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BETTER SKILLS. BETTER JOBS. BETTER LIVES.
THE OECD SKILLS STRATEGY
EXECUTIVE SUMMARY

Better Skills. Better Jobs. Better Lives.
The OECD Skills Strategy
Executive Summary



FOREWORD

Skills have become the global currency of the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into economic growth, and countries can no longer compete in an increasingly knowledge-based global society. But this “currency” depreciates as the requirements of labour markets evolve and individuals lose the skills they do not use. Skills do not automatically convert into jobs and growth.

The global economic crisis, with high levels of unemployment, in particular among youth, has added urgency to fostering better skills. At the same time, rising income inequality, largely driven by inequality in wages between high- and low-skilled workers, also needs to be addressed. The most promising solution to these challenges is investing effectively in skills throughout the lifecycle; from early childhood, through compulsory education, and throughout a working life.

The OECD Skills Strategy provides an integrated, cross-government strategic framework to help countries understand more about how to invest in skills in a way that will transform lives and drive economies. It will help countries to identify the strengths and weaknesses of their existing national skills pool and skills systems, benchmark them internationally, and develop policies for improvement. In particular, the strategy provides the foundations upon which governments can work effectively with all interested parties – national, local and regional government, employers, employees, and learners – and across all relevant policy areas to:

- **Develop the right skills to respond to the needs of the labour market.** The Skills Strategy supports governments in gathering and using better intelligence about changing skills demand. It also helps them work more closely with the business sector in designing and delivering curricula and training programmes.
- **Ensure that where skills exist they are fully utilised.** People with disabilities, chronic health problems, women and older people are more likely to be inactive in the labour market. The Skills Strategy helps governments to identify inactive individuals and understand the reasons for their inactivity. This includes creating intelligent financial incentives that make work pay, and dismantling barriers to participation in the labour force.
- **Tackle unemployment and help young people to gain a foothold in the labour market in a way that makes best use of their skills.** The Skills Strategy brings together successful policies and practices to achieve this. It encourages employers to align their business strategies with human-resource practices and skills development in their workforce. It also highlights how quality career guidance is a critical feature of effective skills policies.
- **Stimulate the creation of more high-skilled and high value-added jobs to compete more effectively in today’s global economy.** Labour markets are not static, and policies can “shape” demand, rather than merely respond to it. The Skills Strategy can help governments to develop skills policies that foster innovation, competition and the spirit of entrepreneurship.
- **Exploit linkages across policy fields.** The Skills Strategy supports governments in creating linkages between relevant policy areas, including education, science and technology, family, employment, industrial and economic development, migration and integration, social welfare, and public finance, to help identify policy trade-offs and synergies, while ensuring efficiency and avoiding duplication of effort.

Investing in the right skills requires a strategic approach. This OECD Skills Strategy, which we have developed by bringing together expertise from across the entire Organisation, guided by an Advisory Group from five OECD Committees, is designed to provide a basis on which governments can begin converting “better skills policies” into jobs, growth, and “better lives”.

Angel Gurría

EXECUTIVE SUMMARY

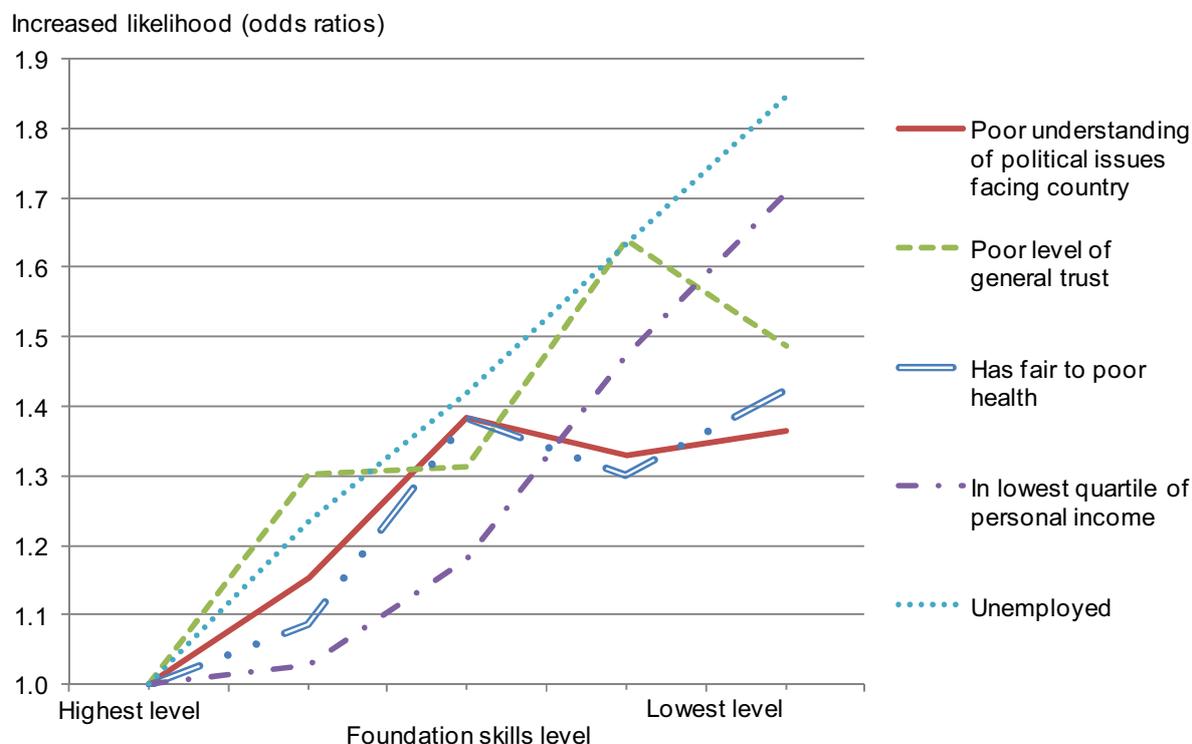
The OECD Skills Strategy: Developing the right skills and turning them into better jobs and better lives

1. Skills transform lives and drive economies. Without adequate investment in skills, people languish on the margins of society, technological progress does not translate into economic growth, and countries can no longer compete in an increasingly knowledge-based global society. People with poor skills face a much greater risk of experiencing economic disadvantage, and a higher likelihood of unemployment and dependency on social benefits (Figure 1). Conversely, according to one estimate, if student performance in the OECD area is raised by just half a school year, that would add USD 115 trillion to the OECD economy over the working life of the generation born this year. Skills affect people's lives and the well-being of nations also in ways that go far beyond what can be measured by labour-market earnings and economic growth (Figure 1). For example, skills relate to civic and social behaviour as they affect democratic engagement and business relationships.

2. In short, skills have become the global currency of 21st-century economies. But this "currency" can depreciate as the requirements of labour markets evolve and individuals lose the skills they do not use. For skills to retain their value, they must be continuously developed throughout life. Getting the best returns on investment in skills requires the ability to assess the quality and quantity of the skills available in the population, determine and anticipate the skills required in the labour market, and develop and use those skills effectively in better jobs that lead to better lives. Working towards achieving this is everyone's business. Governments, employers, employees, parents and students need to establish effective and equitable arrangements as to who pays for what, when and how.

Figure 1. Foundation skills and social and economic disadvantage

The increased likelihood¹ of experiencing social and economic disadvantage, by foundation skills level, adults aged 16 to 65



1. Adjusted for age, gender, education, parents' education and immigrant status.

Note: The figure uses preliminary data from the OECD Survey of Adult Skills, a product of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Although these data are not based on representative samples, they illustrate trends.

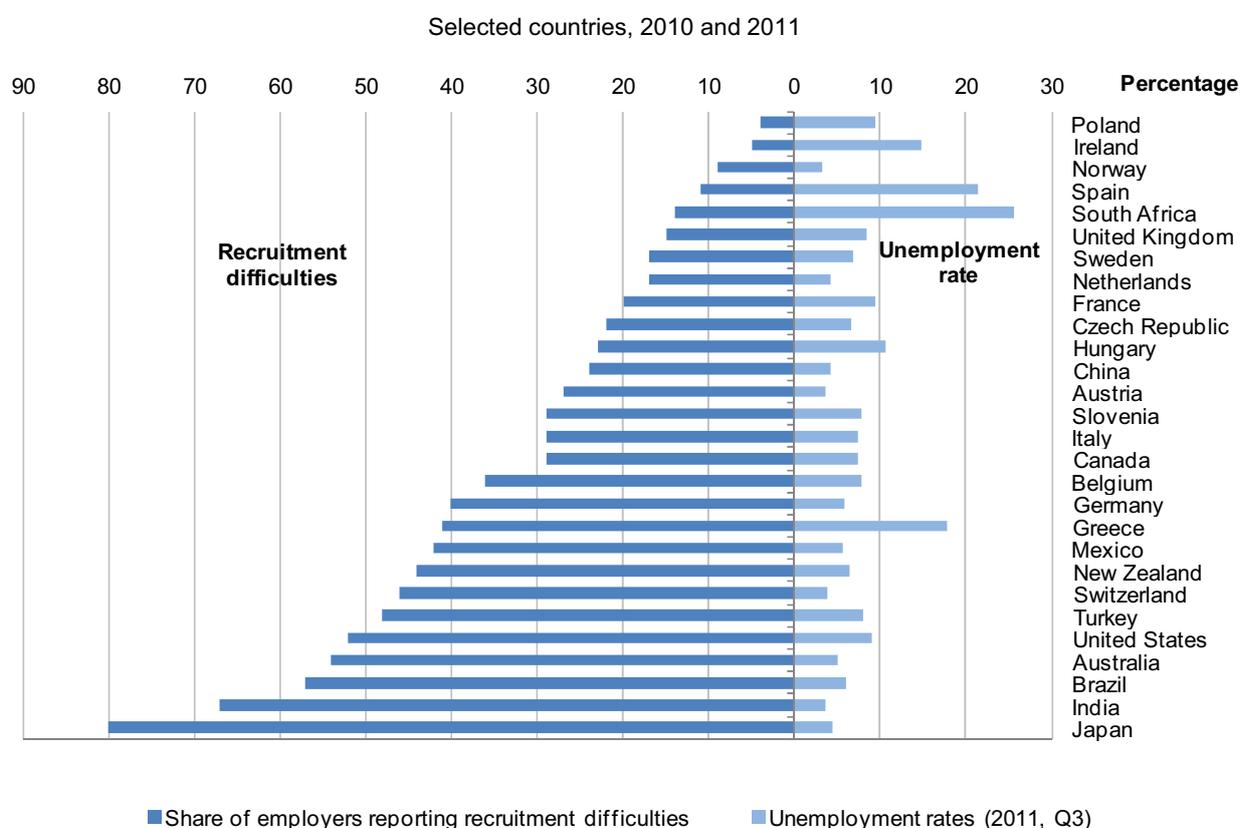
Source: PIAAC Field Trial, 2010.

