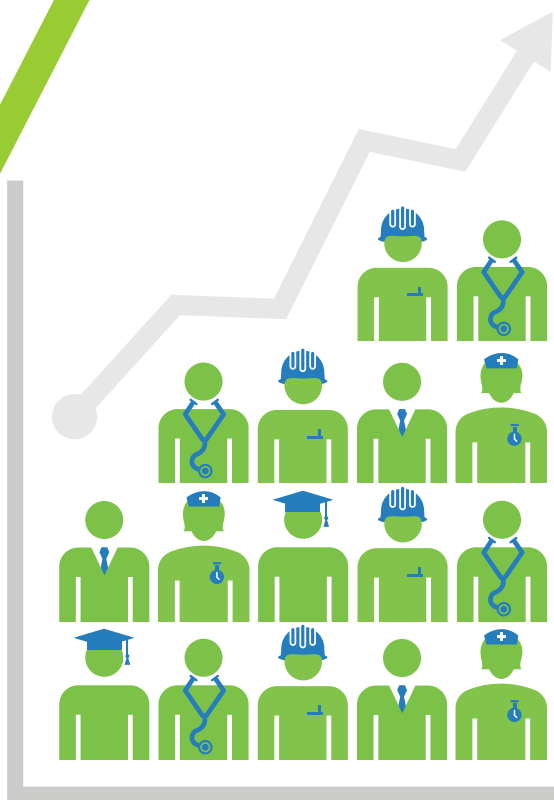
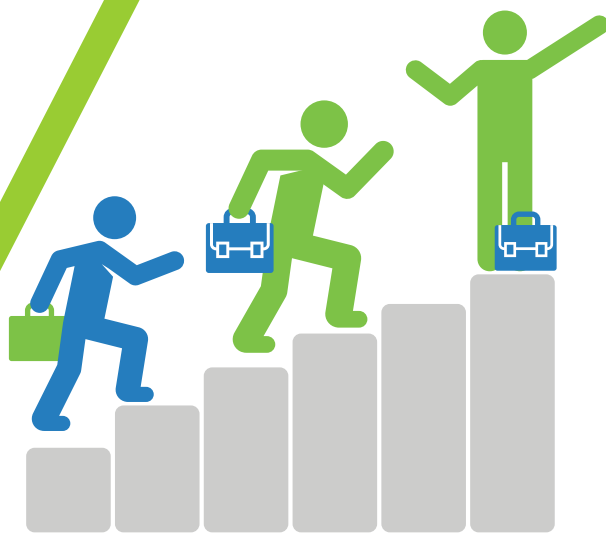


# OECD Skills Strategy Diagnostic Report

Peru  
2016



## Building the right skills can help countries improve economic prosperity and social cohesion



In what way?

By contributing to social outcomes such as health, civil and social engagement.

By supporting improvement in productivity and growth.

By supporting high levels of employment in good quality jobs.



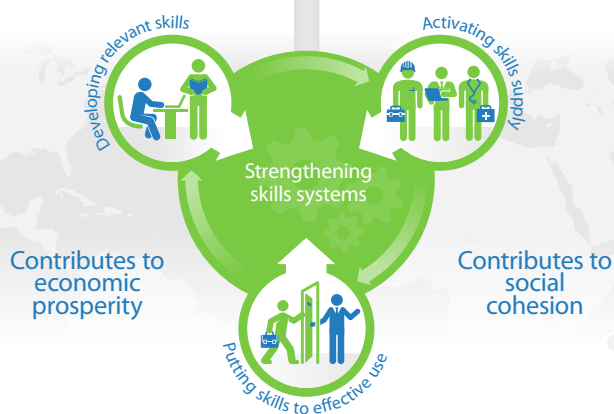
How is this achieved?

### By strengthening skills systems

Designing and implementing an evidence-based national skills strategy.

Funding skills through public and private sources and designing effective incentives for employers and individuals.

Providing good information for the public, businesses and policy makers.



**OECD SKILLS STRATEGY  
DIAGNOSTIC REPORT:  
PERU**

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## FOREWORD

Skills are the foundation upon which Peru must build future growth and prosperity. After a number of years of sustained economic growth, fuelled by an abundance of natural resources Peru has set its sights on moving towards a more diversified economy. Now is the time to harness Peru's skills and human capital to drive innovation and inclusive growth for the future while dealing more effectively with informality.

Paving the path to growth, prosperity, and wellbeing will hinge upon developing high levels of skills that are relevant to the needs of the labour market, facilitating job growth and efficient transitions and returns to work, and making the best use of skills in workplaces. Making this happen in practice requires concerted government action. Peru has undertaken a number of reforms aiming to improve the responsiveness of the labour market and education system, enhance the fiscal framework, and boost the business sector. Yet governments cannot achieve better skills outcomes alone. Success will depend on the commitment and actions of a broad range of stakeholders.

Skills do more than just raise employment, income and aggregate growth. Data from the Survey of Adult Skills (PIAAC) show that in all countries, adults with higher foundation skills, such as literacy and numeracy, are far more likely than those with lower skills to report good health, to perceive themselves as actors in political processes, and to have trust in others. In short, achieving higher skills levels for all fosters equity and facilitates people's participation in democracy and society.

The OECD Skills Strategy provides countries with a framework for developing co-ordinated and coherent policies that support the development, activation, and effective use of skills. Countries that are the most successful in mobilising the skills potential of their people share a number of features: they provide high-quality opportunities to learn throughout life, both in and outside school and the workplace; they develop education and training programmes that are relevant to students and the labour market; they create incentives for, and eliminate disincentives to, supplying skills in the labour market; they recognise and make maximal use of available skills in workplaces; they seek to anticipate future skills needs and they make learning and labour market information easy to locate and use.

This diagnostic report identifies 9 skills challenges for Peru based on analysis of OECD, international organisations and national data, as well as input received from the national government and a wide range of stakeholders, including individuals, employers, employer associations, trade unions and education providers.

As the first non-member country to embark upon a National Skills Strategy country project with the OECD, Peru has demonstrated its commitment to leveraging international comparative data and good practice to tackle its own skills challenges. Equally, Peru's experience will be of great interest to many other countries around the world.

We hope that this report will help in paving Peru's road to sustainable growth and prosperity by stimulating a national conversation on Peru's skills challenges, assets and aspirations. Success will ultimately depend on all actors working together to achieve a common goal.

