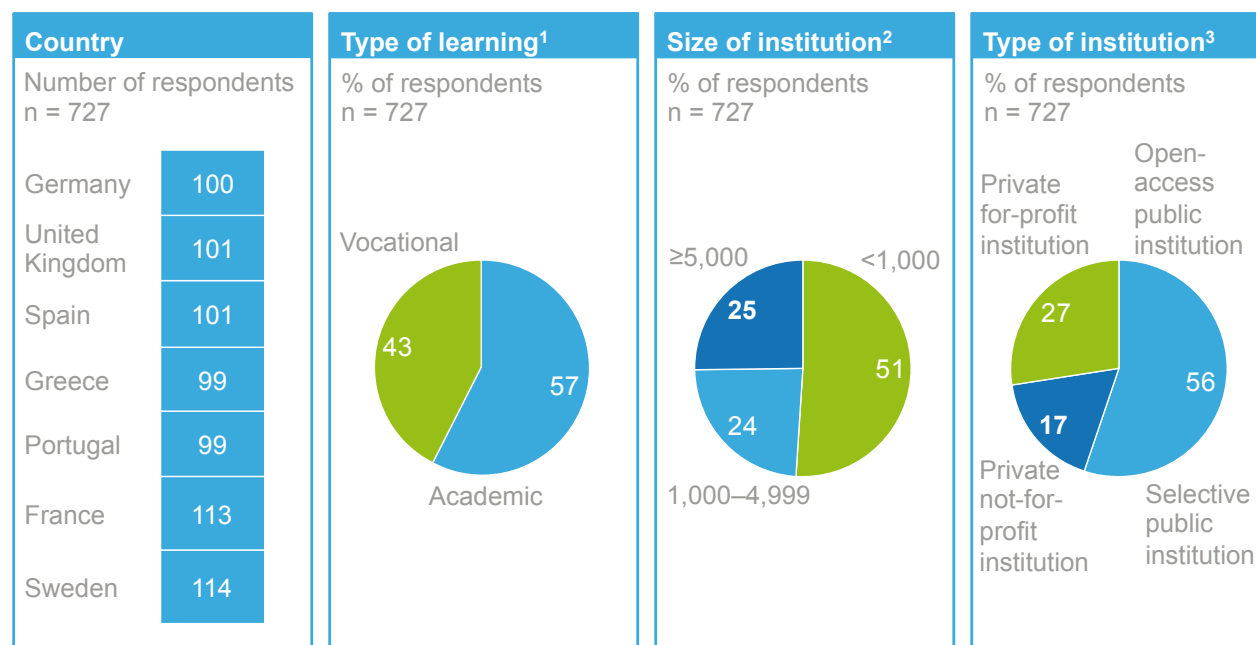
Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 3**Employer survey sample**

¹ Other includes agriculture, hunting, forestry, and fishing; mining and quarrying; electricity, gas, and water supply; real estate, renting, and business activities; and private households with employed persons.

Source: McKinsey survey, Aug–Sept 2012, 2013

i am
a baker

Exhibit 4**Provider survey sample**

1 Which of the following categories best describes your institution? If more than one option applies, please select the one that describes the majority of your activities.

2 How many students are currently enrolled at your institution?

3 Which of the following best describes your institution?

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 5**We constructed an ambition, access, and success matrix for youth**

