



THE G20 SKILLS STRATEGY FOR DEVELOPING AND USING SKILLS FOR THE 21ST CENTURY

Organisation for Economic Co-Operation and Development



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Executive summary

Skills are crucial to promote strong and inclusive growth

1. Investing in skills must be a key element of the G20 commitment to take action to “*support development and Inclusive Growth, and help to reduce inequality and poverty*” in the context of lifting G20 GDP (Brisbane Summit) and promoting inclusive growth. Skills are a key driver of innovation, the adoption of new technologies and higher productivity which combine to deliver strong and inclusive growth. Building adequate skills and adapting them over working lives boosts the earnings of individuals and enhances opportunities and well-being. Effective skills systems underpin thriving communities and societies.

2. Improvements in the relevance and quality of skills have accounted for a substantial proportion of economic growth over the past four decades in advanced and emerging economies. It is estimated that further improvements in foundation skills such as literacy and numeracy could provide an additional strong boost to long-run growth in all G20 countries, resulting in substantial cumulative increases in living standards. In developing and emerging G20 economies with relatively young populations, skills are also crucial to capitalise on the demographic dividend to growth. In other G20 economies facing rapid population ageing, further gains in GDP per capita will become more dependent on skills adaptation and utilisation as well as on productivity gains driven by innovation and knowledge-based capital.

More skills and the better use of skills are urgently needed

3. Capitalising on the potential of skill development policies to promote inclusive growth requires concerted efforts to ensure that people at all ages and stages in their working lives are able to develop and upgrade their skills, activate those skills in the labour market, and utilise them effectively in the workplace across economies and societies. Despite major progress in the past decades in improving access to, and the quality of, education and training, further efforts are required in all G20 countries to fully equip their populations with the skills that are needed in increasingly dynamic and inter-dependent economies. Moreover, it is also essential to ensure that skills are used effectively in the labour market by promoting participation of under-represented groups, improving the recognition and matching of skills and increasing the value employers and workers place in skills.

A set of concrete actionable principle to boost skills and their use

4. The set of concrete actionable principles listed below builds on the OECD Skills Strategy (2012), the ILO Recommendation No. 195 on Human Resources Development, and the Conclusions of the 2008 International Labour Conference on Skills for Improved Productivity, Employment and Development, as well as on the G20 Training Strategy (2010) developed for and adopted by the G20 Development Working Group,¹ and the framework for the World Indicators of Skills for Employment (WISE) also prepared for the G20 Development Working Group. The purpose of these principles is to:

- Reaffirm the importance of a well-functioning and well-resourced education and skills system for promoting strong and inclusive growth;
- Underscore the importance of policy coherence through a whole-of-government approach with full stakeholder engagement; and
- Identify actions that countries could take to improve the contribution of skills to stronger and more inclusive growth.

The G20 Skills Strategy: Policies and targets

Policy principle	Indicator for measuring progress
A. Building skills for work and life	
Strengthen access to <i>quality</i> education	Reduced school non-completion rates
Build strong foundation skills	Reduced incidence of low proficiency in literacy and numeracy
Provide young people with the skills needed to ensure a smooth transition from school to work	Reduced average length of time spent out of work after leaving school
Actively promote quality work-based learning	Increased provision of quality apprenticeships and other forms of work-based learning (as a percentage of all workers or young people).
Foster stronger engagement of social partners in skills policies	Increased mechanisms for the social partners to provide advice on current and future skill needs and the education and training programmes required to meet these needs
B. Encouraging firms to invest in skills	
Foster employers' investment in quality training, focusing on SMEs	Increased provision of training in SMEs
Encourage investment in skills through shared public-private financing, especially for low-skilled workers	Increased incidence of training for low-skilled workers
Improve training opportunities for informal workers	Increased incidence of training for informal workers
Promote job stability to increase access to work-based training	Reduced incidence of precarious jobs
Encourage firms to move up the value-added chain and increase their use of more highly skilled workers	Increased share of jobs requiring higher skill levels
C. Ensuring that skills are fully used	
Activate skills by improving work incentives and job-search help, and by removing employment barriers	Increased participation rates of under-represented groups
Systematically anticipate, assess and respond to changing skill needs	Strengthened systems for the collection and use of information on skill demands
Encourage managers, particularly in SMES, to more fully use available skills	Increased levels of skills utilisation
Ensure that labour market settings lower skills mismatch	Reduced incidence of skills mismatch

INTRODUCTION: WHY A COMPREHENSIVE SKILLS STRATEGY IS NEEDED

5. Investing in skills¹ is crucial to improve individual outcomes and drive better economic performance: skills underpin innovation, adoption of leading technologies and ultimately productivity to drive strong economic growth. They also boost earnings and enhance individuals' opportunities and well-being and support thriving communities and societies.

Skills support improvements in productivity and spur innovation

6. At a macro-level, the performance of countries depends to a large extent on the skills of their workforce: more skilled workers tend to be more productive; they also make it easier for firms to introduce and disseminate productivity-enhancing technologies and new ways of working. Skills therefore contribute to economic growth both directly, through increases in productivity, and indirectly, by spurring innovation (Hanushek and Woessmann, 2010; ² OECD, 2010a; OECD, 2011a; Martinez-Fernandez and Sharpe, 2010; Arnold *et al.* 2007).

Skills support high levels of employment in good quality jobs

7. Skills are also important at the individual level: they significantly increase an individual's chances of being employed; and, conditional on being in employment, increase his/her chances of being in a productive and rewarding job. OECD (2013) showed that skills proficiency has a significant impact on hourly wages over and above the effect of education. Skills also significantly increase the chances that workers will be in a stable job (compared to being in an atypical, often precarious job).

Concerted effort is required to make the most of investment in skills

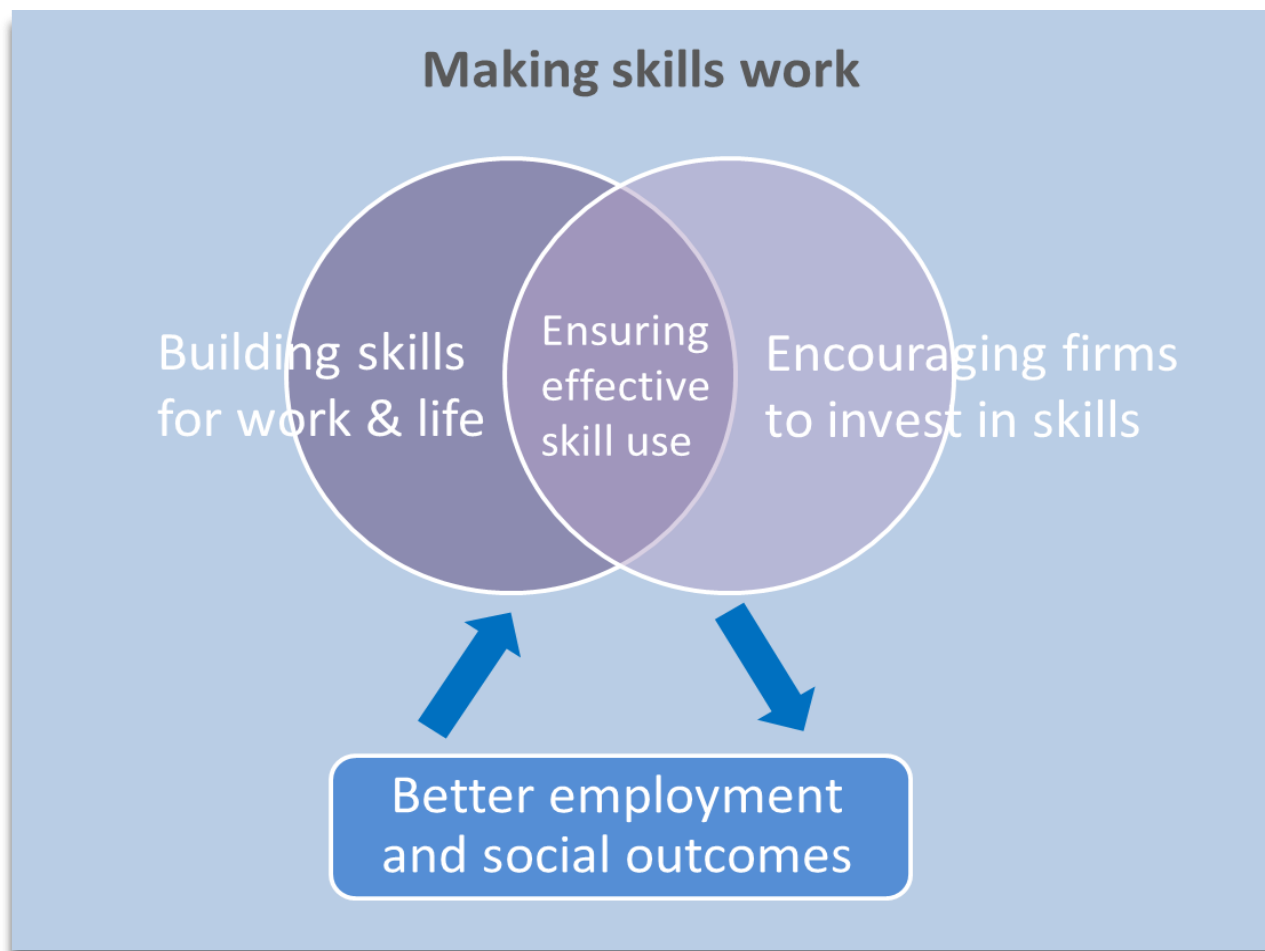
8. However, there is mounting evidence that G20 countries are failing to fully equip their populations with the skills that are needed in an increasingly dynamic and inter-dependent economy and/or failing to make good use of the skills that people have.

9. Capitalising on the potential of skill development policies to promote growth and individual wellbeing requires concerted efforts by all stakeholders – national and local governments, individuals, employers and unions – to ensure that people at all ages and stages in their lives are able to develop relevant skills, activate those skills on the labour market, and utilise them effectively in the workplace and across economies and societies.

The need for a comprehensive and integrated framework to guide skills development policies

10. A comprehensive and integrated framework is needed to assess and identify where policy action is needed to improve skill systems³. The framework put forward in this paper builds on the OECD Skills Strategy (2012) as well as the G20 Training Strategy (2010) and the conceptual framework underlying the World Indicators of Skills for Employment (WISE) database which was developed for the G20 Development Working Group (see Annex). Building on these initiatives, the policy framework to develop and use skills better is designed around three main areas: *i)* Building skills for work and life; *ii)* encouraging firms to invest in skills; and *iii)* ensuring that skills are fully used (through better activation

and matching of skills). Policies in these three areas are instrumental for achieving better economic and social outcomes. In addition, broader labour market settings that enable and provide the right incentives for skill acquisition, higher skill requirements and better skills use are also essential.