How to read this graph: This figure shows that, for example, individuals with the lowest level of foundation skills are 1.8 times more likely to be unemployed, 1.4 times more likely to report health problems and 1.5 times more likely to have low levels of general trust as individuals with the highest level of foundation skills. Odds ratios reflect the relative likelihood of an event occurring for a particular group compared with a reference group. An odds ratio of 1 represents equal chances of an event occurring for a particular group vis-à-vis the reference group. Ratios with a value below 1 indicate that there is less of a chance of the event occurring; ratios with a value above 1 indicate that there is a greater chance.

Sidebar: Foundation skills are defined here as problem solving in technology-rich environments (the ability to use technology to solve problems and accomplish complex tasks); literacy (the ability to understand and use information from written texts in a variety of contexts to achieve goals and further develop knowledge); numeracy (the ability to use, apply, interpret and communicate mathematical information and ideas; and reading components (including word recognition, decoding skills, vocabulary knowledge and fluency).

3. There is ample evidence that countries can do better in developing and using the skills that are available to them. Large proportions of young people do not reach even the lowest level of foundation skills by the end of compulsory education, and significant numbers of adults do not possess the most basic skills considered necessary to succeed in today's societies and economies. Even at the height of the economic crisis in 2009, more than 40% of employers in Australia, Japan, Mexico and Poland reported difficulties in finding people with the appropriate skills (Figure 2). At the same time, unemployment rates in a number of countries are still at record highs. In some countries, up to one-third of workers report that they have the skills to cope with more complex tasks at work, and another 13% believe that they are not skilled enough. This means that many people do not have the required skills or are not using their skills productively for the economy at all.

Figure 2. Share of employers reporting recruitment difficulties and unemployment rates



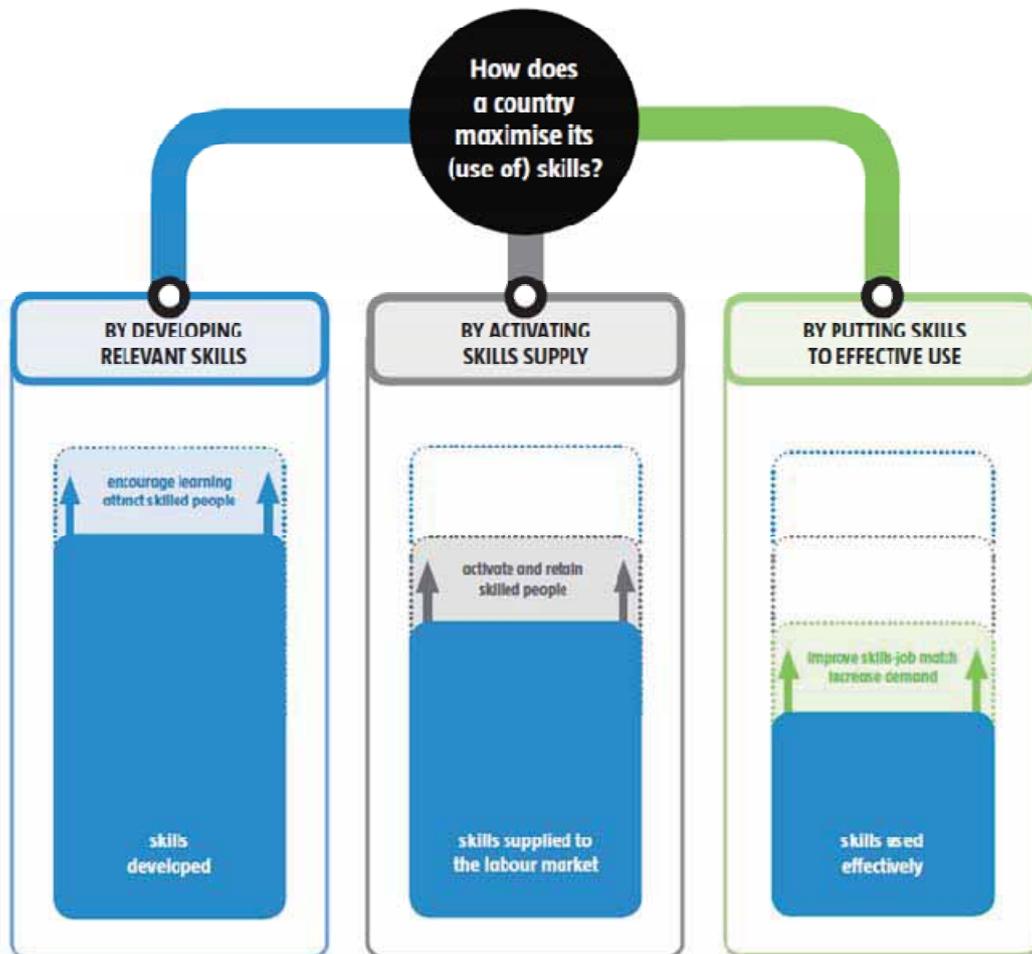
Note: Brazil: Urban areas only; China: Registered unemployment rate in rural areas in 2009; India: 2009/10; Indonesia: 2011Q1.
 Source: Self-elaboration, from OECD Employment Outlook and 2011 Talent Shortage Survey (in Quintini 2011b).

4. What kinds of skills are needed in different economies? How can today's students and workers prepare themselves for a rapidly evolving labour market? How can countries ensure that available skills are used productively? To answer these questions, countries must consider various facets of skills together. Building on its whole-of-government approach to policy making and its unique evidence base, the OECD has developed a global Skills Strategy that helps countries identify the strengths and weaknesses of their national skills systems, benchmark them internationally, and develop policies that can transform better skills into better jobs, economic growth and social inclusion. The Skills Strategy supports countries in adopting a systematic and comprehensive approach to skills policies that can:

- **Prioritise investment of scarce resources:** Since it is costly to develop a population's skills, skills policies need to be designed so that these investments reap the greatest economic and social benefits.
- **Combine short- and long-term considerations:** Effective skills policies are needed to respond to structural and cyclical challenges, such as rising unemployment when economies contract or acute skills shortages when sectors boom, and to ensure longer-term strategic planning for the skills that are needed to foster a competitive edge and support required structural changes.
- **Build a case for lifelong learning:** By seeing skills as a tool to be honed over an individual's lifetime, a strategic approach allows countries to assess the impact of different kinds of learning – from early childhood education through formal schooling to formal and informal learning later on – with the aim of balancing the allocation of resources to maximise economic and social outcomes.
- **Foster a whole-of-government approach:** If skills are to be developed over a lifetime, then a broad range of policy fields are implicated, including education, science and technology, employment, economic development, migration and public finance. Aligning policies among these diverse fields helps policy makers to identify policy trade-offs that may be required and to avoid duplication of efforts and ensure efficiency.
- **Align the perspectives of different levels of government:** With major geographical variations in the supply of and the demand for skills within countries, there is a strong rationale for considering skills policies at the local level. This would help countries to align national aspirations with local needs.
- **Include all relevant stakeholders:** Designing effective skills policies requires more than coordinating different sectors of public administration and aligning different levels of government: a broad range of non-governmental actors, including employers, professional and industry associations and chambers of commerce, trade unions, education and training institutions and, of course, individuals must also be involved.

5. To reach the goal of having and making the best use of a high-quality pool of skills, a country must consider three main policy levers: those that improve the quality and quantity of skills; those that activate the skills for the labour market; and those that ensure that skills are used effectively (Figure 3).

Figure 3. The OECD Skills Strategy framework



Source: Argumentenfabriek.

How can a country improve the quality and quantity of its skills?

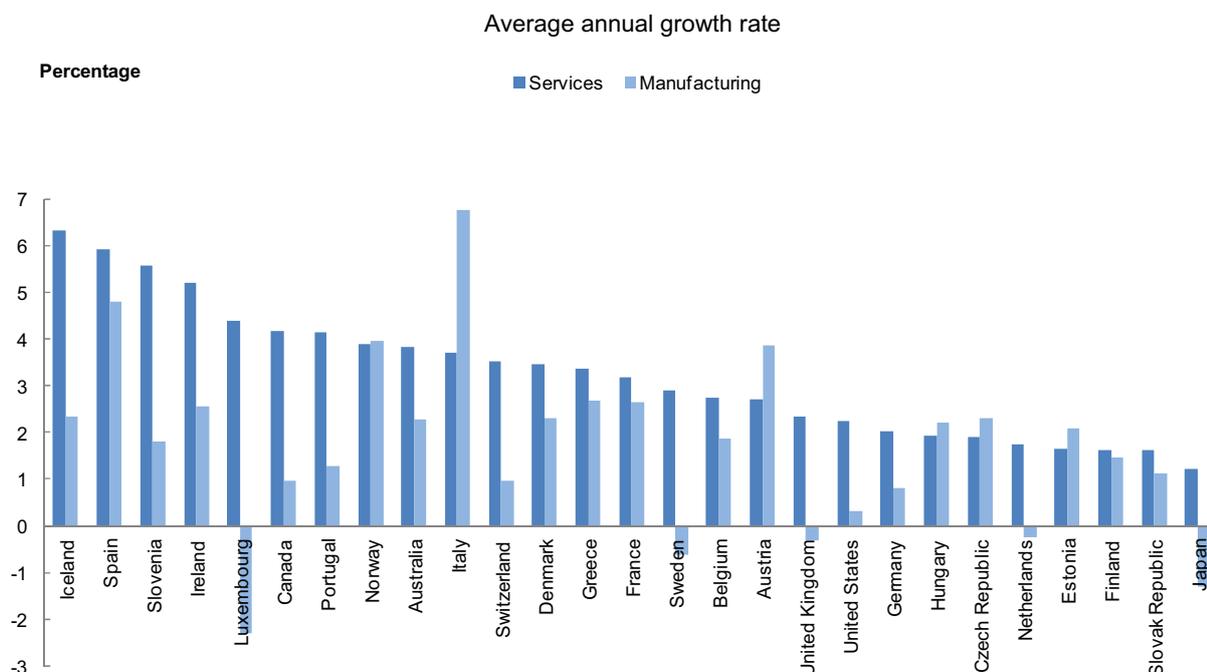
...by encouraging people to learn

Gather and use evidence about the changing demand for skills

6. Investing in skills development throughout a person's lifetime is at the heart of skills policies. During the past few decades there have been major shifts in the economic underpinnings of OECD countries and, more recently, of many emerging and developing countries too. In most countries, the labour market has moved from agriculture to industry to, increasingly, services (Figure 4). These changes imply a decline in the demand for craft skills and physical labour and a rise in the demand for cognitive and

interpersonal skills, and for higher-level skills more generally. As economies continue to evolve, the types of skills demanded by the labour market will necessarily change too. Government and business need to work together to gather evidence about skills demand, present and future, which can then be used to develop up-to-date curricula and inform education and training systems.