● High success ● Moderate success ● Low success

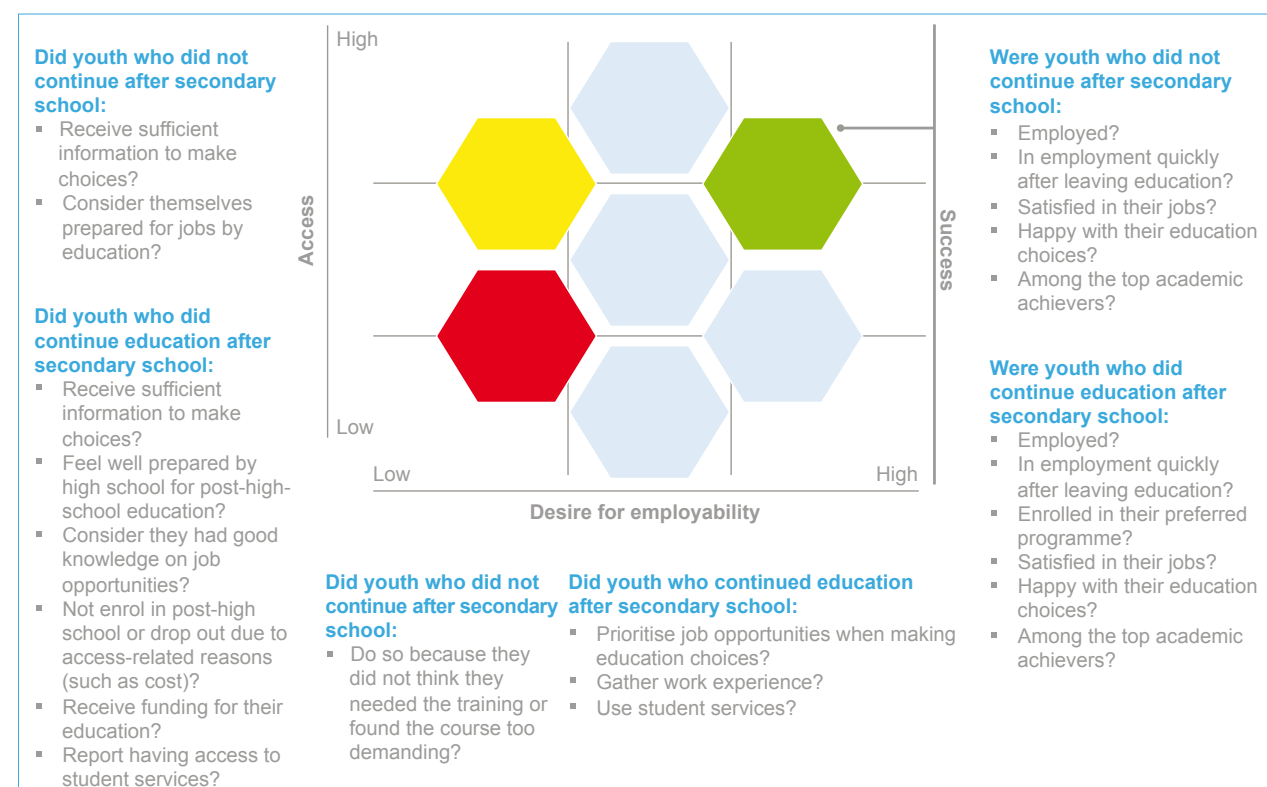


Exhibit 6

Youth who continue education after secondary school (1/3)

Segment	1 – High Achievers (10%)	2 – Coasters (6%)
Ambition	<ul style="list-style-type: none"> Above-average focus on job-placement rates and on teachers' advice Second least focused on being close to home/family/friends 	<ul style="list-style-type: none"> Least focused on job-placement rates and on teachers' advice Independent: friends, family not strong drivers of education choice Second least likely to get work experience during education Likely not to use student services, even when available
Access	<ul style="list-style-type: none"> Higher knowledge of wages and placement rates (while in high school) In comparison, felt most informed about fields of study and corresponding jobs, best prepared by high school Is most offered student services and finds them helpful (if used) 	<ul style="list-style-type: none"> Average knowledge of wages and lowest knowledge of placement rates (while in secondary school) Second-highest access to company visits after high school Highest access to careers/academic support services after secondary school Most satisfied with educational information offered
Success	<ul style="list-style-type: none"> Most satisfied with current job (which is most often related to field of study); fastest to find job Lowest unemployment Most convinced that education improved employment outlook; most optimistic about education and employment opportunities Above-average likelihood to enrol in preferred course Likely to repeat education decisions 	<ul style="list-style-type: none"> Satisfied with job-related information offered (at secondary school) Above average regarding satisfaction with job (which is often related to field of study); least time actively looking to find job Average unemployment Most convinced that education improved employment outlook; very optimistic about education and employment opportunities Most likely to enrol in preferred programme
Context factors	<ul style="list-style-type: none"> High in Sweden; Germany; low in Portugal Second-highest share of private-sector employment Slightly biased toward men Average share of parents' education level Highest-income group Second-highest share of top performers 	<ul style="list-style-type: none"> High in United Kingdom, Sweden, Germany; low in Spain, Greece Second-highest share of state/public-sector employment High academics Second-highest parents' average income Highest share of top performers

"I focused and made the best of the support I received."