The OECD stands ready to contribute to Peru's ongoing efforts in designing and implementing better skills policies for better jobs and better lives.



Andreas Schleicher

Director for the OECD Directorate for Education and Skills and Special Advisor to the Secretary-General on Education Policy



## ACKNOWLEDGEMENTS

This report is part of a series of country projects within the OECD programme of work on “Building effective national strategies”.

The OECD is grateful to the Peruvian inter-ministerial project team, chaired by Astrid Sánchez from the Ministry of Labour and Employment Promotion, and co-chaired by Rommy Urbano, from the Ministry of Education and José La Rosa from the Ministry of Economy and Finance. The OECD is also grateful to Alberto Aquino, for co-ordinating the project at the policy-level from the Ministry of Labour and Employment Promotion. The project benefited greatly from the many contributions of the national project team, which included representatives from the Ministry of Labour and Employment Promotion, the Ministry of Education, the Ministry of Economy and Finance, the Ministry of Foreign Trade and Tourism, and the Ministry of Production, as well as from the National Centre for Strategic Planning (CEPLAN). We are particularly indebted to Iván Figueroa, and Yovana Acaro Ignacio from the Ministry of Labour and Employment Promotion, to Hugo Masías from the Ministry of Education and to Carlos Portillo and Karen Trujillo from the Ministry of Economy and Finances. The OECD team is also grateful to Gustavo Yamada and Pablo Lavado from Pacífico University, to María Arteta and Julio Gamero from the International Labour Organisation and to Carmén Pagés-Serra, David Rosas and Carlos Tovar from the Inter-American Development Bank for generously sharing their expertise and insights. Special thanks to Lesley Giles (Deputy Director, UK Commission for Employment and Skills) and Youngsup-Choi (Senior Research Fellow at the Korea Research Institute for Vocational Education and Training-KRIVET) for their participation and valuable contribution to the Skills Challenges workshop in Lima as international experts.

Thanks also go to Ambassador Cristina Velita de Laboureix and Gonzalo Guillén Counsellor of Peru to the OECD, for their strong support and commitment to this project.

The OECD team wishes to thank the representatives of the government of Peru, and stakeholders who took part in the workshops held in Lima in 2015-16. Their comments and insights – delivered during workshops and by e-mail – have both driven the process and shaped this diagnostic report. We would also like to thank the many people who generously gave their time to meet and correspond with us to answer our many questions regarding Peru’s skills system.

While the diagnostic report draws upon data and analysis from the OECD, Peruvian authorities and other published sources, any errors or misinterpretations remain the responsibility of the OECD team.

José-Luis Álvarez-Galván was the project lead responsible for coordinating this OECD National Skills Strategy project with Peru. Michele Rimini (Directorate for Science, Technology and Innovation), Juan Vázquez (Development Centre), José-Luis Álvarez-Galván, Andrew Bell, Fernando Sols and Tanja Bastianic (Directorate for Education and Skills) were the authors of this report. Tanja Bastianic and Cuauhtemoc Rebolledo-Gómez (Directorate for Education and Skills) conducted the data analysis. As team leaders for the OECD National Skills Strategy country projects, Andrew Bell provided editorial and analytical guidance during the drafting process while Joanne Caddy provided guidance in designing and delivering the workshops and interministerial meetings. Deborah Roseveare (Head of the Skills Beyond School Division, Directorate for Education and Skills) provided thought leadership and strategic oversight.

The OECD Skills Strategy diagnostic report for Peru drew upon the knowledge, input and comments of a broad cross-directorate OECD team, including: Chris McDonald and Guillaume Lecaros (Directorate for Public Governance and Territorial Development); Jorge Carbonell (Global Relations Secretariat); Sebastian Nieto and Angel Melguizo (OECD Development Centre); and Pauline Musset (Directorate for Education and Skills).

Sarah Puppini-Zaft and Florence Wojtasinski (Directorate for Education and Skills) provided invaluable support for project management, report layout and design while Elizabeth Zachary provided proof-reading and editorial support.



## TABLE OF CONTENTS

SKILLS STRATEGY .....	2
FOREWORD .....	3
ACRONYMS AND ABBREVIATIONS .....	13
EXECUTIVE SUMMARY .....	15
Why a skills strategy? Better skills, better jobs, better lives .....	15
Building an effective skills strategy for Peru .....	15
Peru's skills challenges .....	16
9 Skills challenges for Peru .....	17
Pillar 1: Developing relevant skills .....	18
Pillar 2: Activating skills supply .....	18
Pillar 3: Using skills effectively .....	19
Strengthening Peru's skills system .....	20
From diagnosis to action .....	21
INTRODUCTION .....	23
Peru has made great progress over the past decade .....	23
Peru has ambitions to build on these past successes, but some relevant challenges remain ahead .....	24
Skills will be key to achieving Peru's ambitions .....	25
The OECD Skills Strategy can help Peru to respond to skills challenges .....	28
Peru needs to overcome nine key skills challenges to realise its ambitions .....	30
Pillar 1: Developing relevant skills .....	31
Pillar 2: Activating skills supply .....	32
Pillar 3: Using skills effectively .....	32
Strengthening Peru's skills system .....	33
REFERENCES .....	35
DEVELOPING SKILLS .....	37
INTRODUCTION TO DEVELOPING SKILLS .....	39
CHALLENGE 1. IMPROVING SCHOOL COMPLETION AND FOUNDATION SKILLS IN.....	
COMPULSORY EDUCATION .....	40
Access to education is improving over time, and is high relative to other Latin American countries .....	40
Access to pre-primary education has improved, enabling a stronger start in children's education .....	41
Access to primary and upper secondary education has improved .....	43
Despite improvements in school access and student performance, the skills of Peruvian young.....	
people remain comparatively low .....	43
Student performance in Peru varies considerably across socio-economic groups .....	45
Peru could do more to tackle inequalities in skills performance .....	47