11. The framework can be used to identify strengths and weaknesses of skill systems in G20 countries and for developing actionable policy principles. The following sections encompass a brief discussion of each of the framework components, including key facts and examples of good practice.

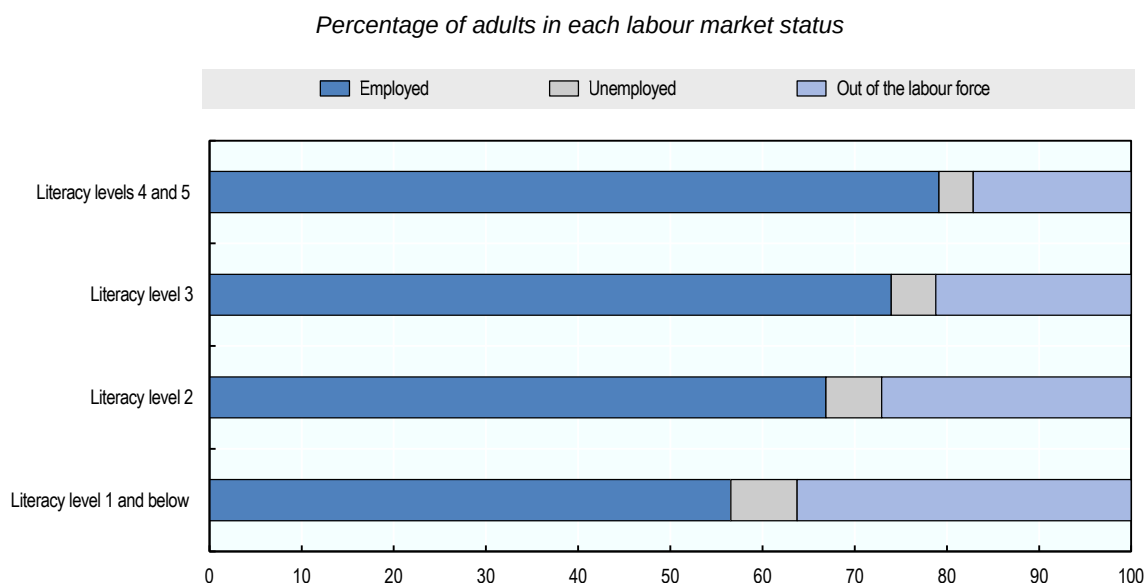
SECTION 1: BUILDING SKILLS FOR WORK AND LIFE

Building skills early on is key to facilitate labour market entry...

12. Building basic skills early on, by broadening and improving the quality of early childhood education, reducing early school leaving, promoting quality primary and secondary education outcomes and raising participation in tertiary education, is essential. For instance, how many women and men are in employment and their productivity potential has a lot to do with the available opportunities to acquire, develop and maintain skills.

13. Figure 1 shows that both unemployment and inactivity are more common among those with the lowest levels of proficiency in information-processing skills. For example, on average, about 57% of those who scored at or below literacy Level 1 on the Survey of Adult Skills were employed, 7% were unemployed, and the remaining 36% were inactive. In comparison, among the most proficient individuals (who scored at Level 4 or 5), 79% were employed, about 4% were unemployed, and 17% were inactive.

Figure 1. Employment status, by literacy proficiency level



Source: Survey of Adult Skills (PIAAC) (2012), Table A6.3 (L).

14. High-skilled individuals in terms of information-processing skills are also more likely to earn higher wages. OECD (2013) showed that skills proficiency has a significant impact on hourly: individuals with skills one standard deviation above the average earn up to 5% more in Italy, and over 10% more in the United States and England. Proficiency in information-processing skills also significantly increases the chances that workers will be in a permanent job (compared to being in a temporary job).

15. More generally, rising educational attainment is leads to better labour market outcomes beyond the effect it has as a result of improving proficiency in information-processing skills. An increase of three extra years of education (one standard deviation) increases the likelihood of being employed by just under 30% in Canada and Italy and over 50% in England, and increases earnings by 7% in Italy and 23% in the United States (OECD, 2013).

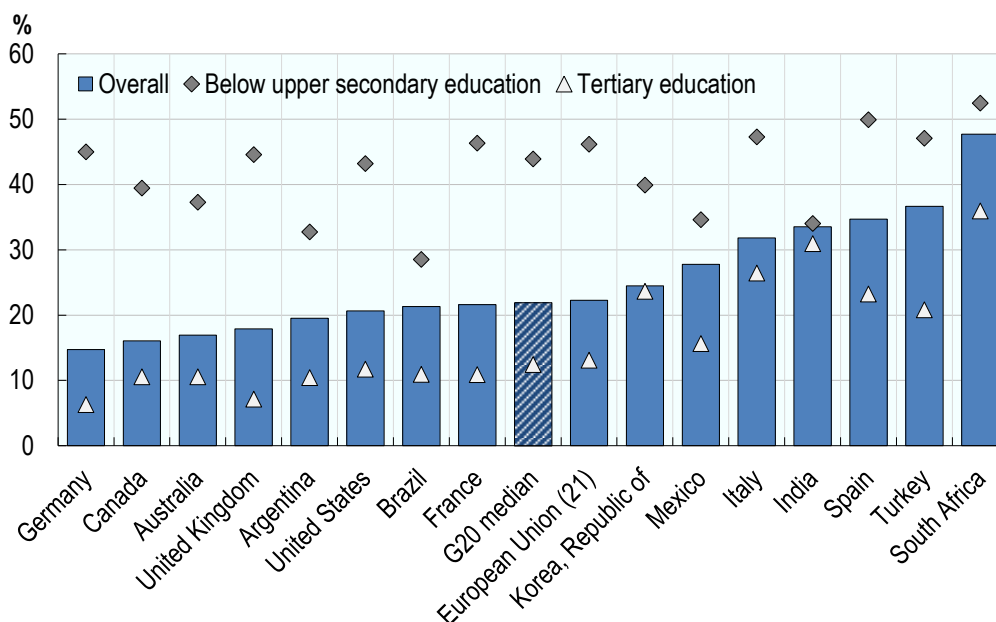
Skills are particularly important for youth

16. Skills are particularly important in the early stages of one's career. A lack of skills is a major driver of poor employment outcomes for youth. The proportion of youth who are both not working and not studying tends to be highest for those with few educational qualifications (Figure 2). It is therefore essential that all young people are equipped with good foundation skills that will enable them to create and seize economic opportunities and to learn new skills. This is even more important in countries with youthful populations. Indeed, a large youth cohort holds the promise of a demographic dividend and

more rapid economic growth. However, without the right skills, a youthful workforce is more likely to be a liability than an asset.

Figure 2. Poorly educated young people are more likely to be not working or studying

Percentage of 15-29 year-olds who are Not in Employment or in Education and Training (NEET), 2013^a



a. 2012 for Brazil and Korea. Quarter 4 2013 for South Africa.

Source: OECD Education at a Glance 2014; national labour force surveys for Argentina and South Africa.

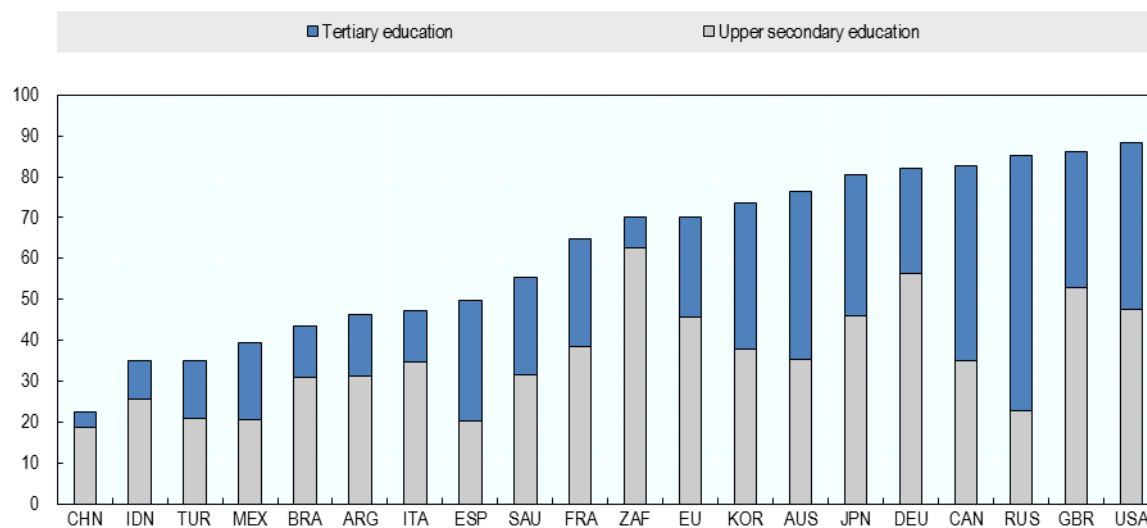
17. Skills development also fosters social inclusion through its positive impact on volunteering, voting and trust. Through these mechanisms, skills support thriving communities and societies.

...but many still lack essential competences

18. Available data suggest that in G20 countries, many school leavers and adults lack the skills required to access and thrive in the labour market. The share of adults without a tertiary qualification remains sizeable in several G20 countries and, in some, few complete even upper secondary education (Figure 3). In some G-20 countries, low educational attainment rates reflect low enrolment rates. While there has been some convergence over time across G-20 countries in the proportion of youth enrolled in upper secondary education, significant gaps remain (Figure 4). Moreover, in some G-20 countries, enrolment varies markedly with household wealth, is significantly lower in rural areas and is lower for girls than for boys. Largely as a result of poor educational attainment but, in some cases, despite holding a qualification, large proportions of students leave compulsory education with a poor command of foundation skills that are essential for entry and progression in the labour market. Similarly, many adults do not possess the literacy skills needed to progress at work and learn new things (Figure 5).