"I flew through education without stopping to think what would come next."

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 7

Youth who continue education after secondary school (2/3)

Segment	3 – Meanderers (5%)
Ambition	<ul style="list-style-type: none"> Less focused on job-placement rates and on teachers' advice Most focused on being close to home/family, less on friends Least likely to gather work experience during education
Access	<ul style="list-style-type: none"> Low knowledge of wages and lowest knowledge of placement rates (while in high school) In comparison, felt more or less informed about fields of study and corresponding jobs, prepared by high school Offered average amount of student services but is least likely to use them
Success	<ul style="list-style-type: none"> Below average regarding satisfaction with job (which is often related to field of study); slightly above-average time to find job Lowest unemployment Most convinced that education improved employment outlook; optimistic about education and employment opportunities Most likely to enrol in preferred programme but often takes longer than usual (if not enrolled: did not pass exams, not convinced in job opportunities after education; similar reasons if dropout) Rather likely to repeat education decisions
Context factors	<ul style="list-style-type: none"> High in United Kingdom, Sweden; low in Germany, Spain, Greece Largest share "still in training"; if employed; public institutions Highest share academics Bigger share public (selective) education institutions; lowest share private institutions; highest share government loans Parents with highest education yet below-average income Smallest share top performers

"Good enough is enough; I'm not aiming high."

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 8

Youth who continue education after secondary school (3/3)

Segment	4 – Persisters (17%)	5 – Dreamers (14%)
Ambition	<ul style="list-style-type: none"> More focused on job-placement rates Most focused on being close to family/friends and on teachers' advice Most likely to gather work experience during education 	<ul style="list-style-type: none"> Most focused on job-placement rates Also focused on being close to family/friends Most convinced that vocational education creates better employment opportunities; most negative regarding its recognition
Access	<ul style="list-style-type: none"> Most self-reported knowledge on wages and job-placement rates (in high school) In comparison, felt least informed about fields of study and corresponding jobs Offered student services less 	<ul style="list-style-type: none"> Least self-reported knowledge of wages and job-placement rates (in high school) In comparison, felt more or less informed about fields of study and corresponding jobs Is least offered student services (especially via interaction with employers)
Success	<ul style="list-style-type: none"> Average regarding satisfaction with job, link to field of study, and time to find employment Lower rate of full-time employed Average probability of enrolling in preferred programme (if not: costs, changed plans, not accepted; similar reasons if dropout) Least convinced that education improved employment outlook Most negative regarding employment opportunities and transparency on available jobs 	<ul style="list-style-type: none"> Least satisfied with job (which is least often related to field of study) Average employment rate Least likely to enroll in preferred program (changed plans, costs, doubt about jobs; similar reasons if dropout) Least likely to repeat education decisions Less convinced that education improved employment outlook; most negative about education opportunities
Context factors	<ul style="list-style-type: none"> High in Spain, Greece; low in United Kingdom, Sweden Average share academic/vocational; gender; parents' education level; institution type; wealth Highest share of family paid for education 	<ul style="list-style-type: none"> Higher in United Kingdom, Portugal; low in Germany Slightly biased toward women Most likely to work in private sector (if employed) Highest share vocational Parents have lowest education and income Biggest share of public open-access education institutions

"I tried and tried, but further education did not help me reach my ambitions."

"I wish I had known more."