Peru could improve the performance of its education system by investing more and making better use of existing resources .....	48
Good quality teaching is essential to the success of students in schools .....	49
Summary and policy implications .....	49
REFERENCES .....	51
CHALLENGE 2. IMPROVING ACCESS TO QUALITY HIGHER EDUCATION AND TRANSITION TO WORK .....	53
Young people and women are at high risk in Peru of not making a successful transition into higher education and work .....	53
Access to higher education is improving, but many students graduate with low quality skills that are not relevant to the needs of the labour market .....	55
Disparities in access to high quality higher education institutions exacerbates social inequalities .....	56
The vocational education and training (VET) system in Peru has expanded rapidly, but there are concerns about the quality and relevance of skills students are acquiring .....	57
Peru has taken action in a number of areas to improve the quality and labour market relevance of skills acquired in higher education and VET institutes .....	62
Summary and policy implications .....	65
REFERENCES .....	67
ACTIVATING SKILLS .....	69
INTRODUCTION TO ACTIVATING SKILLS .....	71
CHALLENGE 3. IMPROVING THE LABOUR MARKET INSTITUTIONAL SETTING TO BOOST FORMAL EMPLOYMENT .....	72
The low skills of many Peruvian workers help explain the widespread use of informal employment arrangements .....	73
Informal employment arrangements create a disincentive to further invest in skills that may increase worker productivity and facilitate transitions to formal employment .....	74
Reducing social security costs could increase formal employment opportunities .....	75
Summary and policy implications .....	76
REFERENCES .....	78
CHALLENGE 4. EXTENDING THE REACH OF ACTIVE LABOUR MARKET POLICIES TO IMPROVE WORKERS' EMPLOYABILITY .....	79
The skills of too many Peruvians are not being fully supplied to the labour market .....	79
Active labour market policies also play an important role in supporting fuller participation in the labour market .....	80
ALMPs remain in limited use in Peru, despite the recent increase in expenditure .....	80
Training programmes are one of the most important types of ALMP in Peru, but their impact has been mixed .....	82
The public employment service plays an important and growing role in Peru, but its performance can still be improved .....	83
There are a number of ways for Peru to improve the effectiveness of ALMPs and the PES .....	84
The adoption of a national qualification framework could facilitate the increased activation of skills in the formal sector .....	85
Summary and policy implications .....	86
REFERENCES .....	88

USING SKILLS .....	91
INTRODUCTION TO USING SKILLS .....	93
CHALLENGE 5. IMPROVING THE ALIGNMENT BETWEEN SKILLS SUPPLY AND .....	
DEMAND AND FOSTERING A BETTER USE OF SKILLS IN THE WORKPLACE.....	94
The effective use of skills improves economic and social outcomes for individuals, firms and society .....	94
Peru is currently not making full and effective use of the skills it has invested in developing .....	95
Despite the large numbers of people who are over skilled for their jobs, many firms report having.....	
difficulty finding workers with the skills they need .....	97
There are a number of measures that Peru could implement to use skills more effectively.....	98
Firm-sponsored training can improve skills use at work .....	98
High performance workplace practices can boost the use of skills at work .....	101
Labour market institutions matter for the use of skills at work .....	104
Summary and policy implications .....	105
REFERENCES.....	106
CHALLENGE 6. PUTTING SKILLS TO BETTER USE TO FOSTER A MORE .....	
DIVERSIFIED AND PRODUCTIVE ECONOMY.....	108
Peru can boost productivity and growth by stimulating greater economic diversification.....	109
Peru should support the expansion of high demand sectors .....	111
Policies to develop, activate and use skills effectively can support diversification into high .....	
demand sectors .....	112
Increased innovation can help Peru to diversify and boost productivity.....	114
Highly skilled individuals and universities are central to a country's innovation system.....	115
Firms in Peru do not invest sufficiently in innovation activities .....	116
Increased entrepreneurship is also key to fostering greater innovation and productivity in Peru .....	117
Summary and policy implications .....	119
REFERENCES.....	121
STRENGTHENING PERU'S SKILLS SYSTEM.....	123
INTRODUCTION TO STRENGTHENING PERU'S SKILLS SYSTEM.....	125
CHALLENGE 7. IMPROVING LEARNING AND LABOUR MARKET .....	
INFORMATION TO SUPPORT BETTER EDUCATION AND CAREER CHOICES AND.....	
EVIDENCE-BASED POLICY MAKING.....	126
Peru has developed a strong system to collect data to inform skills-related policy decisions.....	127
Better availability of information can support Peruvian students in their field of study and career choices.....	128
Improving the use of labour market information can help to address skills shortages and mismatches .....	
in Peru .....	130
Collaboration across ministries and social partners can increase the effectiveness of .....	
skills information systems.....	132
Building capacity to use data effectively and implement evidence-based policies.....	134
Summary and policy implications .....	137
REFERENCES.....	138
CHALLENGE 8. IMPROVING CO-ORDINATION ACROSS DIFFERENT ACTORS .....	
AND LEVELS OF GOVERNMENT TO ACHIEVE BETTER SKILLS OUTCOMES .....	140

Place-based policies and effective horizontal collaboration could strengthen skills outcomes.....	
and reduce regional disparities in Peru.....	141
Better horizontal collaboration can strengthen the development, activation and use of skills in Peru.....	143
Vertical collaboration is essential for ensuring the effectiveness of decentralisation and place-based.....	
policies.....	146
Peru is facing a number of challenges in making vertical collaboration and decentralisation work .....	146
Peru is implementing measures to overcome its vertical co-ordination challenges .....	147
Summary and policy implications .....	149
REFERENCES.....	150
CHALLENGE 9. BUILDING PARTNERSHIPS TO ENSURE THAT POLICIES.....	
ARE RESPONSIVE TO CHANGING SKILLS NEEDS.....	152
Partnerships are critical for improving the effectiveness and efficiency of the skills system.....	153
A number of partnerships are already in place to help Peruvians develop relevant skills .....	153
More could be done to leverage partnerships to ensure that more Peruvians develop.....	
the skills needed in the labour market.....	154
Stronger partnerships between Public Employment Services and employers could improve .....	
skills activation in Peru.....	157
Partnerships are critical for ensuring that skills are used most effectively at work .....	158
Partnerships between universities and firms can prompt a more productive use of researchers' skills .....	160
Summary and policy implications .....	162
REFERENCES.....	163
NEXT STEPS .....	165
Moving from diagnosis to action.....	165

## Tables

Table 1.	Main training programmes currently in place in Peru .....	83
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## Figures