Figure 3. Educational attainment of the adult population, 2012

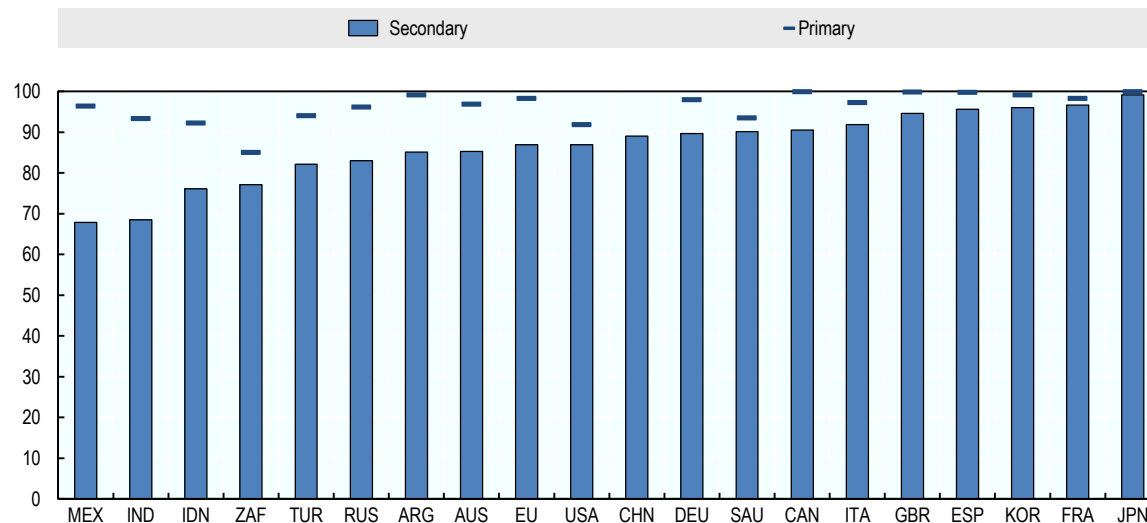
Share of the population by highest educational qualification (in per cent)



Source: OECD, WISE Database.

Figure 4. Net enrolment rates by education level, 2012

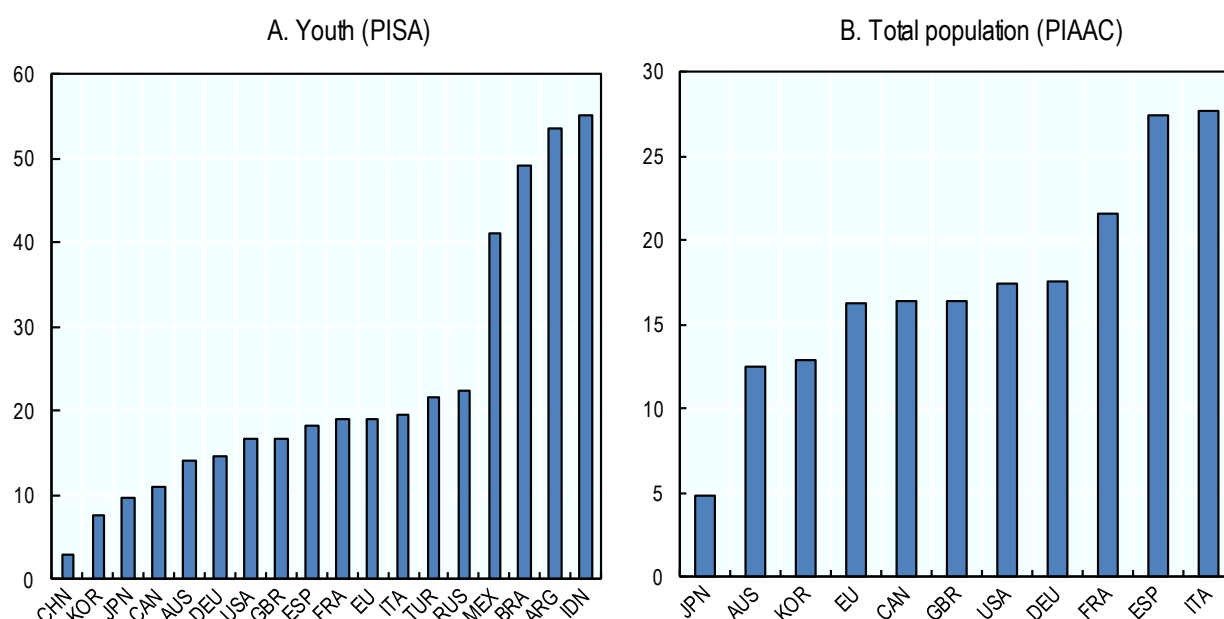
Percentages



Source: OECD, WISE database.

Figure 5. Many youth and adults have a poor command of cognitive skills, 2012

Percentage of people scoring at level 1 or below in reading/literacy proficiency



Source: OECD PISA and OECD Survey of Adult Skills (PIAAC).

Improving educational attainment is an essential first step towards more and better skills

19. The policy responses needed to deal with low educational attainment rates differ, depending on whether these reflect low enrolment rates, or high dropout rates after enrolment, or both. In G-20 countries where enrolment in education through lower secondary education (*i.e.* up to age 15 or 16) is almost universal, the focus has been on improving retention in upper secondary education, in some cases by raising the age of compulsory participation in learning. This is the case in the United Kingdom, in some Länder in Germany, in some Australian and US states and in two Canadian provinces.

20. In other G-20 countries, interventions are needed earlier in the education system, before the focus turns to upper secondary achievement. To encourage educational enrolment of children from disadvantaged socio-economic backgrounds, some countries have added school attendance as a condition to the receipt of cash transfers through so-called Conditional Cash Transfer schemes (CCTs). Many of these schemes have proved successful at improving school enrolment and attendance as well as child nutrition and health (Box 1).

Box 1. Conditional cash transfers (CCTs) can boost investment in human capital

CCT programmes started to emerge in the late 1990s in countries such as Argentina, Brazil and Mexico. Today they represent an important component of social protection in many developing and emerging economies. In certain cases, such as *Bolsa Familia* in Brazil and *Oportunidades* in Mexico, they cover a significant proportion of the total population. CCTs have multiple objectives: they provide income support to poor families in the short run, but also aim to increase school enrolment, attendance and performance as well as to improve the health of children and pregnant women, hence promoting investment in human capital among future labour market entrants.

The positive effects of CCTs on child nutrition, health, school attendance and enrolment have been well established for various programmes in different countries (see OECD, 2010b; and Annex 2.A3 in OECD, 2011b for a review of relevant studies). Evidence from Mexico, Brazil and South Africa suggests that CCT receipt reduces child labour, possibly because it reduces the opportunity cost of having the children attend school rather than work (Skoufias and Parker, 2001; Ferro and Nicollela, 2007; Williams, 2007; and Edmonds, 2004). However, the effects of CCTs on school performance are less clear-cut, possibly reflecting the limitations of the test measures that have been used and the importance of non-monetary factors that affect the learning capacity of children (e.g. nutrition, parenting skills and the value placed on education). The longer-term impact of any improved educational outcomes at a young age also remains an open question, as beneficiaries of the first wave of CCT programmes are only now beginning to enter the labour market (Rodríguez-Oreggia and Freije, 2008; and McKee and Todd, 2011).

CCT effects are found to be larger among poor households (Fizbein and Schady, 2009; Williams, 2007; and Edmonds, 2004) and for children at transition grades, i.e. those moving from primary to secondary education or from lower secondary to upper secondary (Schultz, 2004). The limited evidence available also suggests that the impact of CCTs may be larger for girls than for boys (Hamoudi and Thomas, 2005), especially where initial enrolment is low, which is often the case for girls. The characteristics of the beneficiaries of cash transfers also seem to matter for the impact of the transfer on children's outcomes: a majority of CCT programmes make payments to mothers, as they are thought to have a stronger preference for investing in children than fathers do and because they may place a relatively higher value on investments in girls relative to boys (Fizbein and Schady, 2009). Evidence from the UK's Education Maintenance Allowance (Ashworth *et al.*, 2002) also suggests that paying the benefit directly to adolescents may yield higher positive effects than paying the allowance to their parents.

CCTs can also be helpful in adjusting to temporary shocks. For example, the existing CCT schemes have made it easier for many developing and emerging economies to respond to increased needs stemming from the recent global economic and financial crisis and/or to face the consequences of natural disasters (OECD, 2010b). In particular, through the conditionalities they impose, CCTs can mitigate the long-term effects of economic and natural shocks on school attendance and on children's health status. Such programmes also allow for additional transfers to those already receiving benefits in case of temporary shocks.

Despite these positive aspects, CCTs still face several challenges associated with their administration and effectiveness (OECD, 2011b). For instance, the effectiveness of the conditions imposed on children and pregnant women depends crucially on compliance with these conditions and on the enforcement of sanctions in the event of non-compliance. In most cases, the monitoring of compliance and the enforcement of sanctions are rather limited due to weak administrative capacity and budget constraints. Also, fairly generous means-tests which are rarely re-assessed are likely to increase the extent to which better-off groups receive benefits (i.e. errors of inclusion) and thus reduce the efficiency of the scheme.

Source: Giving Youth a Better Start, A report for the g-20 Employment and labour ministerial meeting (Paris, 26-27 September 2011), prepared by the ILO and the OECD – <http://www.oecd.org/g20/topics/employment-and-social-policy/48732154.pdf>

Investment in skills that are relevant for the world of work is needed

21. While investment in skills in general is important, it is also crucial to ensure that skills taught at school are relevant for the labour market (see the Brazilian example in Box 2). To achieve this, good information about current and future skills demands and gaps is required and effective systems and procedures need to be in place for turning information produced by skills assessment and anticipation exercises into education, employment and migration policy and practice. In addition, skills that are relevant to employers can only be developed by or in co-operation with employers themselves.

Box 2. Rise in enrolments and improving relevance in Brazil

Brazil provides a good example of a country where the logic of economic development has led to substantial improvements in education quality. The Brazilian economy could no longer depend on cheap labour if the country wanted to move to a value-added-based and globalised economy.

Although the constitution of 1988 ensured the right to free public education for children from ages 7 to 15 (8 mandatory years), with a decentralised structure and a small part of the budget spent on education, schools continued to provide only three to four hours of instruction a day.

By 1995, 90% of all children were enrolled in primary school at age 7, but just half of them completed the eighth grade. Students took 12 years, on average, to finish compulsory education, mainly because of grade repetition and dropping out. According to Simon Schwartzman, a leading political scientist in Brazil, what drives students to drop out is not the lure of jobs, but rather the poor quality of teaching and the irrelevant curriculum.