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 9

Youth who did not continue education after secondary school

Segment	6 – Non-believers (27%)	7 – Strugglers (20%)
Ambition	<ul style="list-style-type: none"> Less likely to pay for additional education Much higher preference for vocational training 	<ul style="list-style-type: none"> Least convinced that there are enough jobs for young people and that they can easily be identified Would pay for more education if salary increased Much higher preference for vocational training
Access	<ul style="list-style-type: none"> Higher doubts that education prepares them for employment Average to high on labour-market knowledge and information when compared with other segments; very high: job opportunities Cost biggest reason to leave E2E path, but this is closely followed by insufficient capacity in preferred programme/not being admitted 	<ul style="list-style-type: none"> Felt least well informed about fields of study and related job opportunities following high school, including job opportunities Having to work is the biggest reason to leave E2E path, closely followed by costs and not finding relevant programme
Success	<ul style="list-style-type: none"> Often not accepted to preferred programme Average job satisfaction; average time to find job Below average in academic achievement 	<ul style="list-style-type: none"> Slightly below-average job satisfaction; average time to find job Lowest in academic achievement
Context factors	<ul style="list-style-type: none"> High share in Germany Lower share in Spain, Greece, Sweden Slightly more people with less than high-school completion Least educated parents (same as 7) Most participating in vocational training in high school Slightly below-average family income 	<ul style="list-style-type: none"> Low share in Germany Higher share in Spain Slightly more people with high-school completion Least educated parents (same as 6) More participating in vocational training in high school Poorest segment by family income

"I knew enough but did not believe that education would get me far."

"I need to earn my own money; even though I would like to go further, I have no means to do so."

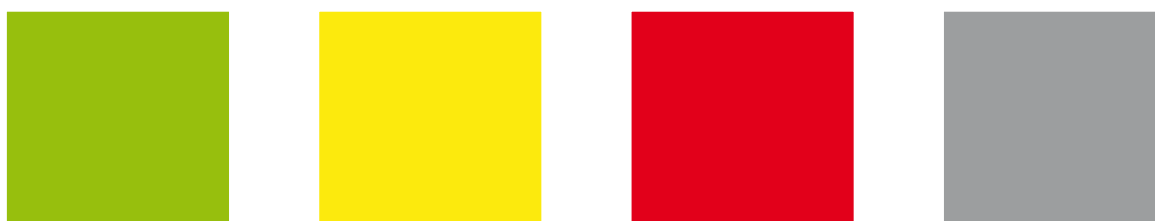
Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 10**Ease of finding talent and willingness to invest**

- Addresses skill shortage
- Partly addresses skill shortage
- Does not address skill shortage

Employers segmented through several factors:

- How often they interact with providers on developing the curriculum and training educators
- Level of interaction with other employers on the topic of skills
- Investment in training for new employees
- Level of satisfaction with new employees

**Success determined via two elements:**

- How easily employers find talent
- Their willingness to invest to gain the talent they need

Source: McKinsey survey, Aug–Sept 2012, 2013 (excluding Italy)

Exhibit 11**Employer segmentation (1/2)**

Segment	1 – The Engaged (26%)	2 – The Stand-alones (34%)
Finding talent	<ul style="list-style-type: none"> ▪ Least successful in hiring skilled, motivated young professionals ▪ Invests more in recruiting and training to fill this gap and therefore does not see it as a serious issue 	<ul style="list-style-type: none"> ▪ Below-average success in hiring skilled, motivated young professionals ▪ Average company effect from lack of talent
Skills	<ul style="list-style-type: none"> ▪ Below-average focus on field of study, degree, and academic standing; lowest focus on previous work experience ▪ Most likely to provide training; most convinced of its effectiveness, most often updates training curriculum, and monitors effectiveness extensively ▪ Hires people with average skill sets; comparably low on importance across skills ▪ More willing to pay for adequately trained hire 	<ul style="list-style-type: none"> ▪ Below-average focus on previous work experience; lowest focus on field of study, institution prestige, and academic standing ▪ More likely to provide training; more or less convinced by company training effectiveness; often updates training curriculum ▪ Hires people with lower skill sets; comparably low on importance across skills ▪ Less willing to pay for adequately trained hire
Partnering	<ul style="list-style-type: none"> ▪ Most likely to partner with providers on education curriculum; average focus on instructor training and subject offers ▪ Highest industry-coordination level 	<ul style="list-style-type: none"> ▪ Less likely to partner with providers on education curriculum, instructor training, and subject offers (and finds it least important) ▪ Lowest industry-coordination level
Context factors	<ul style="list-style-type: none"> ▪ High in Germany; low in France ▪ Low in very small companies ▪ Tends to interview more people per vacancy; highest vacancy rate 	<ul style="list-style-type: none"> ▪ Low in Portugal ▪ Tends to hire higher-educated people
	<p><i>"I overcome the skills gap by investing a lot to train new hires to fit my needs, and I work closely with providers and other companies."</i></p>	<p><i>"I invest internally to address the skill gap, but I do this by myself."</i></p>