Figure 1.	Likelihood of positive social outcomes among highly literate adults.....	26
Figure 2.	Skills matter for labour market outcomes.....	27
Figure 3.	Labour productivity and the use of reading skills at work.....	28
Figure 4.	Educational attainment of the population aged 25 years and older (for latest year available) ...	41
Figure 5.	Proficiency in mathematics according to PISA 2012 results (selected countries).....	44
Figure 6.	Mean score, variation and gender differences in student performance in reading .....	47
Figure 7.	Unemployment rate in selected countries, 2013.....	54
Figure 8.	Share of youth not in education, employment, or training (% of youth population),.....	
	15-24 years old, 2014 or latest available data.....	55
Figure 9.	Main university subjects studied in Peru, 2010.....	56
Figure 10.	Informal employment in Peru (2007-2014).....	73
Figure 11.	Labour income of formal and informal workers, distribution relative.....	
	to the minimum wage in Peru (in Peruvian Soles, 2014).....	74
Figure 12.	The vicious circle between low skills and high informality .....	75
Figure 13.	Informality and costs of formalisation for different income groups in Peru, 2014.....	76

Figure 14.	Activity status for youth (15-29) in different income groups in Peru, 2014.....	80
Figure 15.	Expenditure in active labour market policies in Peru and selected countries ..... (as a % of GDP).....	81
Figure 16.	Job search through formal and informal channels in selected LAC countries, 2009.....	82
Figure 17.	Labour productivity and the use of reading skills at work .....	95
Figure 18.	Percentage of firms reporting having difficulties filling jobs, 2015 .....	98
Figure 20.	Economic complexity indicator (ECI), 1990-2012.....	109
Figure 21.	Patent applications per million people, comparing Peru and select benchmark ..... countries and averages.....	115
Figure 22.	Business expenditure on research and development, 2002 and 2013 ..... (or latest available year) .....	116
Figure 23.	Perceptions of co-ordination among public institutions, 2012 .....	141

## Boxes

Box 1.	The OECD Skills Strategy: Defining the concept of “skills” .....	16
Box 2.	The OECD Skills Strategy: defining the concept of “skills” .....	31
Box 3.	The OECD Peru Country Programme.....	34
Box 4.	CEI and PRONOEI programmes in Peru .....	42
Box 5.	Juntos programme in Peru.....	43
Box 6.	Regional evaluations of primary school students .....	45
Box 7.	Tackling low-performance by strengthening social and emotional skills in Portugal .....	46
Box 8.	Supporting low-performing students .....	48
Box 9.	Improving public educational infrastructure in Peru .....	49
Box 10.	Improving the quality of teachers in Peru.....	50
Box 11.	Skills beyond Schools review of Peru: Vocational Education and Training.....	59
Box 12.	Benefits of work-based learning.....	60
Box 13.	Efforts to facilitate the school-to-work transition for young people in OECD countries .....	61
Box 14.	The new laws on higher education and VET in Peru .....	62
Box 14.	The new laws on higher education and VET in Peru (continued).....	63
Box 15.	International examples of arrangements between VET institutions and universities.....	64
Box 16.	Programmes to reduce educational inequalities in Peru .....	65
Box 17.	Activating skills in the context of high rates of informal employment .....	71
Box 18.	Examples of national qualification frameworks.....	86
Box 19.	OECD Job Quality Initiative .....	97
Box 20.	Identifying barriers to employer engagement in skills investment.....	100
Box 21.	Training programmes for existing workers and SMEs .....	101
Box 22.	Policies to encourage workplace innovation: Examples of good practice.....	103
Box 23.	Promoting the better utilisation of skills in Flanders, Belgium.....	104
Box 24.	OECD advice on sustainable development paths: the Multi-Dimensional..... Country Review of Peru.....	110
Box 25.	International experiences in productive diversification: A challenging path.....	111
Box 26.	Productive diversification and skills policies in Korea.....	112
Box 27.	Assessing the balance between local and regional skills for productive diversification.....	113
Box 28.	Enhancing the prominence of entrepreneurship in the education system .....	118
Box 29.	Engaging actors across the skills system in fostering entrepreneurship.....	119
Box 30.	Peru’s national statistical system.....	127
Box 31.	Peru’s National Centre of Strategic Planning .....	128
Box 32.	The Ponte en Carrera observatory .....	129
Box 33.	Texas Workforce Commission .....	130
Box 34.	Skills assessment and anticipation exercises in OECD countries .....	132
Box 35.	Michigan’s Workforce Intelligence Network.....	133

Box 36. Canadian Occupational Projection System .....	134
Box 37. Improving the evidence base on skills.....	136
Box 38. Regional disparities and economic growth in Peru.....	142
Box 39. The OECD approach to multi-level governance challenges .....	144
Box 40. National strategic bodies to steer skills policy making.....	145
Box 41. Locally-based collaborative governance structures.....	148
Box 42. How to build successful locally-based partnerships .....	155
Box 43. Integrating employment and economic development at the local level.....	156
Box 44. Co-operation between academia and the work place: Campus Helgeland, Norway.....	157
Box 45. Partnerships and outsourcing in active labour market policies .....	158
Box 46. Ireland: Building partnerships among employers to better align skills.....	159
development opportunities with the world of work .....	159
Box 47. Public and private sector collaboration agreements in Barcelona.....	160
Box 48. Examples of partnerships between research, universities and companies across.....	161
OECD countries .....	161

## ACRONYMS AND ABBREVIATIONS

<b>ALMP</b>	Active labour market policy
<b>BERD</b>	Business Expenditures on Research and Development
<b>CAF</b>	Development Bank of Latin America
<b>CV</b>	Curriculum Vitae
<b>EC</b>	European Commission
<b>ECEC</b>	Early Childhood Education and Care
<b>ECI</b>	Economic complexity indicator
<b>ECLAC (CEPAL)</b>	United Nations Economic Commission for Latin America and the Caribbean
<b>EPL</b>	Employment protection legislation
<b>FDI</b>	Foreign direct investment
<b>GDP</b>	Gross domestic product
<b>GVC</b>	Global value chain
<b>HEI</b>	Higher Education Institution
<b>IADB</b>	Inter-American Development Bank
<b>ICT</b>	Information and communication technology
<b>ILO</b>	International Labour Organization
<b>INEI</b>	National Institute of Statistics and Informatics of Peru
<b>ISCED</b>	International Standard Classification of Education
<b>LAC</b>	Latin America and Caribbean
<b>LFS</b>	Labour Force Survey
<b>MINEDU</b>	Ministry of Education of Peru
<b>MNE</b>	Multinational enterprises
<b>MTPE</b>	Ministry of Labour and Employment Promotion of Peru
<b>NEET</b>	Not in education, employment or training
<b>NGO</b>	Non-governmental organisation
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>OECD LEED</b>	Local Economic and Employment Development Programme
<b>PES</b>	Public employment service