President Cardoso, who was elected in 1994, started an educational reform programme that was continued by subsequent presidents. The reform combined quality and equity measures to cope with the rise in enrolment in all regions of the country. The focus of the reform was on improving teacher quality and quantity, providing a relevant curriculum, and encouraging poor families to enrol their children in school and complete compulsory education.

Resources invested in education have increased markedly: from 4% of GDP in 2000 to 5.2% of GDP in 2009. High school completion rates have also increased; and in 2006, 11 years of schooling became mandatory (although not all students complete compulsory education). Brazil now provides basic public education to over 95% of the population. The reforms included:

- establishing assessment systems using an internationally benchmarked index;
- encouraging states and municipalities to take actions to improve education;
- applying student-based funding formulas that distribute funds fairly within states; and
- providing conditional cash transfers to lift poor families out of poverty through education.

Source: OECD (2011c).

Learning in the workplace ensures that the skills developed are relevant to employers' needs

22. Workplace training has many advantages. It provides a strong learning environment, it can improve transition from school to work by allowing employers and potential employees to get to know each other, it contributes to the output of the training firm, and it links training provision to a direct expression of employer needs. To take full advantage of workplace training, the training needs to be of high quality and employers need to be willing to provide it. This means good quality assurance mechanisms, balanced by effective incentives for employers. Despite the many advantages of workplace training, a number of challenges are common across countries. One particular challenge relates to finding adequate incentives for employers' engagement – and country responses typically comprise the provision of financial

incentives, including direct subsidies, special tax breaks and arrangements to share the burden of training between groups of enterprises. Another challenge is to make apprenticeship systems attractive enough to potential apprentices. Again, financial incentives in the form of government grants or subsidies can be helpful in this respect (Box 3).

Box 3. Key outcomes of the 2nd G20-OECD conference on quality apprenticeships

On 25 February, representatives of G20 governments, employers and unions met at a conference in Antalya to discuss the importance of apprenticeships in improving labour market outcomes for youth. Participants renewed their commitment to do improve and expand apprenticeships through close partnerships between all of the stakeholders.

All stakeholders agreed that strong apprenticeships systems improve job prospects for youth and committed to strengthen apprenticeship initiatives by:

- *Ensuring access to high-quality programmes* : Giving better access to quality apprenticeships to those who would benefit most remains a key challenge for many countries. Apprenticeship systems often impose eligibility restrictions in terms of age or educational qualifications which may exclude disadvantaged youth and individuals with prior work experience. Disadvantaged youth face a number of additional barriers: they are more difficult to reach; they are often less prepared, face problems to relocate when necessary and lack the basic skills needed to succeed; and they may also face competition from more skilled youth and reluctance by employers to take them on. In addition, the programmes offered to them may not meet the minimum quality standards offered to other youth, notably in terms of certification and quality of tutors.
- *Making apprenticeships more valuable to youth*: Another key issue for many countries is the need to improve the recognition and value of apprenticeships as an attractive career choice for youth. In many countries, Vocational Education and Training (VET) courses, including apprenticeships, are often seen as a poor second-class choice relative to continuing on in more general academic studies, even if this form of learning may subsequently lead to good labour market opportunities. Apprenticeships may also be seen as a trap, notably when there are not enough bridges down the road to higher-level education programmes or when they do not lead to a formal qualification or certification. Interest in undertaking an apprenticeship may be limited if programmes are only offered in a narrow range of occupations and do not cover expanding employment sectors. The willingness of youth to undertake an apprenticeship will also be low if the training is of poor quality, working conditions and pay are not competitive and the programme does not lead to the acquisitions of skills that are valued by employers.
- *Making apprenticeships more attractive to employers*: The engagement of employers is a crucial element for the success of an apprenticeship system. Apprenticeships cannot expand and become a recognised pathway from school to work without the strong involvement of employers. In many countries, the main challenge is not necessarily in the provision of quality training facilities but to obtain sufficient apprenticeship places with employers. For employers, the key barriers to taking on apprenticeships include: a fixed length of training (often too long and with rigid start- and end-dates) that does not take into account the actual progress of apprentices in obtaining the required competences; off-the-job training that is ill-adapted to the needs of employers; and high effective wage and non-wage costs associated with taking on apprentices, despite the fact that financial incentives are usually in place to reduce these costs. Effective partnerships between employers and trade unions are also another key element of successful apprenticeship schemes.

Successful skill development programmes bring together government, employers and work organisations

23. Skills development is more effective when the world of learning and world of work are linked. Compared to purely government-designed curricula taught exclusively in schools, programmes designed

in co-operation with employers and including a work-based learning component help acquire knowledge that is relevant to the workplace and “soft” skills, such as teamwork, communication and negotiation, that are essential in today’s labour market (Box 4). Trade unions can play an important role, working together with employers, to develop curricula that also include broader, transferable skills and to ensure that good-quality training is available to all. The co-operation among stakeholders is also crucial in the assessment of skill requirements and their use in policy making.⁴

Box 4. Stakeholders’ involvement in skills development initiatives

Below are three examples of tripartite involvement in skills development. These initiatives have been supported by the ILO.

India Institute/Enterprise Flexi-MOU

Industrial Training Institutes (ITI) in India are public and private training institutions under the Ministry of Labour and Employment that form the backbone of the Indian skills training system. Operating within centrally fixed curriculum systems they have had limited flexibility to develop and deliver programs that meet the specific needs of enterprises in their local catchment. Under the recently introduced flexi-MOU system, ITIs are able to work with enterprises to develop customized programs of 6 months to 1 year duration using existing national curricula as the program core. MOUs will be signed with enterprises that guarantee to provide 80% of participants a minimum of 6 months employment. Delivery and assessment can take place in the institution and/or the workplace involving ITI and enterprise staff working together to train and assess. These arrangements reflect a departure from the highly centralized system of specific schemes and curricula that operate in India. Whilst this initiative only covers those institutions administered by the Ministry of Labour, it represents another example of how training institutions are being encouraged to be more responsive to the needs of enterprises in India.

South African Department of Higher Education and Training

For improving policy coherence, skills strategies are integrated in to National Development Plan and UNDAF. The Department of Higher Education and Training as well as the Human Resources Development Council, the National Skills Authority (NSA) and the South African Qualification Authority (SAQA) are developing effective strategies and implementing them. These include:

- Establishment of a Labour Market Intelligence Programme through the National Advisory Council as well as building capacity through training programmes.
- Development of a Worker Education Strategy.
- Trade test improvement strategy: the National Artisan Moderation Body and Trade Testing Authority is developing a strategy for improving pass rates.
- Strengthening of National Qualification Framework (NQF)
- Strengthening of Apprenticeship system: the NSA and HRDC organized an international conference to build the capacity of national institutions in strengthening apprenticeships in Johannesburg.

Mexico’s enterprise development

Mexico has promoted sustainable enterprise development in the sugar and tourism industries as well as in SMEs over the past 6 years. The aging workforce in the sugar industry – 40% of its workforce over the next 5 years will retire – is the starting point and the logic for a quality apprenticeship intervention in that sector, which will focus on a set of skills of new workers focusing on higher automation, quality management, new work organization and new product mixes and the combination of technical and core skills in the sector.

BUILDING SKILLS FOR WORK AND LIFE: ACTIONABLE PRINCIPLES

Policy principle	Indicator for measuring progress
Strengthen access to <i>quality</i> education	Reduced school non-completion rates
Build strong foundation skills	Reduced incidence of low proficiency in literacy and numeracy
Provide young people with the skills needed to ensure a smooth transition from school to work	Reduced average length of time spent out of work after leaving school
Actively promote quality work-based learning	Increased provision of quality apprenticeships and internships (as a percentage of all workers or young people aged 15-24).
Foster stronger engagement of social partners in skills policies	Increased mechanisms for the social partners to provide advice on current and future skill needs and the education and training programmes required to meet these needs

SECTION 2: ENCOURAGING FIRMS TO VALUE AND INVEST FURTHER IN SKILLS

Skill requirements determine how productive each country's economy is

24. Skill requirements – the demand for skills – ultimately determine how productive each country's economy is. The Survey of Adult Skills shows that the way skills are used in the workplace is a key determinant of labour productivity: differences in the average use of reading skills explain around 30% of the variation in labour productivity across countries, even after taking the actual skills possessed by the workforce into account. A healthy demand for high-level skills is also the basis upon which firms/economies can pursue research and development and innovate, ultimately determining their long-term growth potential.

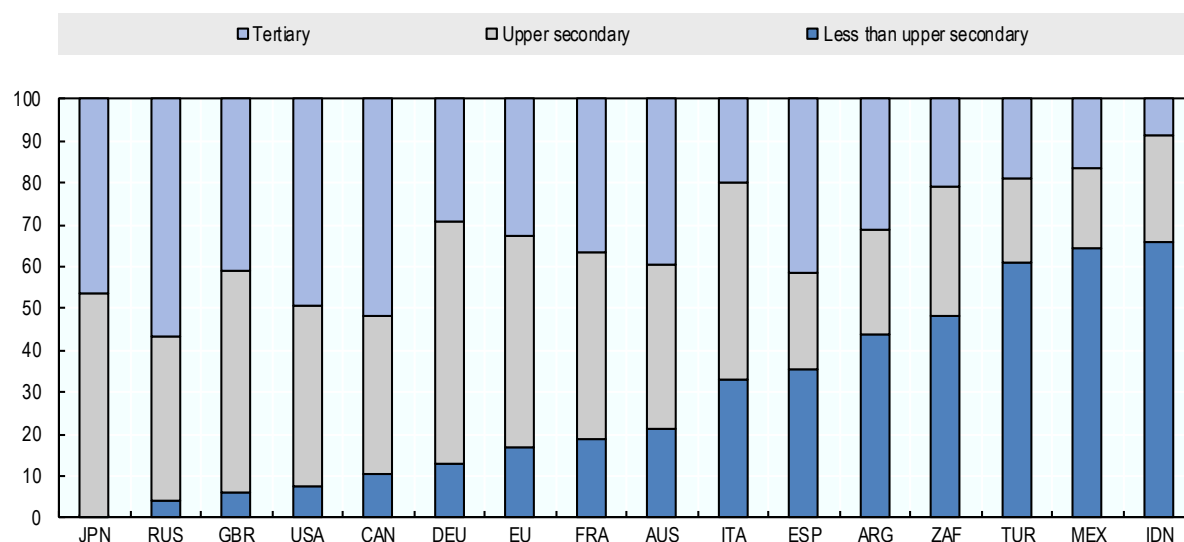
Low-skill equilibria are undesirable for firms and workers

25. Low-skilled equilibria – whereby low-skilled workers fill jobs with low skill requirements – are undesirable for both individuals and firms (Froy, *et al.*, 2011). They can adversely affect the economic development of a local economy, region or sector, or indeed an entire country. For example, firms pursuing business strategies based on low-cost labour-intensive standardised production require only a limited range of low-level skills from the bulk of the workforce. Even if such strategies leave the local workforce vulnerable to displacement because of innovation and competition in global markets, workers have few incentives to remain in education because local employers are neither seeking, nor are they willing to reward, high levels of skills. For their part, employers have little incentive to upgrade production processes or workers' skills since this can undermine their price-based competition strategy.