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 12

Employer segmentation (2/2)

Segment	3 – The disengaged (21%)	4 – The renowned (18%)
Finding talent	<ul style="list-style-type: none"> Above-average success in hiring skilled, motivated young professionals Most believes that issue will solve itself; least likely to invest more in recruiting/training; most negative impact on company 	<ul style="list-style-type: none"> Most successful in hiring skilled, motivated young professionals Average company effect from lack of talent
Skills	<ul style="list-style-type: none"> Highest focus on previous work experience; above-average focus on field of study and academic standing Least likely to provide training; not very convinced by its effectiveness; rarely updates training curriculum and monitors its effectiveness least frequently Hires people with lower skill sets (across most factors); average importance across skills Least willing to pay for adequately trained hire 	<ul style="list-style-type: none"> Highest focus on most hiring factors, including field of study, degree type, institution prestige, and academic performance; above-average focus on previous work experience More likely to provide training; more or less convinced by its effectiveness; rarely updates training curriculum; monitors effectiveness rather extensively Hires people with highest skill sets (across factors) and puts highest importance across skills Most willing to pay for adequately trained hire
Partnering	<ul style="list-style-type: none"> Least likely to partner with providers on education curriculum and subject offers; higher focus on instructor training (all average importance) Lowest industry-coordination level 	<ul style="list-style-type: none"> Most likely to partner with providers on education curriculum, instructor training, and subject offers (highest importance) Highest industry-coordination level
Context factors	<ul style="list-style-type: none"> High in Greece, France; low in United Kingdom High in very small companies; low in large companies Least likely to have hired in past 24 months Tends to hire less educated people Tends to interview less people per vacancy; lowest vacancy rate <p><i>"I know that the skill gap could badly influence my company in the future, but it is not yet a big enough issue to act."</i></p>	<ul style="list-style-type: none"> Low in Greece, Sweden High in large companies; low in very small companies Tends to hire higher-educated people Tends to interview more people per vacancy <p><i>"I am able to find the skilled labor I need, and I am willing to further invest and cooperate with others to ensure this does not change."</i></p>

Source: McKinsey survey, Aug–Sept 2012, 2013

Exhibit 13

Definitions of terms used in country summaries

Unemployment

- Someone is counted as unemployed when they do not have a job and are available for and actively seeking work.
- The unemployment rate is the number of people who are unemployed divided by the number of people who are unemployed and the number who are employed (the active labour force)
- Total unemployment encompasses people aged 15-74
- Youth unemployment encompasses people aged 15-24

Not in education, employment or training (NEETs)

- NEETs are those not in education, employment or training and are aged 15-24
- It includes people who are unemployed and people who are inactive (they are not employed but they are not available for or actively seeking work)
- The NEET rate is the number of youth who are not in education, employment or training divided by the total number of youth

Education levels:

Upper-secondary

- Upper-secondary is the final stage of secondary education in most countries
- The percentage shown is the proportion of youth at the typical age of graduation from upper-secondary who have done so

Post-secondary non-tertiary

- Post-secondary non-tertiary is the level between upper-secondary and tertiary education. It is typically between 6 months and 2 years long
- It is split into academic (largely theoretical based) or vocational (practically orientated / occupationally specific)
- The percentage shown is the proportion of youth at the typical age of graduation from post-secondary non-tertiary who have done so