Figure 4. Growth in human resources in science and technology,¹ by industry, 1998-2008



1. Human resources in science and technology are defined according to the Canberra Manual (OECD and Eurostat, 1995) as persons who have graduated at the tertiary level of education or are employed in a science and technology occupation for which a high qualification is normally required and the innovation potential is high.

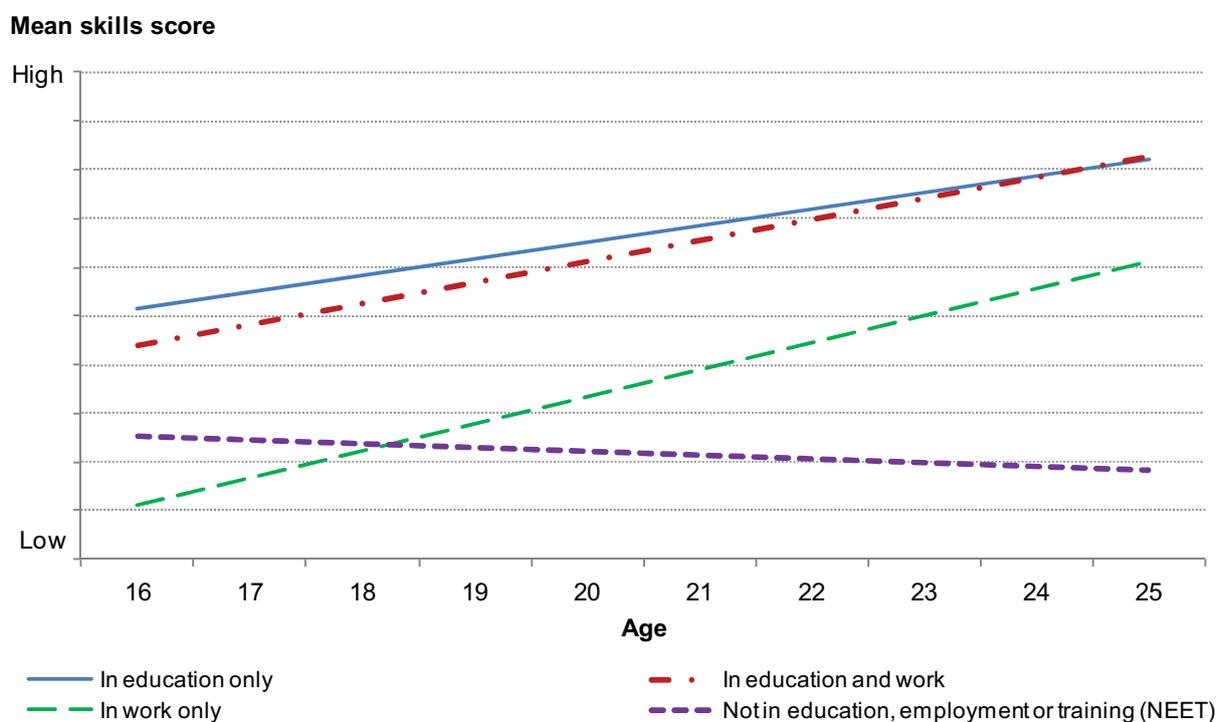
Note: Slovenia: 1997-2007; Sweden: 1997-2007; USA: 2003-08; Japan: 2003-08.

Source: OECD, ANSKILL Database, June 2011.

Involve social partners in designing and delivering education and training programmes

7. Skills development is more effective if the world of learning and the world of work are linked (Figure 5). Compared to purely government-designed curricula taught exclusively in schools, learning in the workplace offers several advantages: it allows young people to develop “hard” skills on modern equipment, and “soft” skills, such as teamwork, communication and negotiation, through real-world experience. Hands-on workplace training can also help to motivate disengaged youth to stay in or re-engage with the education system and smooths the transition from education into the labour market. Workplace training also facilitates recruitment by allowing employers and potential employees to get to know each other, while trainees contribute to the output of the training firm. Employers have an important role in training their own staff; but some, particularly small and medium-sized enterprises, might need public assistance to provide such training. Trade unions can also help to shape education and training, protect the interests of existing workers, ensure that those in work use their skills adequately, and see that investments in training are reflected in better-quality jobs and higher salaries.

Figure 5. Young people in their mid-20s who are in education and work have higher average levels of foundation skills, country average



Note: The figure uses preliminary data from the OECD Survey of Adult Skills, a product of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Although these data are not based on representative samples, they illustrate trends.

Source: PIAAC field trial data, 2010.

Remove barriers to investing in further learning

8. Preparing young people for their entry into the labour market with up-front education and training is only one facet of skills development; working-age adults also need to develop their skills so that they can progress in their careers, meet the changing demands of the labour market, and don't lose the skills they have already acquired (Figure 6). A wide spectrum of full- or part-time adult-learning activities needs to be available: from work-related employee training, formal education for adults, second-chance courses to obtain a minimum qualification or basic literacy and numeracy skills, language training for immigrants, and labour-market training programmes for job-seekers, to learning activities for self-improvement or leisure. The Skills Strategy identifies a number of policy approaches that can help to dismantle barriers to participation in continued education and training. These include:

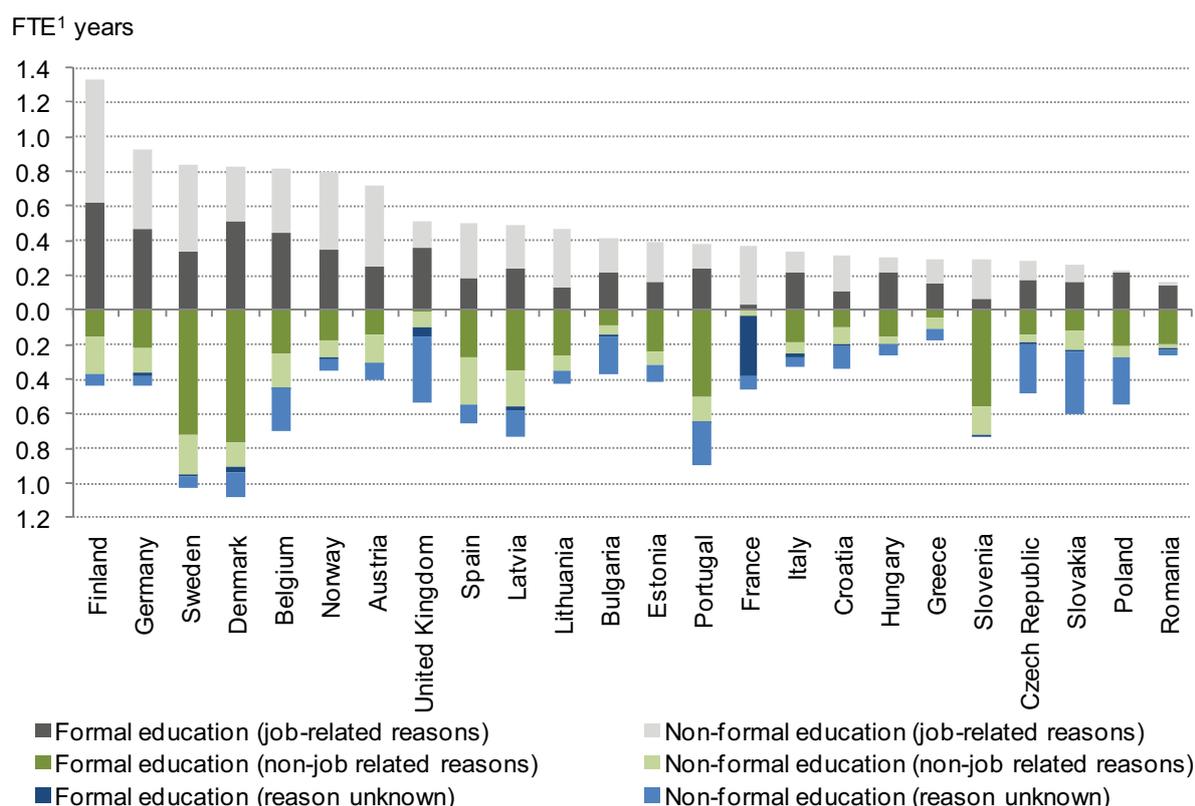
- **Greater transparency:** Making the returns on adult education and training more transparent helps to increase the motivation of users to invest in adult education and training. Governments can provide better information about the economic benefits (including wages net of taxes, employment and productivity) and non-economic benefits (including self-esteem and increased social interaction) of adult learning.
- **Information and guidance for potential learners:** Less-educated individuals tend to be less aware of education and training opportunities or may find the available information confusing. A combination of easily searchable, up-to-date online information and personal guidance and

counselling services to help individuals define their own training needs and identify the appropriate programmes is needed, as is information about possible funding sources.