<b>PhD</b>	Doctorate
<b>PIAAC</b>	Programme for the International Assessment of Adult Competencies (Survey of Adult Skills)
<b>PISA</b>	Programme for International Student Assessment
<b>PRI</b>	Public research institute
<b>R&amp;D</b>	Research and development
<b>SAA</b>	Skills assessment and anticipation exercises
<b>SME</b>	Small and medium enterprise
<b>TFP</b>	Total factor productivity
<b>TLO</b>	Technology licensing office
<b>TTO</b>	Technology transfer office
<b>UIS</b>	UNESCO Institute of Statistics
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation
<b>USAID</b>	United States Agency for International Development
<b>VET</b>	Vocational education and training
<b>WEF</b>	World Economic Forum



## EXECUTIVE SUMMARY

### Why a skills strategy? Better skills, better jobs, better lives

Skills have become the key driver of individual well-being and economic success in the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into growth, and countries are unable to compete in increasingly knowledge-based global economies.

The OECD Skills Strategy provides countries with a framework to analyse their strengths and weaknesses as a basis for taking concrete actions relating to the three pillars that comprise a national skills system: 1) developing relevant skills from childhood to adulthood; 2) activating these skills in the labour market; and 3) using these skills effectively in the economy and society. In addition, there is a fourth dimension/area to be considered, that an effective Skills Strategy strengthens a country's skills system by facilitating policy collaboration and coherence across these three pillars.

### Building an effective skills strategy for Peru

Peru is one of the strongest economic performers in Latin America, and steady GDP per capita growth over the past decade has been accompanied by a sharp decline in poverty rates. Peru's economic development to date has largely been driven by abundant natural resources and high commodity prices in the global market. The goal for the future is to ensure productive diversification, expand export capacity and take part in global value chains with more complex goods and services. Boosting the development, activation and use of skills will be key to achieving these ambitions. As demonstrated by the Survey of Adult Skills (PIAAC), which Peru is currently deploying, higher skills levels are not only associated with higher productivity and earnings, but also with other important outcomes, such as better health, higher levels of trust and greater propensity to contribute to society through volunteering.

In 2014, the share of Peruvian adults having completed upper secondary education as their highest educational level (34%) was close to the OECD average (40%), and enrolments in tertiary education have grown significantly. Despite recent progress, Peru still has a comparatively low-skilled workforce and a relatively high concentration of low value-added activities, which contribute to the prevalence of informal employment arrangements.

On average, workers in the informal economy are less likely to receive training; less likely to participate in high-involvement human resource practices to use their skills more effectively; and more likely to be in precarious and low quality jobs. Firms operating in the informal sector tend to invest less in training their workers and in modernising production, which translates into low productivity and growth. For society, having a large share of the workforce employed informally implies higher social costs and foregone tax revenues that could have been invested in expanding the provision of education and training.

By providing opportunities for all Peruvians to develop high quality and relevant skills; and by supporting employers to improve their human resources methods, Peru can raise productivity levels and, by extension, the incentives for employers to hire individuals in the formal sector. Skills are central to Peru's future prosperity and the well-being of its people. Fostering better and more equitable skills outcomes will provide the foundation for building a healthier, more equitable, and more cohesive society.

## Peru's skills challenges

Peru is the first non-member country to have undertaken a National Skills Strategy project with the OECD. The National Project Team established by the Peruvian government is co-ordinated by the Ministry of Labour and Employment Promotion, and includes representatives from the Ministry of Education and the Ministry of Economy and Finance.

This diagnostic report sets out nine skills challenges for Peru. These challenges were identified through two interactive workshops with stakeholders such as employers, trade unions, education providers and experts, as well as through analysis of the OECD, the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Labour Organisation (ILO), the World Bank, the Inter-American Development Bank (IADB), and national data. The challenges are described under each of the OECD Skills Strategy's main pillars and are framed as outcome statements. The first six challenges refer to specific outcomes across the three pillars of developing, activating and using skills. The next three challenges refer to the "enabling" conditions that strengthen the overall skills system. Success in tackling these skills challenges will boost performance across the whole skills system.