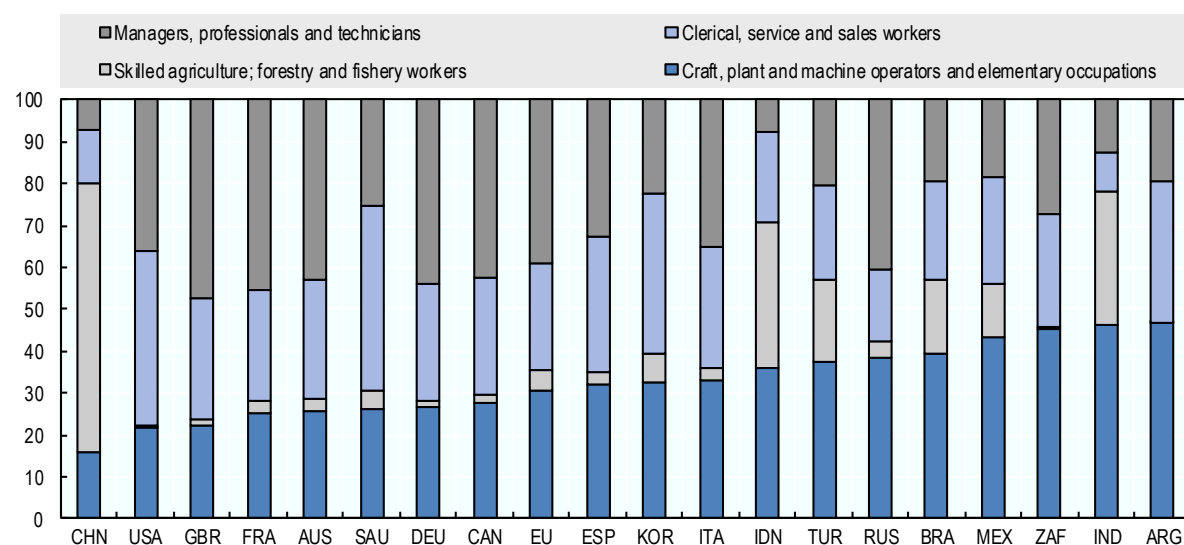
26. The OECD Survey of Adult Skills shows that in many countries, a sizeable share of jobs still has relatively low requirements. For instance, based on workers' views, as many as one in ten jobs in Italy and Australia, one in seven in Korea and more than one in five in England and Spain still require no qualification at all. Similarly, employment shares by occupation and educational attainment show that low-skill jobs still form the backbone of several countries' economies (Figure 6).

Figure 6. Employment shares by educational attainment and occupation, 2012 or latest available year^a

A. By education, percentages of total employment



A. By occupation, percentages of total employment



a) Japanese data for less than upper secondary are not available.

Source: OECD, WISE Database.

Firms' investment in training is crucial to move up the value chain...

27. Investment in skills development helps firms and the overall economy become more productive, and yet it is often sub-optimal. To help countries and regions move up the value chain towards a high-skill equilibrium and foster a culture of achievement and innovation through skills acquisition and development, it is important that the right incentives for firms to train are in place. SMEs face particular barriers to up-skilling their workforce, such as lack of information about training opportunities, insufficient funding for training, small scale in training procurement and human resource management

and concerns related to employee turnover (Box 5). These obstacles have significant implications not only for the employability of the workforce and productivity of firms, but also for the innovative capacity of the economy. Specific attention needs to be given to the informal economy where a majority of firms operate in a number of countries and where skills needs are no less critical.

Box 5. Overcoming barriers to training in SMEs

Encouraging training in SMEs: Korea

In **Korea**, a private or public training provider can receive public subsidies if it forms a partnership or consortium with SMEs in which the providers' facilities or equipment are used to develop skills. Subsidies can cover the costs of the facilities, equipment and salaries for training personnel. Government spending on this programme has steadily increased since 2003. In 2009, 78.3 billion *won* (about USD 69 million) was spent under this programme to train 231 000 employees at 111 000 SMEs.

Separately, SMEs can receive public subsidies to cover part of the costs associated with organising learning in the workplace. Specific activities that are eligible for the funding include study-group activities, creation of study spaces, high-quality learning programmes, development of learning networks, and on-the-job training programmes. This initiative started in 2006. In 2009, subsidies were applied to organised learning activities at 307 SMEs. In other cases, when SME employees participate in training offered by private providers, and the Ministry of Employment and Labour deems the activities to be core or central to the tasks of SMEs, then training costs and part of the labour costs may be subsidised.

The government provides enhanced employment and training services to help SME employees and non-regular workers to develop job skills on their own and move on to better jobs. Under "JUMP" (Job Upgrading and Maturing Programme), SME employees and non-regular workers may take a module-based training course on weekends or weeknights. In 2009 alone, 13.8 billion *won* (about USD 12.1 million) was spent on this programme, benefiting more than 52 000 people.

Firms joining forces to move up the value chain through more skill-intensive production: Italy

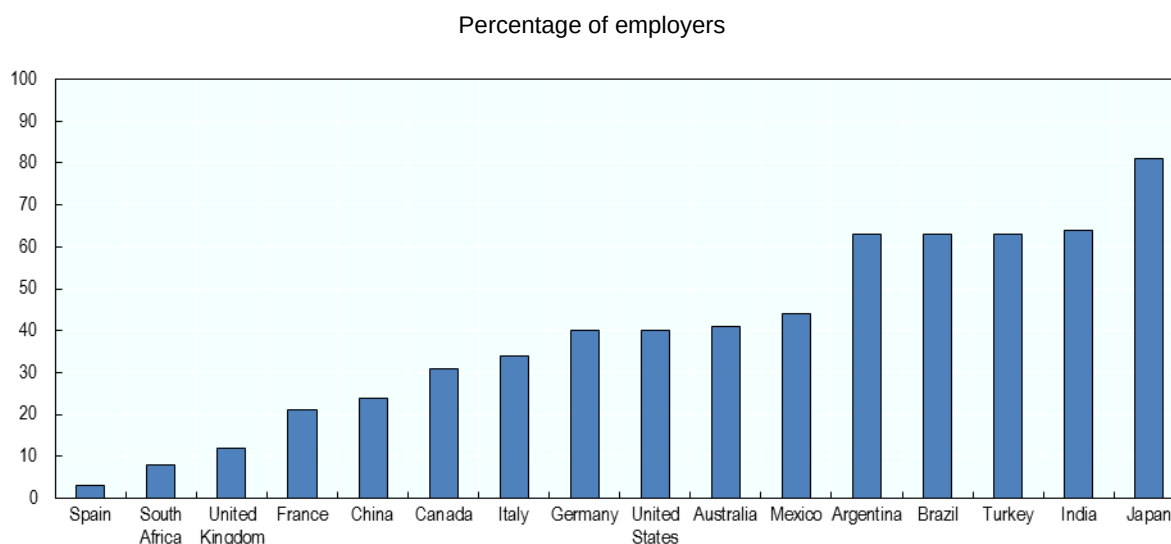
In the Riviera del Brenta industrial district in Northern Italy, a local employers association has helped to raise productivity and skills utilisation in local footwear firms, through tapping into international markets for high-quality, high-fashion, shoes. Through the association (ACRIB), firms have collaborated on a common marketing strategy, while also pooling investment in training provision and helping firms to collectively upgrading their product market strategies. The region traditionally hosted cottage-based shoe making industries which mainly employed low-skilled blue collar workers. However the area has now become a global centre for the production of shoes for major fashion brands and now significant numbers of local people are employed in design and commercial development (50% in design, 10% in commercial development and 40% in frontline production). The privately-run local polytechnic, Politecnico Calzaturiero has played an important role, employing firm managers to train local workers and job seekers after hours, while also offering management training, and investing in research, innovation and technology transfer. The polytechnic therefore invests in skills supply whilst also optimising skills utilisation through new product development and improved human resource management. The fact that firms are members of ACRIB means that they are less worried about pooling training, technology and new innovations. Investment in local human capital will not only improve prospects for individual firms but also for the global brand as a whole. ACRIB has also worked in partnership with local unions to ensure that during this time, improved productivity resulted in higher wages and better health and safety for the workers. European Social Funds have been important in supporting the research and innovation carried out by the polytechnic, and their collaborative work with local employers (Destefanis, 2012). More recently, in 2015 the polytechnic has been working to help support knowledge transfer from older to younger workers in local firms, in the context of demographic change and fears concerning the ageing population in the region.

Source: Korean Research Institute for Vocational Education and Training (KRIVET) <http://eng.krivet.re.kr/eu/index.jsp>; OECD (2014), *Job creation and local economic development*, OECD Publishing, Paris.

...and to help address skills shortages

28. Across the G20, skills shortages are widespread. For example, more than 2 in 5 employers on average in G20 countries claim they have difficulties filling jobs (Figure 7). Employers can play an active role in addressing these shortages by contributing to develop relevant skills through on-the-job training.

Figure 7. Employers having difficulty filling jobs, selected G20 countries, 2014



Source: ManpowerGroup's 2014 Talent Shortage Survey.

Skills upgrading in the informal sector can improve productivity and promote the transition to formality

29. Several G20 economies have a sizeable informal sector playing a key role in employment generation. Upgrading skills can be a key channel to improve productivity and incomes for the millions of people and business in this sector and open opportunities for transition to the formal economy. Additionally skills upgrading can make local economies more dynamic and it can contribute to the inclusion of informal economic activities into national and international value chains.