- **Recognising learning outcomes:** Clear certification of learning outcomes and recognition of informal learning are also incentives for training. Transparent standards, embedded in a framework of national qualifications, should be developed alongside reliable assessment procedures. Recognition of prior learning can also reduce the time needed to obtain a certain qualification and thus the cost of foregone earnings.
- **Flexible delivery of relevant programmes:** It is essential to ensure that programmes are relevant to users and are flexible enough, both in content and in how they are delivered (part-time, flexible hours) to adapt to adults' needs. A number of countries have recently introduced one-stop-shop arrangements, with different services offered in the same institution. This approach is particularly cost-effective as it consolidates infrastructure and teaching personnel and makes continuing education and training more convenient. Distance learning and the open educational resources approach have significantly improved users' ability to adapt their learning to their lives.

Figure 6. Expected number of years of work-related formal and non-formal education and training over a working life

Per adult between the ages of 25 and 64



1. Full-time equivalent (FTE) years indicates the length of time a person attends formal and non-formal education and training on a full-time basis.

Source: EU Adult Education Survey, 2005-2008.

Ensure that education and training programmes are of high quality

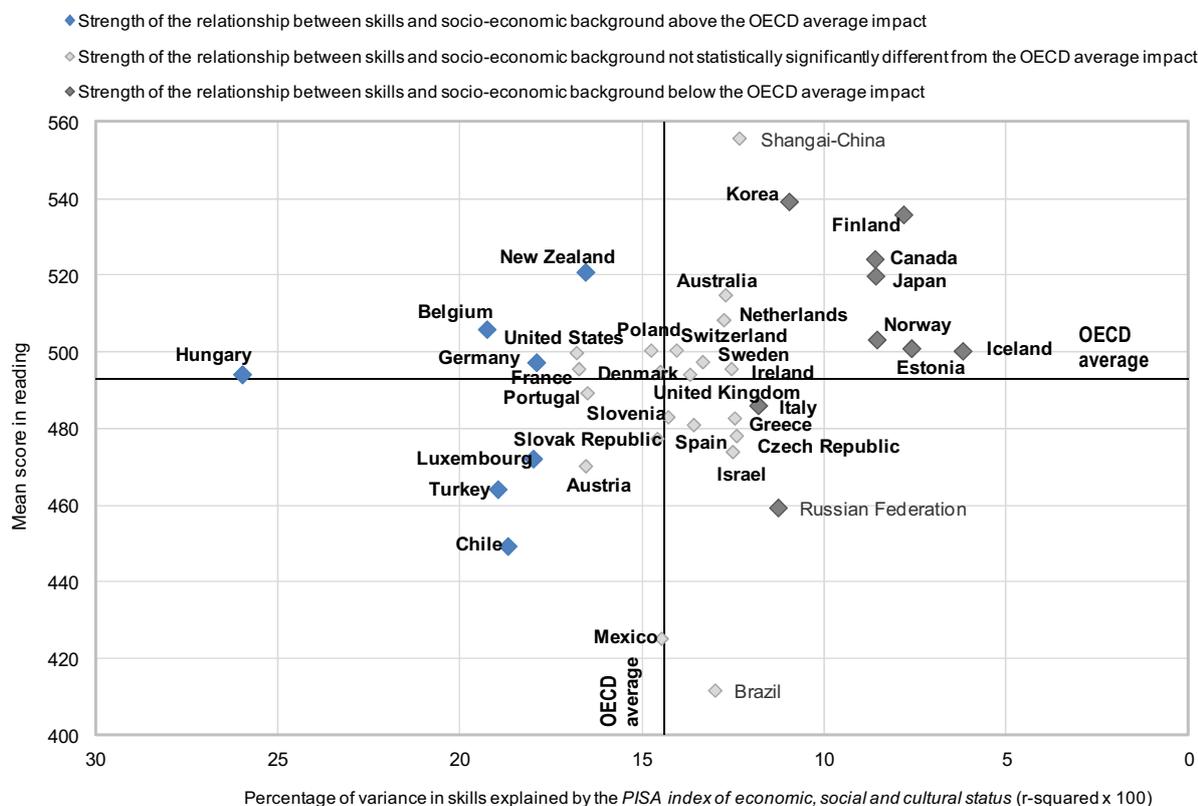
9. Spending time in education is one thing; learning is another. The OECD's Programme for International Student Assessment (PISA) shows that significant numbers of 15-year-olds in many countries do not acquire even a minimum level of skills through compulsory schooling. Governments can help to foster quality in education and training from early education through school and beyond. Education and training institutions need to be governed by a clear quality-assurance framework that serves both accountability and improvement purposes, and that combines internal and external evaluation without imposing an excessive administrative burden. Teaching must be valued as a profession so that the best candidates are recruited and the most effective teachers are retained. Workplace training should also be subject to quality control, in the form of contractual arrangements, inspections and self-evaluations.

Promote equity by ensuring access to, and success in, quality education for all

10. Individuals who have low levels of skills because they do not have access to good-quality education, because they fail to succeed in education or because they do not get a second chance to improve their skills later on are much more likely to have poor labour market and social outcomes. As Figure 1 illustrates, people with poor foundation skills are at greater risk of economic disadvantage and a higher likelihood of unemployment and dependency on social benefits. They also are much more likely to report poor health and to lack trust in others. Yet findings from PISA show that equity and quality in education are not mutually exclusive (Figure 7). Investing in high-quality early childhood education and initial schooling, particularly for children from socio-economically disadvantaged backgrounds, is an efficient strategy to ensure that children start strong in their education careers so that first skills beget future skills. Later in life, financial support targeted at disadvantaged students and schools can improve the development of skills. And since individuals with poor skills are unlikely to engage in education and training on their own initiative and tend to receive less employer-sponsored training, second-chance options can offer them a way out of the low skills/low income trap.

Figure 7. High-performing education systems combine equity with quality (PISA 2009)

Quality of learning outcomes, as measured by the reading skills of 15-year-olds, and equity, as measured by the strength of the relationship between skills and socio-economic background (PISA 2009)



Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD *Education at a Glance 2011*.

Ensure that the costs of education and training are shared

11. Employers have to create a climate that supports learning, and invest in learning; and individuals must be willing to develop their skills throughout their working life. Governments can design financial incentives and favourable tax policies that encourage individuals and employers to invest in post-compulsory education and training. For example, allowing taxpayers to deduct the cost of such education from their income taxes could help to offset the disincentives to invest in skills resulting from progressive personal income taxes. Some countries fear that, with rising enrolment rates and the increasing cost of tertiary education, they might not be able to sustain these investments. To make investing in tertiary education more cost-effective, individuals can be encouraged to shoulder more of the financial burden and funding can be linked more closely to graduation rates. At the same time, individuals need to have access to the necessary financing which can be best assured through income-contingent loans and means-tested grants.

Maintain a long-term perspective, even during economic crises

12. In periods of depressed economic conditions and when public budgets are tight, governments tend to cut investments in human capital first. But cutting investment in skills at such times may be short-sighted, as a skilled workforce will play a crucial role in generating future jobs and growth. If cuts to public spending have to be made, they should be based on the long-term cost/benefit ratios of alternative public investments. On these grounds, there is usually a strong case to be made for maintaining public investment in skills.

...by encouraging skilled people to enter the country

Facilitate entry for skilled migrants

13. Countries may not have an adequate supply of skills because they have booming emerging sectors and not enough people trained in those fields, because their societies are ageing and there are too few young people to replace retiring workers, or because they want to move major parts of the economy to higher value-added production, which requires a well-trained workforce. Labour-migration policies can complement other measures to address these shortfalls. While all countries select labour migrants, they differ in the extent to which public authorities and employers intervene in the selection process. Many countries focus on the migration of highly skilled workers, but there is also a continuing demand for low-skilled work that many native-born people do not want to do. This demand is often met by low-skilled migrants, through both legal and illegal/irregular channels. Countries might want to consider making it easier for recent immigrants to participate in lifelong-learning activities to help them and their families integrate more fully into society.

Design policies that encourage international students to remain after their studies

14. International student mobility has increased dramatically over the past years. The advantage of international students for host-country employers is that they have a qualification that can be easily evaluated. Many of them also work part-time during their studies, allowing them to develop ties with the host-country society and labour market, which in turn facilitates their transition from learning to work. To make better use of this source of skills, several OECD countries have eased their immigration policies to encourage international students to remain after their studies for employment. The overall stay rate varies, averaging 25% in 2008-09 among international students who did not renew their student permits. In Australia, Canada, the Czech Republic, France, Germany and the Netherlands, the stay rate is more than 25%.

Make it easier for skilled migrants to return to their country of origin

15. Migration flows can also have a positive impact on the stock of human capital in countries of origin: returning migrants bring back knowledge and experience that are of use to their home country. To reap these advantages, a number of countries have tried to eliminate disincentives to return and, indeed, to facilitate and encourage return migration. One approach can be to provide financial support to municipalities that invite returnees and provide them with housing; another option is to provide income tax concessions, particularly to highly skilled nationals returning to their home country. However, the track record of such measures is mixed. Co-operation on skills policies between source and destination countries can result in win-win outcomes. For example, some countries provide training to guest workers for as long as they participate in the host country's labour market – and the workers can then take this knowledge back to their home countries when they return.

...by promoting cross-border skills policies

Invest in skills abroad and encourage cross-border higher education

16. While skills policies are typically designed nationally, an increasing number of employers operate internationally and must derive their skills from both local sources and the global talent pool. Some countries have therefore started to consider skills policies beyond their national borders and have begun to invest in the skills of people in other countries. This has the double advantage of providing well-trained workers to branches of firms located abroad and reducing the incentives to emigrate, especially among highly skilled individuals. Another way to encourage skills development globally is to design policies that encourage cross-border tertiary education. This can help a country to expand its stock of skills more rapidly than if it had to rely on domestic resources alone.

How can a country activate skills in the labour market?