Tertiary

- University education or equivalent
- It is split into academic (largely theoretical based) or vocational (practically orientated / occupationally specific)
- The percentage shown is the proportion of youth at the typical age of graduation from post-secondary non-tertiary who have done so

Endnotes

Introduction Europe's rocky journey from education to employment

- 1 Eurostat, Labour Force Survey
- 2 Eurostat
- 3 *ibid*
- 4 PISA 2012
- 5 Eurofound, 2012
- 6 Neumark, Youth Labor Markets in the U.S.: Shopping Around and Staying Put: 1998
- 7 www.parliament.uk/documents/lords-committees/eu-sub-com-b/Youth%20Unemployment/Published%20Call%20for%20Evidence%20090913.pdf
- 8 Eurostat, Labour Force Survey
- 9 We have followed ILO and OECD usage of the youth unemployment rate and NEET rate in this report. See Appendix Exhibit 13.

Executive Summary

- 1 The global survey included youth, employers and education providers from: Brazil, Germany, India, Mexico, Morocco, Saudi Arabia, Turkey, the United Kingdom and the United States
- 2 Eurostat.
- 3 Eurostat and Organisation for Economic Cooperation and Development.
- 4 Eurostat, 2007, included NACE Rev1.1 C-I, K. Percentage of total employment taken as the total number employed in small businesses/total number of people employed 2007.

Chapter 1: Education to employment in Europe: the stage and the actors

- 1 A third possibility is that government legislation inhibits job growth and/or stacks the odds against young people by making it more difficult for employers to hire them. This issue is certainly worth considering, but as explained in the introduction, beyond the scope of this research.
- 2 Eurostat, Labour Force Survey
- 3 Eurostat, Labour Force Survey.



i
a personal trainer

- 4 Ibid.
- 5 Eurostat, Labour Force Survey, Labour Market Activity Rates 2005, 2013.
- 6 Gregg, Paul and Tominey, Emma, *The Wage Scar from Youth Unemployment*, February 2004.

Chapter 2: A road with many barriers

- 1 OECD, age-specific tertiary graduation rate.
- 2 Eurydice, National Fee and Student Support Systems, 2012/13.
- 3 <http://www.slc.co.uk/services/loan-repayment/write-off-terms.aspx>.
- 4 Germany: German National Association for Student Affairs, 2012; UK: National Union of Students; Greece: <http://www.look4studies.com/default.asp?pid=19&langID=1&nwid=179>, <http://www.902.gr/eidisi/festival-kne-odigiti/26513/tis-theseis-tis-gia-ti-stegasi-ton-foititon-kai-ton-spydaston#/0>; Portugal: Portugal Directorate General of Higher Education; France: *L'Etat de l'enseignement supérieur et de la Recherche*, 2010 edition; Sweden: The Swedish Union of Tenants, *The living conditions of students 2013*.
- 5 Eurydice, *National Fee and Student Support Systems*, 2012/13.
- 6 Ibid.
- 7 CEDEFOP (European Centre for the Development of Vocational Training), Skills forecast, 2013.
- 8 UCAS tariff tables.
- 9 Factors were: prestige of institution; qualification/programme type; proximity to home/family; friends going to the same institution; family opinions; cost of programme; ability to study my chosen field; institution's job placement rates; school teacher/principal advice; ability to work whilst studying; duration of the offered programme; average wages of jobs in the disciplines offered at the institution; number of available jobs in the disciplines offered at the institution.
- 10 Cereq (Centre d'études et de recherches sur les qualifications). *Quand l'école est finie... Premiers pas dans la vie active d'une génération, enquête 2010*.
- 11 Ofqual, *Vocational and Other Qualifications Quarterly*, April-June 2013.
- 12 Eurydice.
- 13 Ibid.
- 14 Eurostat, Labour Force Survey; OECD, Graduates by field of education.
- 15 Priorities were: supporting research; reducing costs and making the institution more cost-effective; increasing graduation and programme completion rates; developing partnerships with companies; developing partnerships with other education institutions; attracting students; attracting and retaining effective faculty/instructors; helping students and graduates find employment after programme completion; generating sufficient revenues for the institution; maintaining a relevant and up-to-date curriculum.
- 16 Fields of study where unpaid internships were greater than 45 percent: customer service; education; social work; journalism/media; healthcare/medicine; operations; manufacturing.