30. Within an integrated approach encompassing business training, credit and post-training support, as well as a legal and regulatory framework supportive of private sector development, skills training can support medium-term strategies for integration with the mainstream economy while also offering a range of immediate benefits to informal economy entrepreneurs and workers. For example, technical and vocational skills can improve product quality, reduce wastage and encourage innovation. Business skills can improve occupational health and safety and stimulate better working conditions. Foundation skills – such as literacy and numeracy – and empowerment-related skills – such as negotiation, communication, problem solving, and management skills – can enhance decision making and improve confidence and capacity to explore and try new income-earning opportunities. In addition, better-educated entrepreneurs are generally also more responsive to policy measures, which is important for the sector's development.

Innovative approaches are needed to provide training in the informal sector

31. Several obstacles make the provision of training in the informal sector challenging. First, a significant share of informal sector workers have very low basic skills to start with. In some countries it is estimated that two-thirds of informal sector workers are women who are driven to the informal sector by lack of education and skills. For this group, formal training is often too general and theoretical. Often the entry requirements and fees are too high, the training methods are suitable for the literate population only and courses are inflexible and standardised. Working hours are often long and any time off from the productive work means less income. Non-formal and informal training, tailored to the needs of specific groups of informal workers are more promising.

32. In South Africa, training levies in the formal sector are used to promote training for both formal and informal employees, in an attempt to foster an inclusive labour market (OECD, 2009; see Box 6). In Haiti, mobile teams organised by government and NGOs provide training in immediate work contexts and assist individuals and small groups on-site at the workplace. The mobile teams aim to reach the working poor that are unable to attend training because of the timing of the courses, the cost of leaving their job for training, or because they are reluctant to participate in structured classes (Liimatainen, 2002).

Box 6. Approaches to training in South Africa

In South Africa, an inclusive labour market system and a single regulatory framework incorporating the entire labour market with the extension of protective measures to all workers in both formal and informal employment were established in 1998 under the Skills Development Act. The Act institutes:

- the National Skills Authority (NSA), representing the public authorities and the social partners, and advising the Department of Labour;
- the skills development levy, which raises 1% of the total payroll;
- the Sector Education and Training Authorities (SETAs), made up of employers and employee representatives, and covering 23 sectors: finance, banking, textiles, chemicals, agriculture, etc.

SETAs receive 80% of the skills development levy and develop training in enterprises and programmes to improve critical skills for the labour market. With the remaining 20% of the levy, the National Skills Fund (NSF) serves the unemployed and people in the informal economy.

Source: OECD (2009), *Promoting Pro-Poor Growth and Employment*.

Governments can help shape the demand for high-level skills

33. The need to “shape” demand, as opposed to merely respond to it, is often prioritised in national skills strategies. In many countries governments are helping local economies or sectors to move production up the value-added chain and enhance economic performance.⁵ The UK Commission for Employment and Skills,⁶ for example, encourages employers to take more “ownership” in the area of skills development, while also supporting improvements to work organisation, through the longstanding Investors in People scheme, and by generating growth and productivity gains through a new Growth and Innovation Fund (Box 7).

Box 7. Shaping demand in the United Kingdom

In the United Kingdom, concerns about a “long tail of low skills” have meant that skills policies have focused primarily on boosting the supply of skills through publicly-funded investments, and through social inclusion and mobility. More recently the UK Commission for Employment and Skills (UKCES), led by a team of commissioners, including large and small employers across a wide range of sectors, and representatives from trade unions and the government, has argued that “the future employment and skills system will need to invest as much effort on raising employer ambition, on stimulating demand, as it does on enhancing skills supply”. As the Commission points out, there is little value to an organisation having a skilled workforce if the skills are not used well. The United Kingdom is implementing a number of different initiatives to this end:

Investors in People: Investors in People, first introduced in 1991, specialises in transforming business performance by aligning business planning and goals with people management. In April 2010, responsibility for Investors in People passed to the UK Commission. Investors in People helps organisations to grow, improve their performance and business impact, and ensure that the skills of their employees are fully used. Working with Investors in People demonstrates a business’s commitment to developing people. Some 16% of all workplaces in the United Kingdom are recognised as Investors in People.

Employer Ownership of Skills: The Employer Ownership pilot offers all employers in England direct access to up to GBP 250 million of public investment over two years to design and deliver their own training solutions, including apprenticeships, training courses and pre-employment opportunities. The pilot is jointly overseen by UKCES, the Department for Business, Innovation and Skills and the Department for Education, and will test new employer-led delivery models. The prospectus invites employers to work with employees, trade unions, colleges and training providers, and other partners to develop proposals that establish how they will invest in skills to drive enterprise, jobs and growth within a sector, supply chain or locality.

Growth and Innovation Fund: The Growth and Innovation Fund (GIF) is open to all employer representative organisations, including Sector Skills Councils, and is an England-only fund. GIF helps employers to develop their own innovative, sustainable skills solutions that have the potential to transform growth in their sector, region or supply chain by raising the capacity of employers to collectively upgrade the skills of their workforce. Successful bids have included proposals to set up new employer-training networks and group-training associations, and to develop new industry standards and talent-development programmes. GIF will co-invest up to GBP 34 million in 2012-13, with comparable levels of investment planned for the following two years.

The Employer Investment Fund: The Employer Investment Fund is a UK-wide fund targeted only at Sector Skills Councils to incentivise innovative and self-sustaining skills solutions that strengthen employer leadership, drive up skills levels and ensure better use of those skills. Some GBP 66 million has been committed so far to leverage greater co-investment in a range of activities, including projects to improve skills development in key areas; enhance industry standards; strengthen career pathways, progression routes and employment opportunities so that talent is effectively developed, managed and retained; and to build stronger employer networks within sectors. The funding for these projects will run from April 2012 to March 2014.

The Scottish Government has also made a strong commitment to improving the use of skills. Among initiatives to boost demand for, and improve the use of, skills, a Skills Utilisation Leadership Group was established, and a series of action-research projects were initiated, aimed at exploring the potential for universities to help to improve the use of skills in the workplace.

Source: United Kingdom Commission for Employment and Skills, Green (2012).

Broader support for the creation of more high-level skills and high value-added jobs is needed

34. There are a number of ways in which policy makers can increase the demand for skills that go beyond investments in education and lifelong learning. For example, by developing economic-diversification strategies and supporting inward investment, they can increase the number of knowledge-intensive jobs

in a region. In addition, by reducing labour market duality, they can support the creation of jobs that provide valuable training. Similarly, by acting on the level and structure of social security contributions they can discourage work in the informal sector where training opportunities are limited and tax incentives for firms to train are unlikely to work.

ENCOURAGING FIRMS TO INVEST IN SKILLS: ACTIONABLE PRINCIPLES

Policy principle	Indicator for measuring progress
Foster employers' investment in quality training, focusing on SMEs	Increased provision of training in SMEs
Encourage investment in skills through shared public-private financing, especially for low-skilled workers	Increased incidence of training for low-skilled workers
Improve training opportunities for informal workers	Increased incidence of training for informal workers
Promote job stability to increase access to work-based training	Reduced incidence of precarious jobs
Encourage firms to move up the value-added chain and increase their use of more highly skilled workers	Increased share of jobs requiring higher skill levels

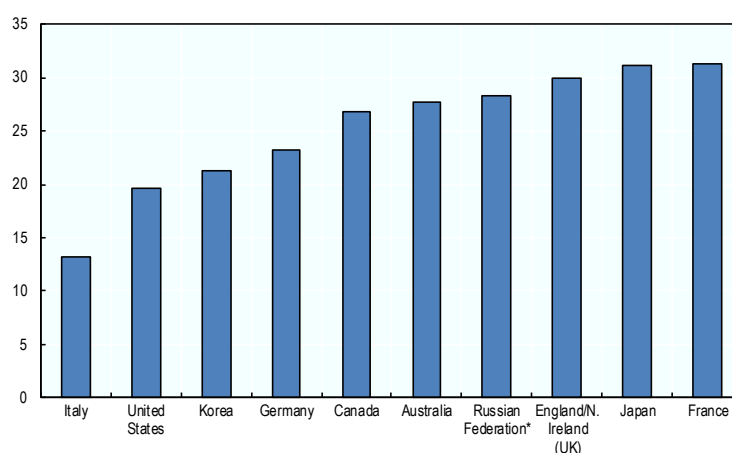
SECTION 3: ENSURING THAT SKILLS ARE FULLY USED

Matching skills with jobs – a process of unprecedented economic and social value

35. Many skills are not fully used at work. This is the case, for example, of workers who are mismatched – *i.e.* they have substantially more skills than jobs require. This phenomenon is widely spread in many advanced economies and some developing countries, where significant investments in education not accompanied by job growth foster high rates of graduate unemployment and qualification mismatches (Figure 8). Mismatch situations prevent individuals, enterprises and economies from reaping the benefits of their investment in skills in terms of higher wages, productivity growth and innovation. Moreover, skills that are not used will likely atrophy, adding to the cost of skills underuse.

Figure 8. Many workers hold higher qualifications than those required by their job, 2012

Percentage of workers who have a qualification higher than what they deem necessary to get their job today



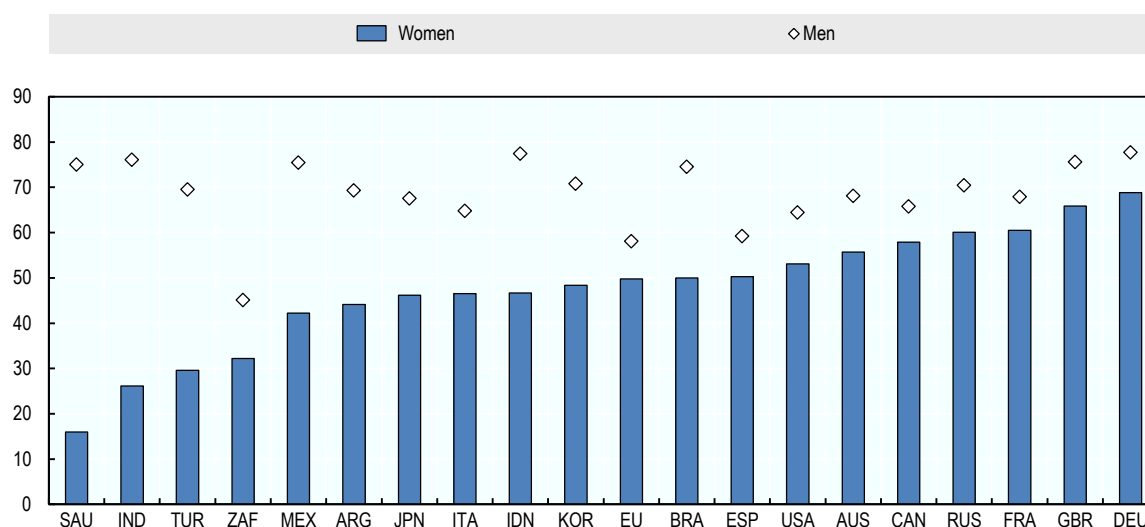
Source: OECD Survey of Adult Skills (PIAAC, 2012).