### Box 1. The OECD Skills Strategy: Defining the concept of "skills"

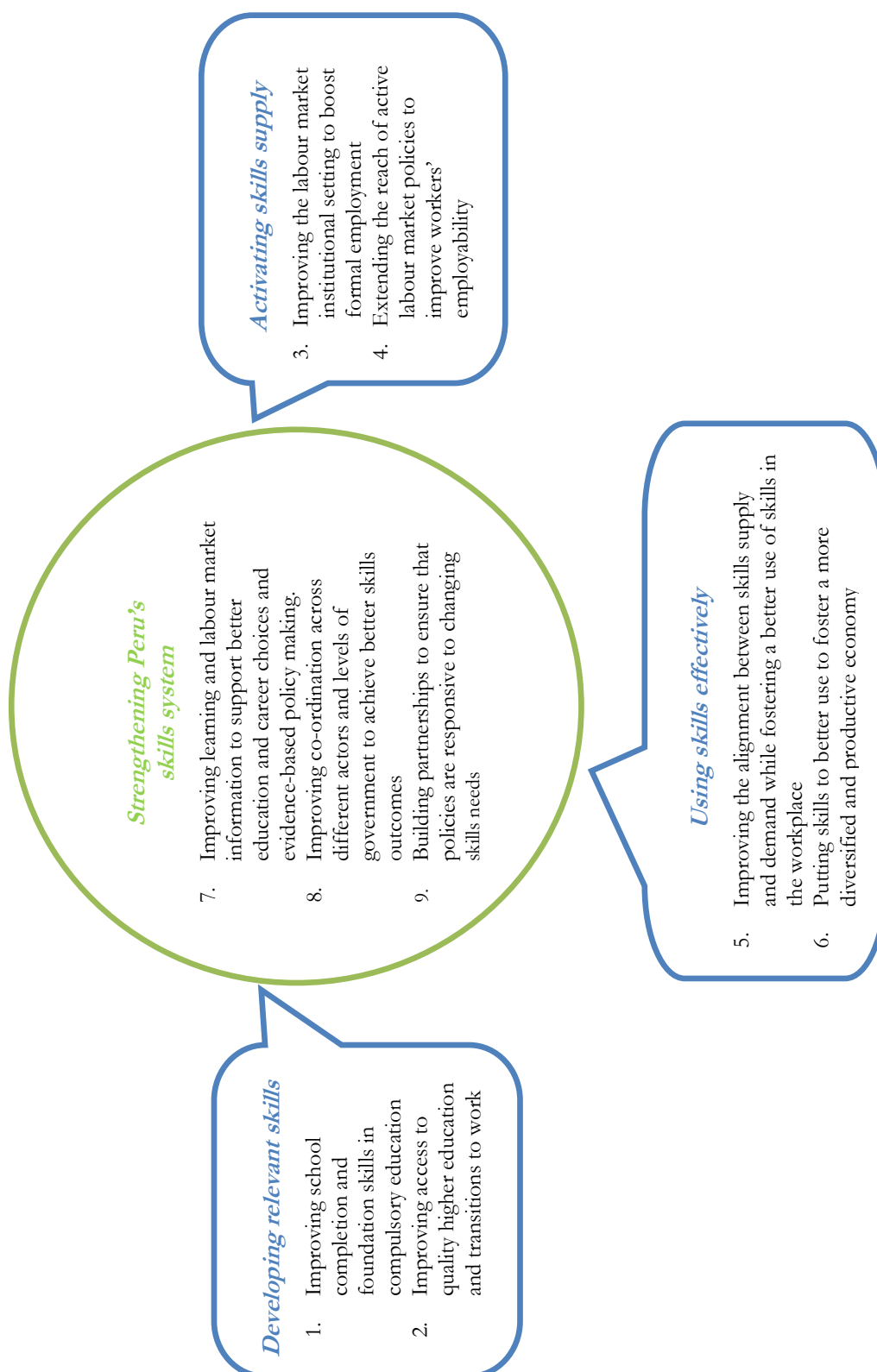
The OECD Skills Strategy defines skills (or competences) as the bundle of knowledge, attributes and capacities that can be learned, that enable individuals to successfully and consistently perform an activity or task, and that can be built upon and extended through learning. This definition includes the full range of cognitive, technical and socio-emotional skills. The concepts of "skill" and "competence" are used interchangeably in this report. The sum of all skills available to the economy at a given point in time forms the human capital of a country.

The OECD Skills Strategy shifts the focus from traditional proxies of skills, such as years of formal education and training or qualifications/diplomas attained, to a much broader perspective that includes the skills people acquire, use and maintain – and also lose – over the course of a lifetime. People need skills to help them succeed in the labour market, contribute to better social outcomes, and build more cohesive and tolerant societies.

Source: OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264177338-en>.

All of the challenges identified are strongly interlinked, and their connections with each other are identified throughout the report. Failure to look beyond policy silos will have implications for specific groups in Peru, such as young people, as well as for the economy and society's ability to build a solid foundation for future prosperity.

## 9 SKILLS CHALLENGES FOR PERU



### Pillar 1: Developing relevant skills

1. ***Improving school completion and foundation skills in compulsory education.*** Many Peruvian young people are not developing the skills needed for success in work and life. While both access to education and skills performance have been improving over time, a large share of Peruvian youth still have comparatively very low levels of achievement in reading, mathematics and science. The programme for international student assessment (PISA) found that about one quarter of Peruvian students perform at level 2 or above in mathematics, while the remaining three quarters achieve very basic or insufficient levels of proficiency, meaning that many are unable to perform even very direct and straightforward mathematical tasks (level 1 or less). Furthermore, certain groups are performing far worse than others. Those from lower socio-economic backgrounds, rural areas and households where Spanish is not the mother tongue, all perform far below average on a number of indicators of success in education. Recently implemented policies to ensure that quality education reaches all people in Peru should be sustained; but more needs to be done to make greater progress faster.
2. ***Improving access to quality higher education and transition to work.*** Many Peruvians face difficulties in making a smooth transition from compulsory education to further studies or work. Despite comparatively low levels of youth unemployment, around 18% of young adults in Peru were neither in employment nor education in 2013. Despite a large expansion in access, Peruvian universities and vocational education and training (VET) institutes fall below international standards in terms of quality. The rapid and unregulated expansion of higher education and VET has negatively impacted on the quality and relevance of skills acquired by students. Faced with an increased demand for a higher level of education, Peru liberalised the higher education and VET sector without first putting into place the necessary quality assurance mechanisms. This has generated great heterogeneity regarding programme quality and job relevance, with many institutions lacking both. Low institutional quality translated into course offerings that are not sufficiently responsive to the country's skills needs.

### Pillar 2: Activating skills supply

3. ***Improving the labour market institutional setting to boost formal employment.*** A high level of informal employment is a defining characteristic of Peru's labour market. Despite recent increases in participation rates, and decreases in unemployment and inactivity rates, still around 70% of workers were employed informally in 2014. As mentioned, informal employment arrangements raise the risks associated with investment in skills for both the worker and employer, with the result being lower investment overall. Lower investment in skills also means that firms in the informal sector continue to suffer from low productivity and, as a result, continue to be unable to afford the costs associated with the transition into the formal sector. Encouraging greater investment in skills can increase productivity and reduce informality. By improving the skills of its workforce and, by extension, their productivity, Peru can raise incentives to employ workers formally. Peru can also reduce informality by decreasing the costs associated with the formal hiring of workers. This could involve developing mechanisms to better ensure that minimum wage levels are linked to worker productivity. It could also mean subsidising social security contributions for lower income workers, typically those with lower levels of skills. Finally, efforts to increase formalisation should be linked to the productive diversification strategy of the country. By encouraging growth in high productivity sectors that demand a higher use of skills, Peru could help to create the conditions whereby formal employment arrangements are better able to flourish.
4. ***Extending the reach of active labour market policies to improve workers' employability.*** Active labour market policies (ALMPs) are an important means of activating people who are inactive or unemployed and of promoting employment. In Peru, 12% of adults aged 30-64 are inactive or unemployed, while another 51% are employed informally. Only 35% of 30-64 year-olds are employed formally. Transitions out of employment informality towards employment formality are low in Peru, with only 20% of young men and 18% of young women transitioning from an informal job to a formal job. ALMPs and Public Employment Services (PES) can facilitate a better transition from school to work, assist the unemployed to find work that matches their skills, and support those employed in the informal