...by activating people

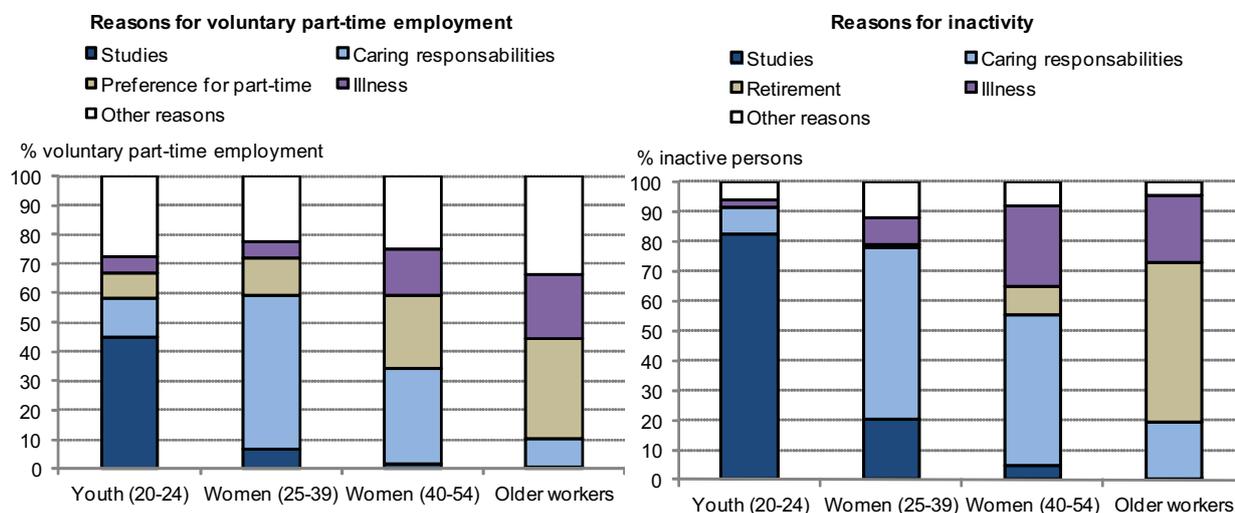
Identify inactive individuals and why they are inactive

17. People may have skills, but for a variety of reasons they may not be willing or able to supply them to the labour market. In most countries, significant numbers individuals are out of the labour force by choice, or because of their personal/family circumstances, or because there are financial disincentives to work.

18. Labour-force participation rates – the sum of people in employment and in unemployment as a percentage of the working-age population – range from close to 90% in Iceland to below 60% in Turkey. Some socio-demographic groups are more likely to be inactive than others, notably women and people with disabilities or chronic health problems, particularly if they are also low-skilled. Integrating under-represented groups into the labour force has a great potential to increase the skills base in an economy. Targeting activation policies efficiently requires identifying inactive individuals and their reasons for inactivity (Figure 8).

Figure 8. Reasons for working part-time or being inactive

Percentages, averages over 21 European countries¹ and years 2005-2007

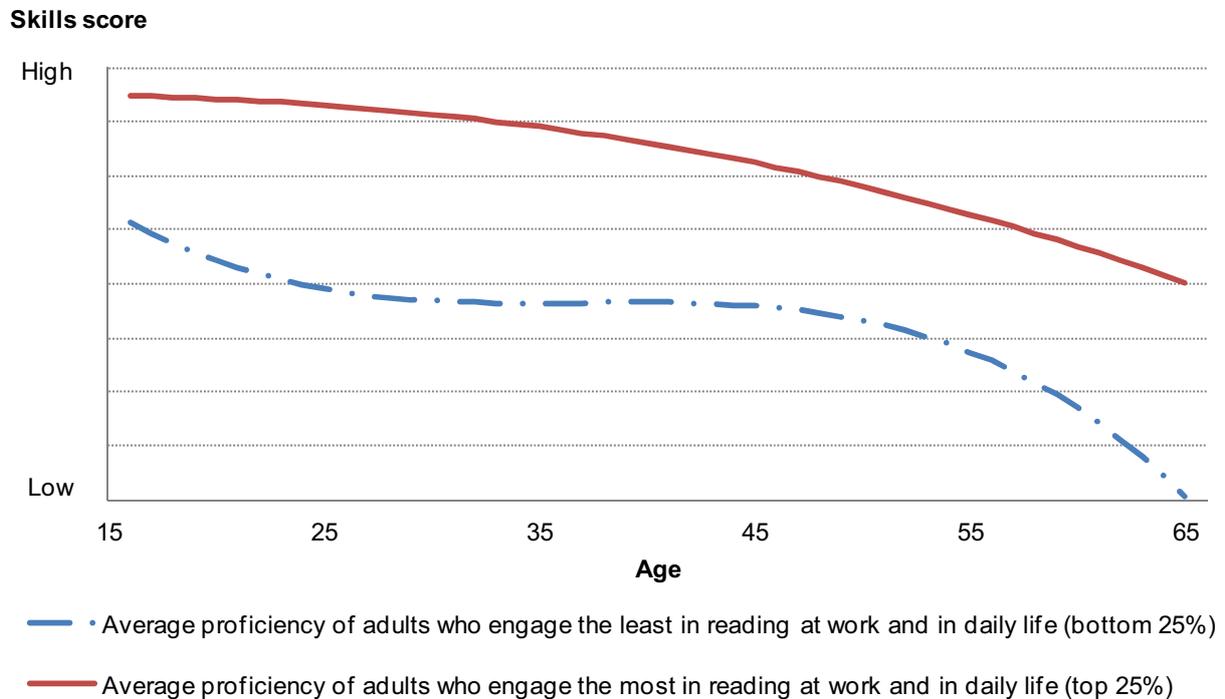


1. Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, the Slovak Republic, Spain, Sweden and the United Kingdom.

Source: OECD Employment Outlook 2010.

19. Unused human capital represents a waste of skills and of initial investment in those skills. As the demand for skills changes, unused skills can become obsolete; and skills that are unused during inactivity are bound to atrophy over time. Conversely, the more individuals use their skills and engage in complex and demanding tasks, both at work and elsewhere, the more likely it is that skills decline due to aging can be prevented (Figure 9).

Figure 9. Unused skills may be more likely to atrophy



Note: The figure uses preliminary data from the OECD Survey of Adult Skills, a product of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Although these data are not based on representative samples, they illustrate trends.

Source: PIAAC field trial data, 2010.

Create financial incentives that make work pay

20. Costly childcare services, tax systems that make work economically unattractive, or benefit systems that offer better compensation compared with expected salaries can make it uneconomical to work. For people with disabilities, incentives to withdraw from the labour force largely depend on their access to full disability-benefit schemes. A number of countries have either abolished partial disability benefits or have made full disability schemes exclusive to people who can no longer work. In some countries, people who can still work are increasingly being counted as unemployed, and are thus subject to the so-called "mutual obligation", whereby they have to comply with job-search and training requirements or risk losing part or all of their unemployment benefits. When examining beneficiary claims, countries need to shift the focus from assessing health status to assessing the remaining capacity to work.

Dismantle non-financial barriers to participation in the labour force

21. Inflexible working conditions can make it difficult for people with care obligations and individuals with disabilities to participate in the labour force. Part-time work is increasingly seen as a way to activate these groups. Less rigid working-time arrangements and improved working conditions,

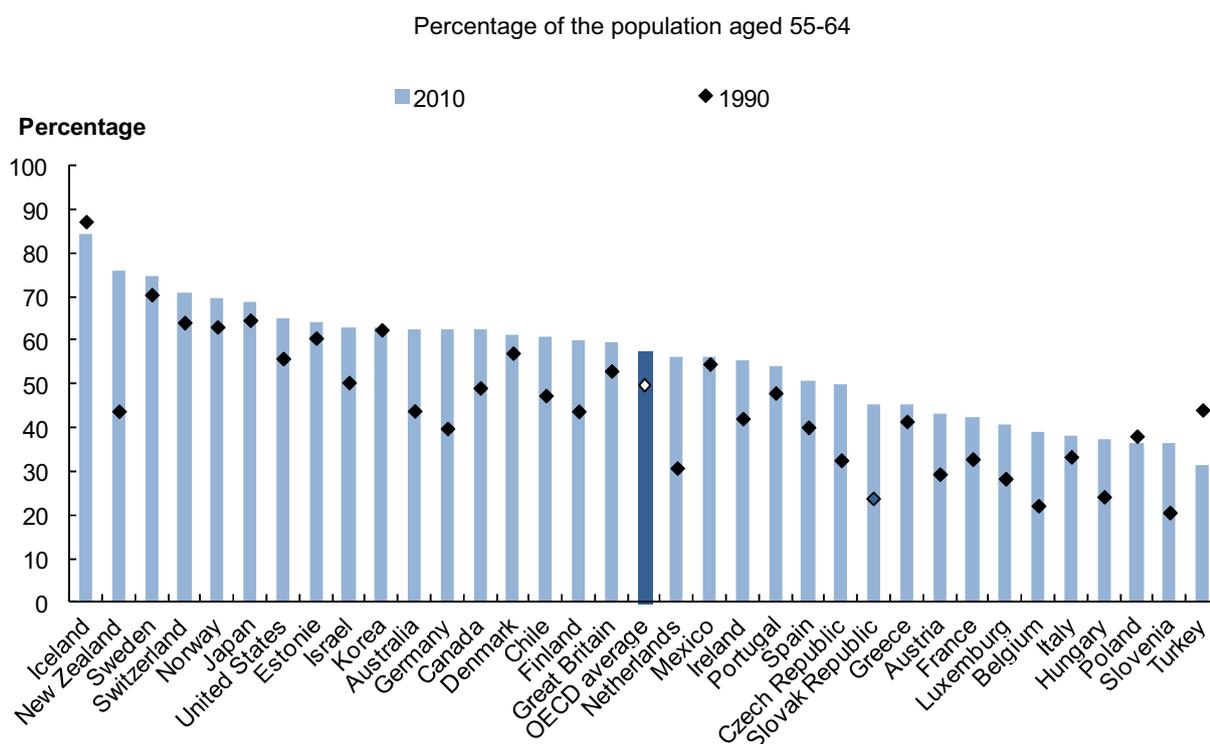
particularly for workers with health problems, can also make employment more attractive to these traditionally inactive groups. Employers, trade unions and government can work in concert to design these policies. To be effective, however, these programmes have to be combined with efforts to reduce employers' reluctance to hire inactive individuals. In addition, since skills can atrophy or become obsolete during long periods of inactivity, these individuals may need re-training or up-skilling to improve their employability.