Unused human capital represents a major loss of initial investment in skills and unmet talents potential

36. In all G20 countries, many individuals are out of the labour force by choice, because of their personal/family circumstances, or because of barriers to access to the labour market or financial disincentives to work. In fact, existing differences in employment rates across countries can be largely explained by differences in employment rates among socio-economic groups within countries. In particular, in most countries, youth, women and older people have significantly lower employment rates than prime-aged men, and these gaps are much larger in some countries than others. For instance, in Saudi Arabia, India and Turkey, fewer than 30% of women work compared with 70% or more among men while differences between genders are minor in Germany, the United Kingdom and France (Figure 9). This unused human capital represents a waste of skills and of the initial investment in those skills. Again, to make things worse, skills that are not used because of inactivity are bound to depreciate. This is a particular concern for young school leavers who experience long periods without working. A comprehensive strategy to promote participation in the labour market of under-represented groups and the matching of their skills with those in demand is needed, as also highlighted in many G20 Employment Action Plans.

Figure 9. Female employment rates are below those of men in all G20 countries, 2013 or latest available year

As a percentage of population aged 15-64 in each group



Source: OECD WISE database.

A strategic approach based on assessing and responding to changing skill needs is needed

37. Unless the right policies are in place, mismatch and the under-utilisation of skills are likely to get worse in a context where the structure of employment is changing rapidly due to technological change and the increased interconnectedness of economies. This points to the need for a strategic approach to skills development and utilisation which is based on anticipating and responding to changing skills needs (Box 8).

Box 8. Assessing and responding to changing skill needs

Good information about current and future skill demand is required to ensure that education and training systems prepare youth and adults for the world of work and are responsive to changing skill requirements. The OECD has recently conducted a comparative assessment of country practices in this area. The study concludes that:

- All countries have systems and tools in place for assessing and anticipating skills needs, but approaches vary significantly in terms of: how they approximate skill needs; their time span; their methods; and their national/regional/sectoral scope. Many countries carry out more than one exercise as each approach/method presents its specific advantages and disadvantages. For instance, Canada carries out analyses of current skills needs along with medium to long-run forecasts to identify future skill needs and imbalance and tailor immediate policy intervention (e.g. identify migration opportunities or develop short-term worker training schemes) as well as long-term policy orientations (e.g. develop apprenticeship programmes in certain fields).
- The outputs of skills assessment and anticipation exercises are widely used to inform a range of skills-related policies across different domains. In education, they are commonly used to inform curriculum development and set the number of student places in upper-secondary, post-secondary and tertiary education programmes. In many countries skills assessment and anticipation exercises are specifically linked to the development of Vocational Education and Training (VET) programmes. With regards to labour market policy, information is used to update occupational standards (which provide a guide for employers about the skills, training and experience needed to carry out a job) and to design apprenticeships, re-training and on-the-job training programmes.
- Some countries also draw on the information to develop and update selective migration policies. Australia draws upon its analyses of job vacancies and contacts with employers to identify occupations in current and

future need in order to facilitate migration of workers with the relevant skills. Similarly, the United Kingdom's Migration Advisory Committee uses general labour market information to identify occupations experiencing shortages to advise the government on immediate skill needs. Other countries such as France and Italy use the skills needs information to help in the transition to a green and/or a digital economy. The social partners (trade unions and employers) also use the outputs of skills assessment and anticipation exercises to advise their members, support the development of their own training programmes or influence employment or education policy.

- Unfortunately, the characteristics of the exercises are often not aligned with the potential policy uses and the key stakeholders may not be sufficiently engaged and, when they are, disagreements about skills needs and the required policy response arise, requiring consensus-building. Linking these exercises to more specific policies may help to overcome some of these challenges, but at the risk of losing wider relevance.
- Information about skills needs is most effectively used in policy making when there is good co-ordination across ministries and strong stakeholder involvement. A variety of mechanisms have proven successful in helping to reach consensus. These include: working groups (as the case of the inter-ministerial skills working groups in United States) with specific objectives and realistic timelines; co-ordinating the exercises and the discussions through specific agencies (e.g. sector skills councils as in Australia and the United Kingdom); or the existence of a third party that leads and co-ordinates the discussion around current or future skill needs (e.g. national skills advisory groups as in Germany).

Source: OECD analysis of country replies to its questionnaire on anticipating, assessing and responding to changing skill needs.

Management and organisational practices can help reduce mismatch

38. The under-use of available skills can result from the introduction of new technologies that accomplish tasks previously performed by workers. In other cases, workers may not have been well-matched to their jobs when hired, due to the difficulty for employers of assessing the actual skills of job applicants – particularly those with limited work experience. In addition, there may be a lack of high-skilled jobs in a preferred sector or geographical location. Whatever the reason behind skills mismatches, skills policies should support employers in making better use of the skills available to them. Mechanisms that help managers, particularly in SMEs, to identify effective work and organisational practices, should be emphasised.⁷ These include promoting innovation and adopting technologies and practices that complement the existing skills base, such as through brokerage services. Successful practices also include employee engagement and high-performance organisation of working and learning, which involves job flexibility, delegation of authority, and incentives for innovation (Box 9).

Box 9. Embedding skills policies in broader strategies to promote innovation: Advanced Manufacturing Jobs and Innovation Accelerator Challenge in the United States

In the United States the Obama Administration has invested in the *Jobs and Innovation Accelerator Challenge* grants, which among other things help to embed skills policies in a broader set of interventions to stimulate innovation and technology transfer. The grants leverage funding and technical assistance from multiple Federal agencies in a coordinated regional effort to generate greater impact. The AMJIAC grants give flexibility to regions to determine the best way to support small and medium-sized manufacturers, with each region drawing upon its particular assets and capabilities. For example, In East Tennessee, the AMJIAC efforts focus on expanding usage of additive manufacturing technologies (the industrial version of 3-D printing) by the region's small and medium-sized manufacturers. Firms are invited to tour the Oak Ridge National Lab's Manufacturing Demonstration Facility to better understand the possibilities of these technologies. On the workforce side, Pellissippi State has created an additive manufacturing certification program to equip new and incumbent workers with the skills necessary to use these technologies in the production

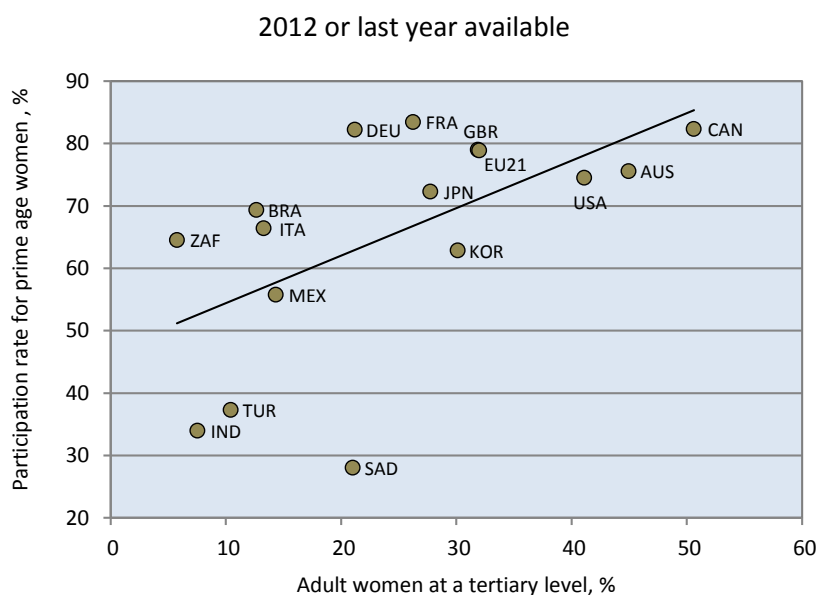
process. Teams of students help firms solve “real-world” problems using additive manufacturing technologies. This not only helps the school and its students, but it also helps small and medium-sized manufacturers overcome real product and process development problems.

Source: OECD (2014), *Job creation and local economic development*, OECD Publishing, Paris.

Encouraging people to join and stay in the labour market should be part of any skills policy

39. Promoting labour force participation is crucial to mobilise skills. Raising educational attainment can play a crucial role. For instance, ensuring women have equal access to education can help to promote their participation in the labour market although this only partly explains the large differences in female participation rates across countries (Figure 10). More broadly, ensuring that available skills are actively used also requires giving people outside of the labour force the right incentives to work (Box 10) and removing the barriers to employment they may face. For instance, greater efforts are needed to foster access to quality jobs and greater flexibility to combine professional and personal responsibilities and interests.

Figure 10. Female labour force participation rises with educational attainment



Source: OECD WISE database; ILOSTAT and national labour force surveys.

Box 10. In-work benefits policies to encourage labour market participation

For women. Single parents are usually women, and most OECD countries target social-protection policies to this group. Nevertheless, financial benefits from being a sole parent may be a disincentive to enter or re-enter the labour market. The challenge is thus to encourage these women to return to work.

- **The Canadian Self-Sufficiency Project (SSP).** SSP is a ten-year experimental research project on the labour-market behaviour of single parents who receive social assistance. The project, launched in 1992, involves different experimental studies. In all studies, some single parents in the experimental group received generous earning supplements, while the rest were in the control group. The studies found that financial incentives had a positive effect on the return to employment, encouraging single parents to leave welfare rolls. However, earning supplements had a much stronger effect among those sole parents with recent employment experience. Single parents who were long-term social assistance claimants showed a

high rate of employment in the short term, but that declined after some time (Immervoll and Pearson, 2009).

For older workers. A few countries provide older workers with a direct wage top-up (or in-work benefit) for either finding a job or remaining in employment, although it has been claimed that employers may offer lower wages than they would without this measure.