sector to transition to higher quality jobs in the formal sector. However, ALMPs and the PES remain underdeveloped in Peru. Expenditures on ALMPs are below those found in many other large Latin American and Caribbean (LAC) countries, including Brazil, Chile and Argentina, and are well below the OECD average. Existing spending is highly concentrated on training programmes and PES. The reach of PES remains limited, but there have been some recent improvements, including the introduction of a “one-stop” employment service. Peru could improve its training programmes by increasing their duration, integrating work-based learning opportunities, and tailoring them more to the needs of specific target groups. PES could additionally be improved through the introduction of better performance management and accountability frameworks, more tailored job search assistance, and the expanded use of digital technologies to extend its reach, effectiveness, and efficiency.

### **Pillar 3: Using skills effectively**

5. ***Improving the alignment between skills supply and demand and fostering a better use of skills in the workplace.*** The use of skills at work in Peru is inefficient as many workers are over-qualified or under-qualified for their jobs. In 2013, the share of workers who were under and over-qualified was 50.5%, which represents a modest improvement since 2008, when it was 53%. Such mismatches are a drag on Peru’s productivity. However, despite apparent high rates of skills underutilisation, firms in Peru report having problems finding employees with the cognitive, socio-emotional and technical skills they need. The prevalence of over-qualification may suggest an inefficient allocation of skilled workers across the economy and/or a lost opportunity on the part of firms to reorganise their workplaces to make better use of the available talent in a way that could boost their productivity and competitiveness. Collaboration between firms and educational institutions could reduce mismatches, while effective firm-sponsored training could improve skills gaps and skills use in the workplace. Greater efforts are needed to raise awareness among firms of the importance of making the effective and intensive use of skills in the workplace a central component of their business strategies. Better human resource practices can help workers to make optimal use of their skills and set incentives for continuous learning and skills development. In this respect, increased adoption of high performance workplace practices may be very important for improving skills uses.
6. ***Putting skills to better use to foster a more diversified and productive economy.*** The complexity of Peru’s production structure is lower than many countries benchmark countries. In 2012, Peru ranked 80<sup>th</sup> out of 144 countries for economic complexity and, in contrast to most Latin American economies, its positioning has worsened over the past two decades. To maintain current levels of economic growth, the Peruvian economy must undergo a process of structural change that will see the expansion of high demand sectors and the shifting of workers into more productive areas of the economy. Higher levels of skills enable the introduction of new products, markets and business ideas, while also ensuring that workers can adapt more quickly to the organisational and productive transformation generated by the transition towards a more diversified economy. However, productive diversification may come at the expense of low skilled workers employed in less productive firms who may face higher economic and employment insecurity. Upward labour mobility towards higher productive occupations should, therefore, rely on mechanisms of broader skills upgrading rather than taking the best existing workers from low productive occupations. Moreover, increasing the stock of highly skilled individuals who can perform innovation activities and design innovative products could address Peru’s weak innovation performance regarding research and development (R&D) and patenting activities. Education and skills could play an important role in building an entrepreneurial culture and developing the skills needed to support the development of new products for high demand sectors.

### Strengthening Peru's skills system

7. ***Improving learning and labour market information to support better education and career choices, and evidence-based policy making.*** Peru has the institutional capacity to produce the indicators necessary to implement evidence-based skills policies. However, as in many OECD countries, challenges persist for ministries to make full use of indicators to inform policy making. Students in Peru, on average, do not have the information they need to make informed field of study and career choices, especially as the upper-secondary education system has become increasingly complex and somewhat opaque. Web portals, such as the “Ponte en Carrera” observatory (a web portal that collects relevant and quality information on educational offerings and labour market demands), and other instruments should be strengthened to provide students with information about available study options and professional career paths after graduation. Workers and job seekers could make better use of labour market information if it were provided in a more accessible format. Furthermore, skills assessment and anticipation exercises – such as those already conducted in a number of OECD countries – could be developed in Peru to provide guidance on future skills demands, thereby mitigating the incidence of skills shortages and mismatches.
8. ***Improving co-ordination across different actors and levels of government to achieve better skills outcomes.*** Peru could improve its skills outcomes by strengthening horizontal collaboration among different ministries and vertical collaboration across different levels of government. Many ministries and authorities in Peru have an impact on the development, activation and use of skills, but systems of inter-ministerial collaboration are relatively underdeveloped. To foster collaboration across ministries that have a stake in skills, the Ministry of Labour has recently launched three sector skills committees in the areas of sanitation services, construction and tourism. Sustaining this dialogue and transforming it into co-ordinated action will be critical for the long-term success of such initiatives. Co-ordination among different levels of governments is crucial given Peru's ambition to have a highly decentralised form of government. In many cases, more than one level of government has responsibility for the same policy area, with unclear division between national, regional and local levels. This issue is particularly visible in the case of education. To achieve a more efficient decentralisation, the capacity of regions and local authorities should be strengthened to allow for a more thorough implementation of place-based policies with the goal of reducing regional and urban-rural disparities in skills outcomes.
9. ***Building partnerships to ensure that policies are responsive to changing skills needs.*** To improve countries' performance in the development, activation and effective use of skills, governments must foster collaboration and co-ordination among the various actors with a stake in, and an influence on, skills outcomes. Stronger partnerships can increase the relevance of skills developed in VET and higher education. Peru's VET system is characterised by the existence of strong sectorial schools, which are designed to respond to the skills demand of specific economic sectors, and a weaker public and private system for the rest of the economy. Engaging firms in the co-design and running of training programmes in non-sectorial schools would ensure a better alignment between the skills developed and labour market demands. In addition, employers should play a more active role in the design and implementation of ALMPs. Their involvement in training and activation programmes would enhance the skills quality and relevance of those still searching for jobs and build up a ready-to-use talent pipeline. A more active participation of employers in skills assessment and anticipation exercises would ensure better alignment between skills supply and demand. Partnerships between higher education institutions and the private sector could ensure that local demand for highly skilled workers is met by a relevant tertiary education offering. Partnerships between academia and the private sector could help knowledge dissemination and foster a more productive use of academic researchers' skills.