...by retaining skilled people

Contain early retirement

22. Some skilled workers might leave the labour market prematurely for various personal and work-related reasons. This is particularly a problem in countries with ageing populations (Figure 10). To keep older workers in the labour market, many countries have eliminated early-retirement schemes, increased the official pensionable age and corrected distorted financial incentives to retire early. To tackle demand-side barriers to employing older workers, some countries have tried to balance labour costs with productivity by reducing employers' social security contributions or providing wage subsidies for older workers. Lifelong learning and targeted training, especially in mid-career, can improve employability in later life and discourage early withdrawal from the labour market. A rise in the pensionable age lengthens the period of time over which employers could recover training costs; hence, it is likely to motivate more employers and older employees to invest in training.

Figure 10. Labour-force participation among older workers, 1990¹ and 2010



1. 1991 for Iceland, Mexico and Switzerland; 1992 for Hungary and Poland; 1993 for Czech Republic, 1994 for Austria and Slovak Republic; 1996 for Chile and Slovenia.

Source: OECD Labour Force Statistics Database.

23. In certain countries, losing highly skilled individuals through migration to other countries, also known as brain drain, can create shortages of skills and represents a loss of the investment made in these skills. To reap the full benefits of initial investments in skills, countries where brain drain is a major concern should focus on retaining their skilled workers. But experience has shown that the best way to prevent brain drain is to provide incentives to stay, including by improving labour-market conditions locally, rather than by imposing coercive measures to prevent emigration. Brain drain also happens within countries, particularly between rural areas and urban centres. Local career-advice services can help to ensure that skilled people are fully aware and take advantage of the opportunities available within their nearby labour market.

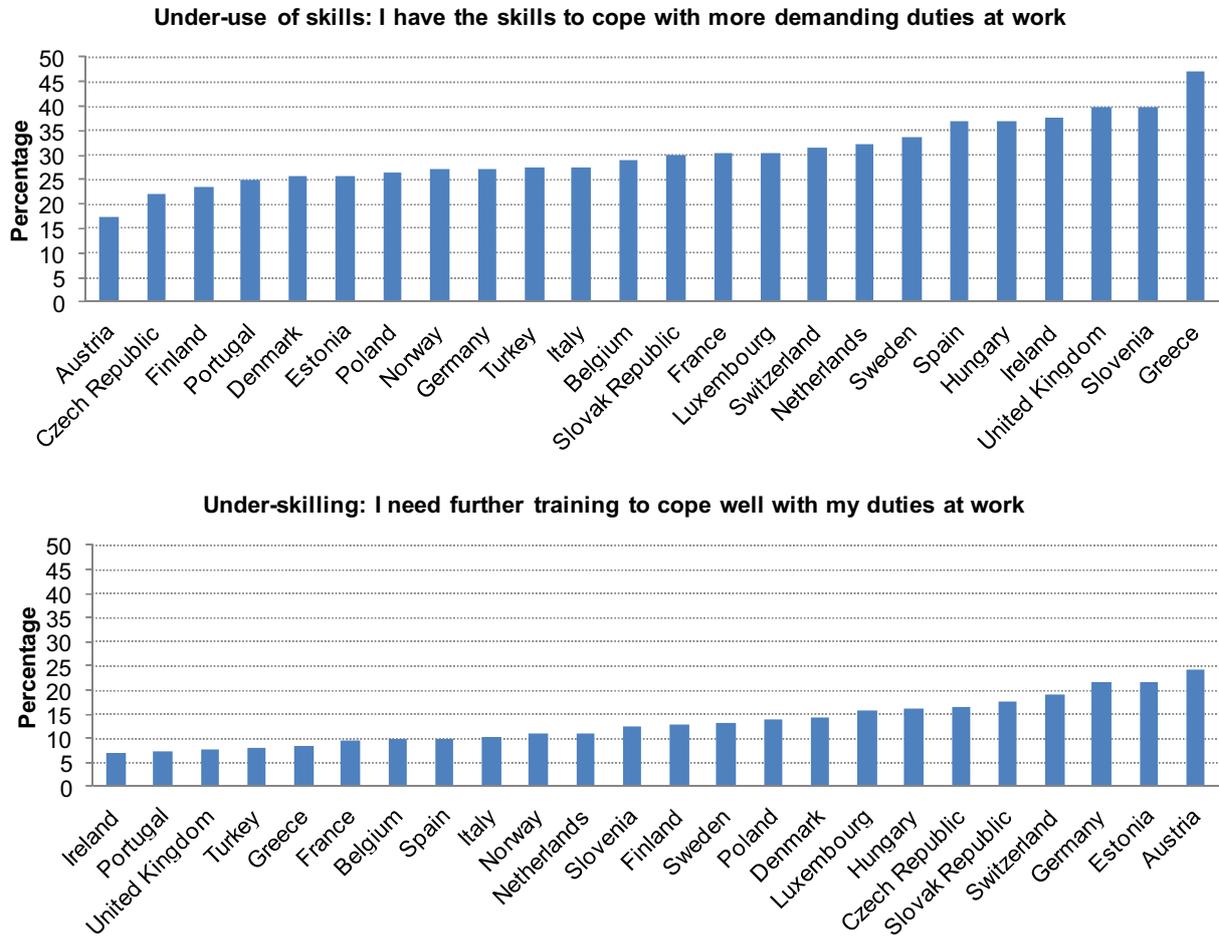
How can a country make the best use of its talent pool?

...by ensuring that people use their skills effectively

24. Developing skills and making them available to the labour market will not have the desired impact on the economy and society if those skills are not used effectively. The fact that skills shortages can co-exist with high unemployment, and that there is persistent evidence of mismatch between employees' skills and job requirements, indicates that a population's stock of skills – and the investment made to develop those skills – may be partly going to waste. Skills mismatch on the job (Figure 11) can be a temporary phenomenon: sometimes, for example, the demand for skills takes time to adjust to the fact that there is a larger pool of highly skilled workers available. Thus, not all types of skills mismatch are bad for the economy. Skills surpluses, which can result from an under-use of skills in specific occupations, can serve as a skills reserve that may be used in other, more advanced jobs and for building knowledge economies over the long term. However, the mismatch between workers' skills and their tasks at work can adversely affect economic and social outcomes (Figures 12 and 13). Over-skilling, or the under-use of skills, in specific jobs in the short to medium term can be a problem because it may lead to skills loss. Workers whose skills are under-used in their current jobs earn less than workers who are well-matched to their jobs and tend to be less satisfied at work. This situation tends to generate more employee turnover, which is likely to affect a firm's productivity. Under-skilling is also likely to affect productivity and, as with skills shortages, slow the rate at which more efficient technologies and approaches to work are adopted.

Figure 11. The incidence of skills mismatch

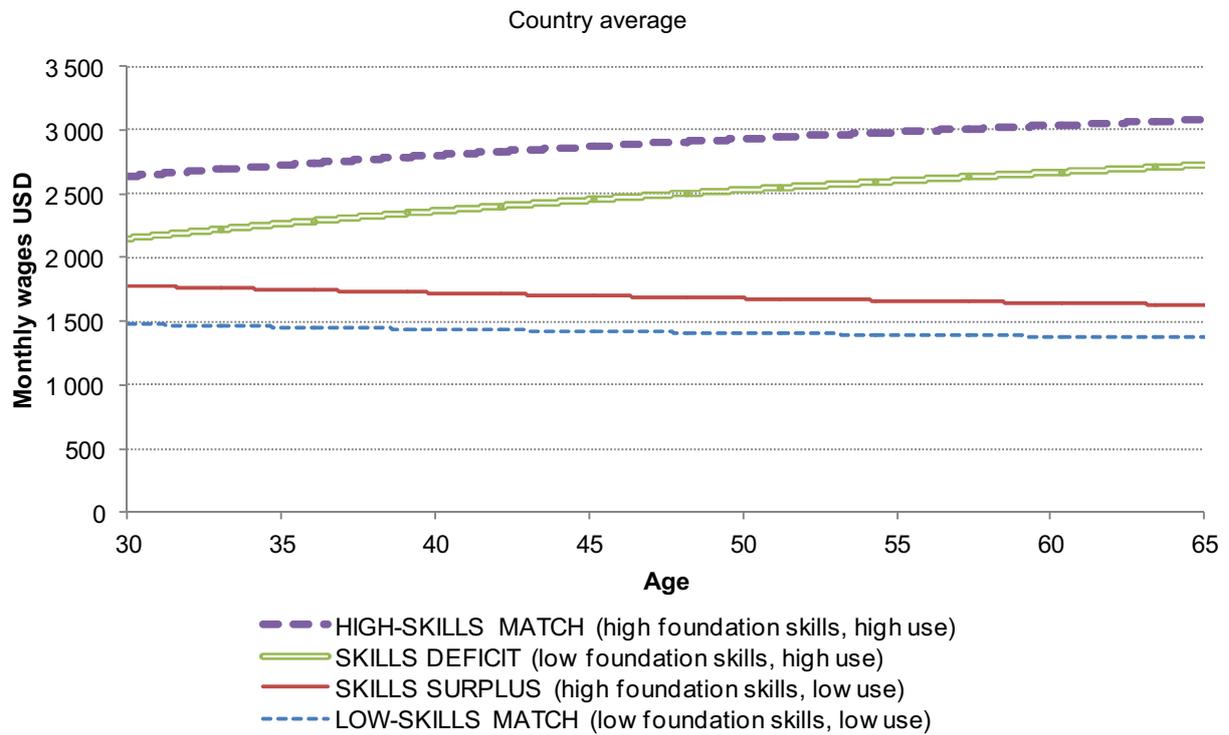
Incidence of self-reported over- and under-skilling in selected OECD countries, 2010¹



1. Data from Switzerland refer to 2005.

Source: Quintini (2011). Secretariat estimates based on the European Survey of Working Conditions, 2005.