Country summaries

- 1 <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG> and http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-14112013-AP/EN/2-14112013-AP-EN.PDF.
- 2 www.indexmundi.com/france/youth-unemployment-rate.html.
- 3 Eurydice.
- 4 *Quand l'école est finie... Premiers pas dans la vie active d'une génération, enquête 2010*, Cereq.
- 5 Bundesagentur für Arbeit, Prospects for 2025: Skilled workers for Germany.

- 6 Ibid.
- 7 Federal Ministry of Education and Research, Annual Education Report 2013.
- 8 Eurydice, National Student Fee and Support Systems, 2012/13
- 9 <http://www.look4studies.com/default.asp?pid=19&langID=1&nwid=179>, <http://www.902.gr/eidisi/festival-kne-odigiti/26513/tis-theseis-tis-gia-ti-stegasi-ton-foititon-kai-ton-spoydaston#/0>;
- 10 OECD, Education at a Glance, 2012.
- 11 Portugal Directorate General of Higher Education.
- 12 Eurostat and OECD.
- 13 *Empleo juvenil en España*, McKinsey, Universia and trabajando.com, January 2013.
- 14 SCB, HSV.
- 15 OECD, PISA 2012
- 16 www.parliament.uk/briefing-papers/sn05871.
- 17 QS World University Rankings 2013.
- 18 Nida Broughton *In the Balance: The STEM Human Capital Crunch*, Social Market Foundation, 2013.
- 19 www.parliament.uk/briefing-papers/SNO6113.pdf.
- 20 M. Stepping, FernUniversität in Hagen, University for Distance Education—Teleteaching. December 18, 2006,. Retrieved from http://www.kaderali.de/fileadmin/praesentationen/Stepping_Vortrag_SUSU_CS.pdf. *Facts and Data*. (n.d.). Retrieved from FernUniversität in Hagen: <http://www.fernuni-hagen.de/english/profile/data.shtml>.
- 21 *Büffeln ohne Ende*, December 23, 2010. Retrieved from Zeit Online: <http://www.zeit.de/2010/52/C-Fernuni>.
- 22 (2013, Summer). Retrieved from Research & Practice in Assessment: <http://www.rpajournal.com/dev/wp-content/uploads/2013/05/SF2.pdf>.
- 23 OECD indicators, *Education at a Glance*, 2013 [http://www.oecd.org/edu/eag2013%20\(eng\)--FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf).
- 24 www.thecrimson.com/article/2013/6/21/new-edx-fall-2013/.
- 25 CSN 2012 annual report -Årsredovisning 2012
- 26 <http://www.slc.co.uk/media/589346/slcosp012013.pdf> (Table 1A(ii))
- 27 <http://www.businessweek.com/articles/2013-08-22/obamas-college-ratings-will-shape-student-loans>
- 28 Americana, interview with human resources manager, November 2012.
- 29 Interviews, site visit, website.

Chapter 3: Building a system that works for everyone

- 1 Interviews with: director, international engagement and business development; TAFE Directors Australia and manager, international marketing; TAFE NSW, Sydney, Australia, September 2012. *Annual National Report of the Australian Vocational Education and Training System*, 2009.
- 2 Department for Business, Innovation and Skills, *The Right Advice at the Right Time*; ONS, Labour Force Statistics, Table UNEMP01; <https://nationalcareersservice.direct.gov.uk/Pages/Home.aspx>.
- 3 National Careers Council, *An Aspirational Nation*, June 2013,.
- 4 Canton of Bern (Erziehungsdirektion), McKinsey; educa.ch