- **Germany** and the **United States** have such schemes, providing unemployed workers who find a job with a supplement of 50% of the difference in earnings between their old and new jobs, up to a given ceiling. In countries like Germany, where unemployment benefits are high, this kind of policy encourages older workers to return to work.
- **Japan's** system only offers older workers the top-up if their reduction in earnings is of 25% or more, relative to what they were earning at the age of 60. No unemployment benefits can be claimed in this case.
- **Spain** provides an in-work tax allowance in its Personal Income Tax system, the so-called "extending labour market participation allowance" by which working taxpayers extending their labour market participation beyond the retirement age (65 years) may increase their "work-related expense allowance" (applied for all taxpayers receiving income from work) by 100%.

For people with disabilities. Recipients of disability benefits who enter a job generally lose entitlement to part or all of their benefits. High tax burdens are one of the main factors that discourage some individuals from entering the labour market. Nevertheless, some countries have successfully introduced measures to encourage people with disability benefits to enter the labour force by reducing taxation.

Box 10. In-work benefits policies to encourage labour market participation (cont.)

- **Working Income Tax Benefit (WITB).** In **Canada**, in addition to WITB entitlements available to all eligible low-income workers, low-income working individuals with disabilities can be entitled to a WITB Disability Supplement. The additional supplement increases with individual earnings, at a rate of 25%, up to a maximum benefit equivalent to half of the maximum WITB entitlement for single individuals, thereby further improving their financial return from work. The supplement is reduced when income exceeds a threshold.

Source: OECD (2006; 2010d; 2011d).

Labour market regulations should promote effective utilisation of skills...

40. While the reasons behind poor employment outcomes are many and complex, labour market regulations may also contribute. In the case of women, for example, some countries could do more to promote the use of flexible working-time arrangements and part-time work to increase labour force participation. In other countries, employment protection legislation may be either overly strict, restraining formal job creation, or display a wide gap between permanent and temporary and other atypical contracts, leading to labour market dualism and to certain groups (e.g. youth, low skilled) being trapped in low-quality and precarious employment. Find the right balance between providing effective protection for workers against abuses and promoting the formalisation of labour contracts and the stability of work relationships is essential not only to foster quality jobs but also ensure an effective utilisation of skills.

... as can disincentives built into the tax-benefit system

41. In some countries, low employment rates are also the result of tax-benefit systems that hinder work incentives. Again, the barriers will vary depending on the groups concerned. For older workers, the financial advantage of continued work can be low or nil, reflecting work disincentives embedded in pension and early-retirement systems. For women, the tax treatment of second earners, a lack of suitable parental leave provisions and/or high childcare costs can represent significant obstacles to labour force participation.

ENSURING THAT SKILLS ARE FULLY USED: ACTIONABLE PRINCIPLES

Policy principle	Indicator for measuring progress
Activate skills by improving work incentives and job-search help, and by removing employment barriers	Increased participation rates of under-represented groups
Systematically anticipate, assess and respond to changing skill needs	Strengthened systems for the collection and use of information on skill demands
Encourage managers, particularly in SMES, to more fully use available skills	Increased levels of skills utilisation
Ensure that labour market settings lower skills mismatch	Reduced incidence of skills mismatch

CONCLUSIONS

42. Building skills that are relevant to labour market needs, using them fully in the workplace and developing them further over the lifecycle can yield sizeable returns for individuals, economies and societies as a whole. This provides a strong case for adopting a set of common policy principles around a G20 Skills Strategy to complement the G20 Growth Strategies and Employment Plans. Implementing such Strategy should consider country-specific conditions and challenges, but could collectively translate into stronger, more sustainable and, in particular, more inclusive global growth in the short- and medium-term. More skilled individuals that are matched to suitable jobs are more likely to work and earn higher wages – key components of individual wellbeing. Firms also benefit from a better skilled workforce allowing them to expand and adopt new technologies. Finally, skills support thriving communities and societies through their positive impact on volunteering, voting and trust.

43. Despite sizeable progress made in all G20 countries to promote access to, and quality of, education, much remains to be done towards a successful Skills Strategy along the lines delineated in this paper. Many workers still lack basic skills necessary to participate and thrive in the labour market. Additional investments in skills that are relevant for the world of work are needed and employers are among the best placed to provide those skills directly in the workplace. Not only would training on the job help address skill shortages, it would also help firms and economies move up the value chain towards a high-skilled equilibrium. Finally, while focusing on increasing the skill base, societies also need to make the most of existing skills. Unused human capital – either due to inactivity or to a bad match between workers' competences and those required by their jobs – represents a waste of skills and of the initial investment in them.

44. These challenges call for a strategic approach, involving all relevant stakeholders. To be effective, policies related to initial education and life-long learning need to be complemented by broader actions including, for instance, the removal of obstacles to labour market entry of under-represented groups, a change in those labour market regulations that favour job types with poor training provision, and the removal of disincentives built into the tax-benefit system.

45. Based on the evidence collected, the paper puts forward a three-pronged approach to developing strong skills systems:

- Building skills for work and life;
- Encouraging firms to invest in skills; and
- Ensuring that skills are fully used (through activating skills) and used well (matching workers to jobs).

46. Only if all three elements and the actionable policy principles put forward under each of them are successfully combined will better economic and social outcomes be achieved.

ANNEX

THE OECD SKILLS STRATEGY

In May 2012, Ministers from all OECD countries endorsed the OECD Skills Strategy. The 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. Its purpose is to 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.
- Ensure that where skills exist they are fully utilised.
- Tackle unemployment and help young people to gain a foothold in the labour market in a way that makes best use of their skills.
- Stimulate the creation of more high-skilled and high value-added jobs to compete more effectively in today's global economy.
- Exploit linkages across policy fields.

To achieve these objectives, the OECD Skills Strategy addresses three inter-related policy levers: *Developing relevant skills; Activating skills; and Putting skills to effective use*. Since the launch of the strategy, the OECD has worked with several national governments to help them develop a skills strategy or improve existing ones by building consensus across the relevant actors and following a whole-of-government approach.

See:

<http://skills.oecd.org/>

THE G20 TRAINING STRATEGY

In June 2010 at the Toronto Summit the G20 leaders welcomed the G20 Training Strategy for a Skilled Workforce for Strong, Sustainable and Balanced Growth prepared by the ILO at their request. In preparing this strategy the ILO worked closely with employers and workers, consulted other international organizations, and drew on the Conclusions on skills for improved productivity, employment growth and development adopted by the International Labour Conference in June 2008. In Seoul, in November 2010, G20 Leaders pledged to support countries which are not part of the G20 setting in implementing national strategies on skills for employment, building on the G20 Training Strategy.

- The Training Strategy focused on the following building blocks seen as key to developing a skilled workforce:
- Promote quantity and quality of employment;
- Facilitating a balanced approach to demand- and supply-side policies and measures;
- Strengthening complementarities between different labour market institutions and job quality and growth;
- Anticipating future skills needs, especially related to trade, technological change, and green jobs;
- Promoting the participation of social partners in training design and delivery;
- Encouraging sectoral approaches;
- Enhancing labour market information and employment services;
- Improving design and implementation of Active Labour Market Programmes for skills development;
- Strengthening systems for monitoring and evaluation of PES performance and ALMPs implementation;
- Improving training quality and relevance;
- Promoting gender equality and broad access to training among youth, people with disabilities, rural and migrant workers.

See:

http://www.skillsforemployment.org/wcmstest4/groups/skills/documents/skpcontent/mwdf/mdix/~edisp/fm11g_021626.pdf

THE INDICATORS FOR SKILLS AND EMPLOYMENT BY THE G20 MULTI-YEAR ACTION PLAN FOR DEVELOPMENT

In the context of the G20 Action Plan adopted in Seoul in November 2010, G20 Leaders asked international organisations to develop a set of internationally comparable and practical skills indicators for employment and productivity in developing countries under the Human Resource Development (HRD) pillar of the G20 Multi-Year Action Plan on Development. The OECD took the lead in producing this report, with inputs from the World Bank and support from other international organisations.

The resulting report presents a conceptual framework for choosing the most appropriate skills indicators to guide skills development policies and to benchmark country performance. The framework consists of five inter-related domains of indicators, including:

- contextual factors which drive both the supply of and demand for skills;
- skill acquisition which covers investments in skills, the stock of human capital and its distribution;
- skill requirements which measure the demand for skills arising in the labour market;
- the degree of matching which captures how well skills obtained through education and training correspond to the skills required in the labour market;
- and outcomes which reflect the impact of skills on economic performance and employment and social outcomes.

A set of indicators is proposed in the report using this framework and based on the criteria of: relevance, feasibility, comparability and timeliness. A distinction is made between core indicators, which are seen as both essential and potentially available for a wide range of LICs, and supplementary indicators which, while desirable, are not yet widely available for LICs. Altogether, 58 core indicators and 10 supplementary indicators were identified based on a preliminary survey of available international databases that could be used as secondary sources for obtaining these indicators.

The report also puts forward a proposal for the development and maintenance of the international database containing these indicators as well as for some ongoing capacity building to help countries develop the necessary statistical infrastructure to supply the data required to construct these indicators and also to develop their capacity to use these international indicators together with a range of more country-specific indicators to guide their skills development policies.

- 1 . Throughout this document and unless otherwise stated, the term skills encompasses a broad range of competences, including: foundation skills such as literacy, numeracy and problem solving that are the basis for the acquisition and development of other competences; knowledge in specific disciplines; soft/generic skills such as collaboration and communication, critical thinking and creativity or the ability to organise one's work and work independently; and other competences used to perform firm- and job-specific tasks.
2. Hanushek and Woessmann (2010) estimate that over the period 1960-2000, their measure of cognitive skills accounts for a substantial proportion of the variation in growth in real GDP per capita in a sample of 50 countries. They estimate that an increase in cognitive skills by one-standard deviation (100 points in their index with a mean of 500) would boost growth by just under 2 percentage points per annum. For OECD countries, their simulations suggest that, for different plausible scenarios where skills rise, the present value of OECD aggregate gains through 2090 could be as high as 13.8 percent of the discounted value of future GDP.
- 3 . The set of actors, policies and institutions that influence the acquisition, development and use of skills.
- 4 See the ILO Recommendation No. 195 on Human Resources Development, calling for shared responsibilities for skills development:
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R195
- 5 See OECD (2010c); Scottish Government (2007); Froy, Giguère and Meghnagi (2011).
- 6 UKCES (2010).
7. Bloom et al. (2007)

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