Figure 12. The link between skill mismatch and earnings

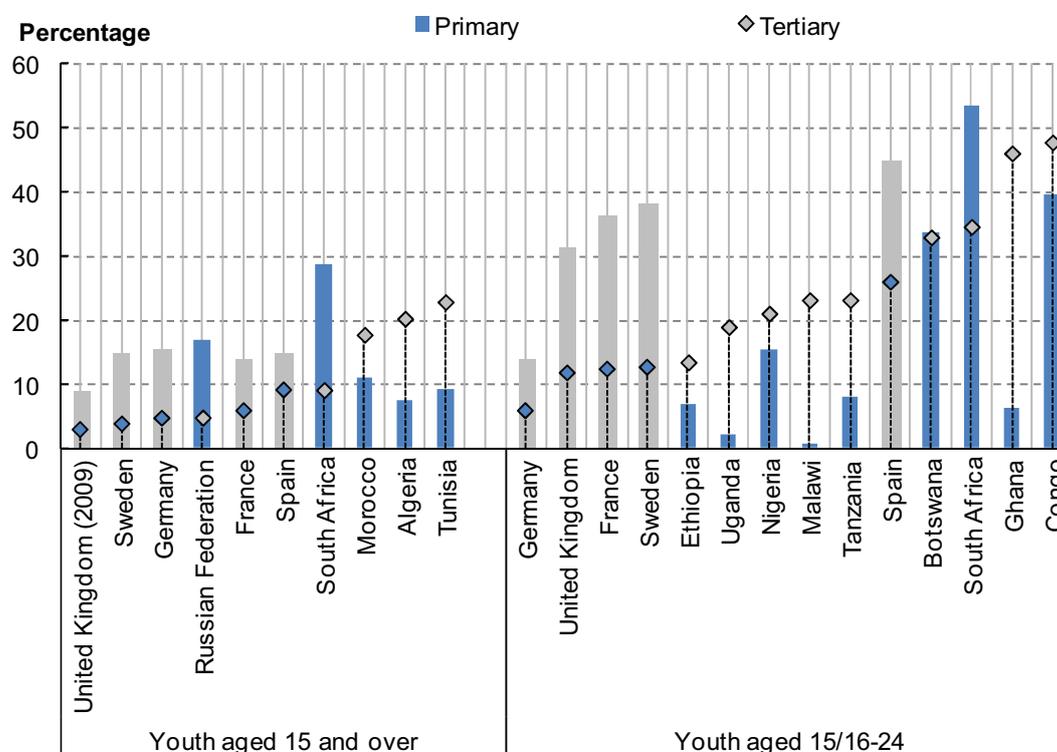


Note: The figure uses preliminary data from the OECD Survey of Adult Skills, a product of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Although these data are not based on representative samples, they illustrate trends.

Source: PIAAC field trial data, 2010.

Figure 13. Unemployment rate by level of education in selected African and European countries

Percentage of labour-force participants in each group, persons aged 15 and over¹, latest year available



1. 15-72 for the Russian Federation, 16 and over for Spain and 16-64 for South Africa and the United Kingdom.

Note: Data from 2010 for Russian Federation, South Africa, Algeria and Tunisia; Data from 2009 for United Kingdom, Sweden, Germany, France, Spain and Morocco; Data from 2006 for Uganda, Tanzania and Ghana; Data from 2005/06 for Botswana; Data from 2005 for Ethiopia and Congo; Data from 2004 for Malawi; Data from 2003/04 from Nigeria.

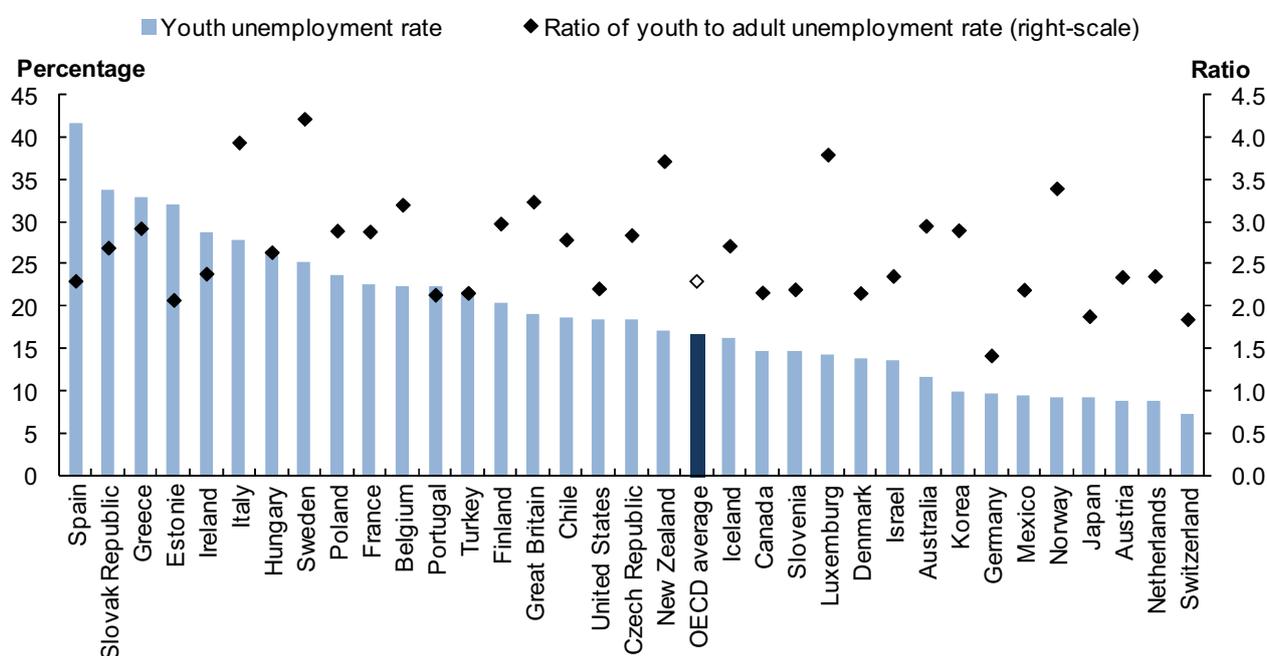
Source: LO Department of Statistics, Statistical Update on Arab States and Territories and North African countries for Algeria, Jordan, Morocco, Tunisia, the West Bank and Gaza Strip, Lebanon, Qatar, Saudi Arabia, and Syria; ILO, Short-Term Indicator of the Labour Market for the Russian Federation; OECD Education Database for France, Germany, Spain, Sweden and the United Kingdom; national Labour Force Survey for South Africa; and African Development Bank (AfDB) estimations for Botswana, Congo, Ethiopia, Ghana, Malawi, Nigeria, Tanzania, and Uganda.

Help young people to gain a foothold in the labour market

25. Successful entry into the labour market at the beginning of a professional career has a profound influence on later working life. The “scarring effects” of a poor start can make it difficult to catch up later. In 2011, the average youth unemployment rate among OECD countries was close to 17% – 2.3 times higher than that of prime-age adults. While that figure reflects the impact of the global economic recession, high rates of youth unemployment were common even before the crisis (Figure 14). In addition, in Europe in 2005 close to one in five 15-29-year-olds were either trapped in unstable jobs or were neither in employment nor in education and training. Strong basic education, in conjunction with vocational education and training programmes that are relevant to the needs of the labour market, tend to smooth the transition from school to work; so do hiring and firing rules that do not penalise young people compared with other groups, and financial incentives that make it viable for employers to hire young people who require on-the-job training. Such policies can help to prevent skills mismatch and unemployment later on.

Figure 14. Youth unemployment in OECD countries, 2010

Youth unemployment rate, and ratio of the unemployment rate of 15-24-year-olds to that of 25-64-year-olds



Source: OECD Labour Force Statistics Database.

Help employers to make better use of their employees' skills

26. Mismatch on the job, where it affects economic and social outcomes negatively, can be tackled in various ways. In the case of under-skilling, public policies can help to identify workers with low levels of foundation skills and offer an incentive to both employees and employers to invest in skills development to meet the requirements of the job. When the skills available aren't adequately used, better management practices are needed. For example, employers can grant workers some autonomy to develop their own working methods so that they use their skills effectively. As workers assume more responsibility for identifying and tackling problems, they are also more likely to "learn by doing", which, in turn, can spark innovation. Trade unions have an important role to play in improving the match between skill demand and supply.

Provide better information about the skills needed and available

27. Under-skilling, under-use of skills, and unemployment can arise because of a lack of information and transparency in skills systems. The under-use of skills is often related to field-of-study mismatch, whereby individuals work in an area that is unrelated to their field of study and in which their qualifications are not fully valued. Under-skilling could be the result of skills shortages that force employers to hire workers who are not the best fit for the jobs on offer. Quality career guidance thus becomes a critical part of any skills strategy. Competent personnel who have the latest labour-market information at their fingertips can steer individuals to the learning programmes that would be best for their prospective careers. Coherent and easy-to-interpret qualifications can help employers to understand which skills are held by potential employees, making it easier to match a prospective employee to a job. Continuous certification that incorporates non-formal and informal learning over the working life is also essential, as is recognition of foreign diplomas. One of the biggest obstacles immigrants face when looking

for work is that their qualifications and foreign work experience may not be fully recognised in the host country. As a result, many immigrant workers hold jobs for which they are over-qualified.

Facilitate internal mobility

28. One reason why skills shortages can co-exist with high unemployment is that people with the relevant skills are not in same geographical location as the jobs that require those skills. Reducing costs and other barriers associated with internal mobility helps employees to find suitable jobs and helps employers to find suitable workers. Importing skills from outside a country without first considering the potential for skills supply through internal mobility can have adverse consequences for overall employment and skills use in the country.

...by increasing the demand for high-level skills

Help local economies move up the value-added chain

29. In recent years there has been a growing trend, particularly in emerging economies, in mass-producing simple and effective products and services aimed at customers who do not have great purchasing power. When companies deliver standardised products to markets and attract customers mainly on the basis of costs, they tend to use technical means of production that are task and routine-based. Thus, they have little incentive to attract skilled staff or to train new staff. Government programmes can influence both employer competitiveness strategies (how a company organises its work to gain competitive advantage in the markets in which it is operating) and product-market strategies, which determine in what markets the company competes. As companies move into higher value-added product and service markets, the levels of skills that they require, and the extent to which they use these skills, tend to increase.