- 15 Kathrin Hoeckel, Simon Field, and W. Norton Grubb, *Learning for Jobs: OECD Reviews of Vocational Education and Training—Switzerland*, April, 2009. Retrieved from OECD: <http://www.oecd.org/switzerland/42578681.pdf>.
- 16 *Lehrstellenbarometer*, Link Institute, 2013.
- 17 Caroline Hoxby and Sarah Turner, March 28, 2013. Retrieved from Stanford Institute for Economic Policy Research (SIEPR): <http://siepr.stanford.edu/?q=/system/files/shared/pubs/papers/12-014paper.pdf>
- 18 Institute of Technical Education, “A worldclass vocational technical education system in time for the future: The Singapore experience,” presentation for the World Bank and African Education Policy Makers, Singapore, June 2006. Institute of Technical Education, “Leading change: Branding and marketing of TVET,” presentation for World Bank Leaders in Education and Training for Sustained Growth in Africa, Singapore, January 2008.
- 19 gobuildalabama.com
- 20 MLMM website; press clippings; team analysis; (2012). *An Overview of Turkish VET System*. Republic of Turkey Ministry of National Education; *Summary of Case Studies from Turkey*. (n.d.). Retrieved from UNDP Istanbul International Center for Private Sector in Development (IICPSD): <http://iicpsd.org/wp-content/uploads/2013/05/Summary-of-Case-Studies-from-Turkey-English.pdf>
- 21 European Commission. *Effects and impact of entrepreneurship programmes in higher education*, 2012.
- 22 (2011). *Cisco Academy—ICT Education for the 21st century*. Cisco Networking Academy.
- 23 INSEE, Ministère de l'Éducation nationale.
- 24 *Annual Report 2012-2013*, October, 2013. Retrieved from AWP: <http://www.awpa.gov.au/publications/Documents/Annual-Report%2012-13.pdf>.
- 25 *ICT Workforce Study*, July, 2013. Retrieved from AWP: <http://www.awpa.gov.au/publications/Documents/ICT-STUDY-FINAL-28-JUNE-2013.pdf>
- 26 Frank-Jürgen Weise, “Behind the German jobs miracle,” *Government Designed for New Times*, McKinsey & Company, 2012.
- 27 www.ukces.org.uk/ourwork/employer-skills-survey.
- 28 <https://www.gov.uk/government/news/millions-in-government-funding-made-available-to-target-industrial-strategy-skills-training>.
- 29 Finland's Youth Guarantee 2013 report of the working group, www.nuorisotaku.fi/en/youth_guarantee/information/materials.
- 30 Interview with Finnish Ministry of Employment and Education, December 2013.
- 31 www.gtavic.asn.au/about-gtav/about-gtav.
- 32 www.grouptraining.com.au/Publications/LookingAheadReport.
- 33 Interview with GTAV executive director, December 2013.
- 34 Interview with owner of SME client of GTO, December 2013.
- 35 SK Telecom, interview with manager, October 2012.
- 36 AMICA (The Moroccan Professional Association for the Automotive Industry and Trade), interview with president, Casablanca, Morocco, July 2012.
- 37 Source: Interview—Working Rite. The organisation has projects in the following areas in the United Kingdom: Highland, Moray, Aberdeenshire, Aberdeen City, Argyll & Bute, Renfrewshire, East Renfrewshire, Clackmannanshire, Edinburgh, East Lothian, West Lothian, Worcestershire and Herefordshire, East Sussex, and North-East Lincolnshire.
- 38 www.ft.com/cms/s/2/102b69ec-dce4-11e2-9700-00144feab7de.html#axzz2miF2KrdX.

- 39 S. L. Gamlath, (n.d.). *More than just fun: Experimental Evidence of the Impact Simventure had on a University Enterprise Course*. Retrieved from http://89.248.60.100/~entecuk1/components/com_rsevents/assets/files/5176ec7a50f2c_Suresh%20Gamlath.pdf.
- 40 Education Growth Advisors (2013), "Learning to Adapt: A case for accelerating adaptive learning in higher education".
- 41 www.universityworldnews.com/article.php?story=20110114222552395.
- 42 www.ond.vlaanderen.be/hogeronderwijs/bologna/about.