Stimulate the creation of more high-skilled and high value-added jobs

30. A good match between available skills and job tasks is not always a positive situation: people can be matched with their jobs, but at a very low level. Such low-skills equilibria can adversely affect the economic development of a local economy or region, or indeed an entire country. To tackle such a situation, policies can also “shape” demand, rather than merely respond to it. By fostering competition in the market for goods and services, policy makers can promote productive economic activities that contribute to stronger economic growth and the creation of more productive and rewarding jobs. While such policies primarily fall into the realm of economic-development actors, education institutions focusing on new technologies and innovation can also be involved in developing the skills that will shape the economies of the future.

Foster entrepreneurship

31. Entrepreneurs are made, not born. To be successful they need to know how to identify opportunities, turn them into successful ventures, and recognise and respond to difficulties and obstacles that may emerge. Teaching entrepreneurship in schools, universities and vocational training institutions can help instil these skills and competences in students. In promoting entrepreneurship, universities themselves need to be entrepreneurial and innovative. In some countries, for example, recruitment and career-development programmes for academic staff in many private and public universities now take into account entrepreneurial attitudes and prior experience, as well as work in mentoring entrepreneurs. Since migrants too can be entrepreneurs, policies can support recent immigrants in establishing their businesses by offering seminars and briefings on local labour law, and income and corporate tax and social-security legislation in addition to more traditional courses in financing, production and marketing.

The way forward

32. With its bird's-eye view of effective skills policies, its tools to benchmark the strengths and weaknesses of national skills systems, and its analysis of good practice, the OECD Skills Strategy identifies essential components of effective skills policies to optimise the demand, supply and use of skills to achieve better economic and social outcomes.

33. Building on the Skills Strategy, the OECD will now turn to enhancing the evidence base and its use in designing more effective policies, and helping countries to implement state-of-the-art national, regional and local skills strategies.

Enhancing the evidence base to help design effective skills policies

34. As a first step towards developing national skills strategies, countries need to build “skills intelligence” in order to situate their strengths and weaknesses on the different dimensions laid out in the OECD Skills Strategy and to design and evaluate policy alternatives.

35. To facilitate this, the OECD Skills Strategy shifts the focus from a quantitative notion of human capital, measured in years of formal education, to the skills people actually acquire, enhance and lose over their lifetimes. As an empirical foundation for this, the OECD Survey of Adult Skills provides a first-of-its kind assessment of the skills individuals have, how these are used on the job, and what the resultant economic and social outcomes are (Box 1). The first results from the OECD Survey of Adult Skills will be published in October 2013 as part of a new OECD Skills Outlook. In later editions, this publication will feature the OECD's ongoing work on skills, such as meeting skills needs, preventing the deterioration of skills among displaced workers and helping them back into jobs, improving the flexibility of education and training systems to respond to local needs, and using science skills for innovation. Based on the Skills Strategy framework, the Skills Outlook will also allow countries to identify and fill knowledge gaps in such areas as approaches to funding skills development and the various facets of adult learning.

36. In addition, the OECD is developing an interactive online portal for skills, skills.oecd.org. This will allow governments, researchers and other users to access the rich stock of data and analysis on skills in the most up-to-date form, identify the strengths and weaknesses of their existing skills systems, and benchmark national skills policies internationally. Users are able to access data by theme, position their country internationally, and share their experiences with policy implementation and best practices. In collaboration with the European Commission, the OECD is also developing an online version of the Adult Skills Survey (PIAAC) that will allow individuals, firms, regions and other sub-national entities to assess their foundation skills (literacy, numeracy and problem solving in technology-rich environments) and the effectiveness of skill use and to benchmark these internationally.

Box 1 The analytical potential of the OECD Survey of Adult Skills

The OECD Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC), is the most comprehensive international survey of adult skills ever conducted. It gathers information from some 5 000 people aged 16 to 65 in each participating country.

Directly assessing adult skills has significant advantages over previous measures of human capital, such as those based on educational qualifications. A diploma does not certify a precise skill, even on the day it is awarded; one that was awarded many years prior to an assessment says even less about a person's current skills. The Survey of Adult Skills not only measures the level of skills, it also tries to assess how skills are associated with the success of individuals and countries. In addition, it examines how well education and training systems succeed in instilling these competencies, and how public policy might improve their effectiveness. The data gathered through the Survey of Adult Skills, which also includes information on participants' demographic characteristics (age, gender, immigrant status, etc.), education and training, job history, and the social aspects of their lives, are broad and deep enough to offer insights into many different aspects of skills, including:

- **The influence of skills on social and economic outcomes:** The survey allows for in-depth analysis of the relationship between skills and labour-market outcomes as well as between skills, trust, political engagement, volunteering, and health. Information from the survey, combined with advanced econometric modelling, can provide insights into how the supply of skills and the quality of those skills affect economic growth.

- **The use of skills in the workplace:** The data from the survey can be compared against other measures of skills, such as occupations and qualifications or diplomas, while differences and similarities in how skills are used in the workplace can be examined and compared among countries, industries and enterprises. The data also offer a unique opportunity to develop a direct measure of mismatch by comparing observed individual skills levels to skills requirements at work. In addition to shedding light on the under-use of skills, its causes and consequences, the data will also allow for an examination of the reasons behind skills deficits.

- **Developing skills over a lifetime:** The survey allows for a study of some of the factors that are important for acquiring and maintaining skills, and how the acquisition of skills changes over time. These aspects of skills development can be studied at both the cohort and country levels. The comparative data on adult learning can also be used to identify international patterns of who is and who is not participating in adult learning, whether and where the opportunity to participate is not available to all, and the factors that motivate people to participate. The data can also help identify adults with poor skills and can also be used to develop strategies to improve their literacy.

- **Immigrant skills and qualifications:** The data from the survey can also be used to examine differences in skills levels between immigrants who acquired their skills in the host country and those who acquired their skills elsewhere, and between first- and second-generation immigrants. This information sheds light on such issues as whether returns to skills depend on where the qualifications, diplomas and work experience were acquired; the relationship between outcomes and measured skills, as opposed to formal qualifications; and the role of language proficiency in immigrants' labour-market outcomes and occupational choices.

- **Digital literacy, problem solving in technology-rich environments, and using information and communication technologies:** The survey will help build a better understanding of how well adults cope with an increasingly hi-tech environment, both in and outside the workplace. They can be used to examine inequalities in cognitive foundation skills, particularly among young people, and the factors that drive those differences, including parental background, educational attainment, tracking, the quality of education and ICT-related practices.

37. Countries operate in different economic and social contexts, are in different phases of their development trajectories, and differ in their capacity to collect and analyse skills data. In addition to engaging in a large-scale measurement exercise like the OECD Survey of Adult Skills, the challenge for many developing and emerging countries is to establish the statistical infrastructure that can regularly collect a wide range of data needed for policy purposes. In response to a request from G20 leaders, the OECD, ILO, UNESCO and The World Bank are collaborating on formulating a set of internationally comparable indicators of skills for developing countries. In addition, as a follow-up to the 2011 Busan High-Level Forum on Aid Effectiveness, the OECD has developed a framework on *Education for Development* in the context of the OECD Strategy on Development. The framework aims to complement the Millennium Development Goals by providing a range of indicators that examines what education

systems deliver, not only in terms of school completion rates but also in terms of the actual skills with which students are – or are not – equipped by the time they leave school.

Supporting the development and implementation of national skills strategies

38. Several countries have already published or are developing national skills strategies. The key challenge, however, is putting such strategies into practice and adopting a holistic approach that includes all relevant actors at the national and local levels. Flexibility and agility is required to respond to emerging needs and to be effective in different local contexts. Some countries are already advanced in establishing institutions specifically concerned with skills policies that can analyse the current situation, design a strategy and support its implementation; for other countries, this remains a major challenge.

39. As a follow-up to development of the Skills Strategy, and in collaboration with the European Commission, the OECD will be devising guidance on how to develop national skills strategies and support countries with their implementation. Recognising that each country is different, the OECD has a well-established track record of working together with individual countries to assist them in achieving better economic and social outcomes. It will seek to apply this experience to assist countries or regions to develop their own skills strategy or to reshape their existing policies for skills to make them more effective. The OECD's approach is a collaborative one of working together as partners to support policy development in the country or region concerned, in a process where the OECD can contribute:

- An external, independent and cross-sectoral assessment of the strengths and weaknesses of current policy approaches to assist countries/regions to identify priority areas that their skills strategy needs to address.
- Relevant international evidence, concrete examples from other countries, and peer learning to widen and deepen understanding of alternative approaches and the relevant lessons that can be learned from others.
- A range of policy options that are tailored to addressing the specific challenges each country is facing and take into account the country-specific context.
- Techniques for drawing in stakeholders to the process to promote engagement and ownership and for developing an effective action plan to support implementation so as to make reform happen and deliver results.

40. The methodology and approaches taken will be developed in the spirit of collaboration and partnership through close consultation with the country or region concerned. This approach leads to a broad menu of options and approaches for collaboration and partnership. Each country/region can develop its collaboration with the OECD around a different combination of elements, such as:

- **A diagnostic exercise to assess current strengths and weaknesses, using OECD diagnostic tools and benchmarking where appropriate and useful.** This would typically involve a fact-finding mission and short stocktaking report prepared by an OECD-led team, including relevant OECD and external experts.
- **A process for building broad agreement across stakeholders on the need to enhance skills, current strengths and weaknesses and priorities for action.** This would typically involve one or more events bringing together key national/regional and local participants, OECD experts and international experts.

- **In-depth analysis on one or more specific priority areas where skills development and utilisation need to be improved.** Some countries/regions may find it more useful and constructive for this analysis to conclude with laying out policy options for consideration, while others may prefer the OECD to offer more concrete policy recommendations. This would typically involve an OECD-led team of OECD and external experts carrying out an in-depth review, with full opportunity for the country/region to provide feedback on the draft report.
- **Peer learning opportunities whereby countries can look at case studies and examples from other countries.** The OECD's role can take a range of forms, from identifying relevant examples, to events bringing in experts who can share their experience, through to an OECD-guided visit to one or more countries to study what they have done and consider the relevant lessons for the country/region's own situation.

In supporting countries with the development and implementation of national skills strategies the OECD is taking into consideration ongoing efforts at the national and international levels to build on the work already begun in some countries. In the end, we are all in this together.