## From diagnosis to action

The main goal for this joint project between the OECD and the Peruvian government on “Building an effective Skills Strategy for Peru” was to provide a strategic assessment of the national skills system in Peru and the way skills are developed, activated and used. This analysis is needed when designing effective skills policies and strategies to meet Peru’s future skill needs, and to improve the match between supply and demand for skills.

Now is the time to focus on improving skills outcomes to boost productivity and innovation while strengthening the bedrock for Peru’s future economic growth. This diagnostic report represents one input to future action on improving skills outcomes in Peru. Of equal importance to future success are the “intangible” assets generated by the National Skills Strategy project through sustained inter-ministerial dialogue and stakeholder engagement over the course of 2015-16.

This diagnostic report can be used in many ways, including: as a basis for raising public awareness, fostering broader public debate about the skills challenges currently facing Peru, and encouraging social partners and national and regional governments to work together to tackle these challenges in the future. The OECD stands ready to support Peru in its ongoing efforts in designing and implementing better skills policies for better jobs and better lives.







## INTRODUCTION

Skills have become the key drivers of individual well-being and economic success in the 21st century. Without proper investment in skills, people languish on the margins of society, technological progress does not translate into growth, and countries can no longer compete in increasingly knowledge-based economies. The more countries strive to achieve the highest levels of innovation and competitiveness in their economies, the more they have to focus on generating the right skills mix, making sure that those skills are fully activated in the labour market, and maximising their use in workplaces.

This introduction briefly discusses recent Peruvian successes, some of the main challenges ahead, and how skills will play a critical role in shaping Peru's future prosperity and well-being. It concludes with the set of skills challenges the OECD identified in Peru in close collaboration with stakeholders, experts and representatives of the Peruvian government.

### **Peru has made great progress over the past decade**

**In 2009, Peru became an upper middle-income country and has since become one of the strongest economic performers in the Latin American region.** In 2015 it had a Gross National Income of 194.6 Billion USD (in 2015). Other upper middle-income countries in the region include Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador and Panama. Around the world, other countries with a similar income level are China, Kazakhstan, Turkey, and South Africa (World Bank, 2016).

**Poverty rates have been dramatically reduced and GDP per capita has been growing in recent years.** Peru has reduced poverty rates from 58.7% in 2004 to 22.7% in 2014 (World Bank, 2016). At the same time, GDP per capita in Peru grew constantly between 2006 and 2015 (with the exception of 2009). Growth was particularly high in 2007 and 2008 (7.2% and 7.8%, respectively), but has decelerated in the last couple of years, with growth rates of 1% in 2014 and 1.9% in 2015 (World Bank, 2016).

**Peru has taken advantage of its rich natural resources and high commodity prices in the global market.** Like some other countries in the region, Peru has benefited from the relatively high price of commodities in recent years, especially in the mining industry, which has been driven largely by the economic expansion of China. Natural resources rents peaked at 14.9% of GDP in 2007, but still accounted for about 8.7% of GDP in 2014. Within natural resources rents, mineral rents as a proportion of GDP have grown impressively in Peru in recent years, reaching a peak of 11.7% of GDP in 2007. This means that almost 80% of the total rents from the exploitation of natural resources in Peru came almost exclusively from the mining industry. Until 2014, mineral rents in Peru accounted for about 6.4% of GDP (World Bank, 2016).

**The age composition of the population in Peru is changing and proportionally enlarging the size of the labour force.** The age dependency ratio<sup>1</sup> declined from 64.6% in 2000 to 53.2% in 2015, which means that an increasing share of the population is of working age. The age dependency rate is relatively higher in Peru than for the Latin American region and the OECD (50.2% and 52.6% respectively, also in 2015). At the same time, Peru's population is ageing as the dependency rate has increased for the older population (65 years old and over) (from 8.1% in 2000 to 10.5% in 2015), while the proportion of people aged 15 years old and younger has decreased in the same period, from 56.54% to 42.73% (World Bank, 2016).

**The Peruvian population is becoming better educated and labour force participation is increasing, especially among females.** An increasing number of students are completing higher education studies, either at tertiary or upper secondary non-tertiary level (the share of workers having completed higher education increased by 21.4% between 2008 and 2013). This increase was particularly large for workers who had completed university studies, which grew by 23.4 %, compared to those who had completed non-university higher education, which grew by 13%. As a result of these positive trends, in 2013, 1.6 million workers in Peru had completed university education, and almost 1.5 million had completed non-university higher education (MTPE, 2014). The labour force participation rate in Peru has increased from 66% in 2000 to about 69% in 2014; while the rate for women increased from 54% in 2000 to 60% in 2014 (reaching a peak of about 67% in 2010) (World Bank, 2016).

**Access to basic education and school completion has improved.** Net enrolment rates in primary education for those aged 5 (first year of compulsory education) were around 93% in 2013, similar to the Latin America and Caribbean (LAC) average of 91.5%, and not far below the average for OECD countries of 97% (UNESCO/UIS, 2016). The average years of education among 15-year-olds has increased from 9.5 years in 2005 to 10.1 years in 2014 (INEI, 2015), and the share of the population with no schooling or incomplete primary education has declined from 26.3% in 2005 to 18.1% in 2014 (UNESCO/UIS, 2016). At the same time, there has been a large increase in the share of adults who have completed at least upper secondary education, rising from 26.3% in 2005 to 34.4% in 2014, which is similar to the rate for Chile (35.5%) and all OECD countries (36.7%), and significantly higher than the rates for Mexico (17.4%) and Costa Rica (16.6%).

**Peruvian adults are, on average, better educated than their counterparts in the Latin American region.** Among the population aged 25 and older, the share of Peruvians with no schooling (5.1%) is below the Latin American average (7.1%). At the other end of the educational spectrum, the share of adult Peruvians with a tertiary education (21.1%) slightly surpasses the regional average (20.3%). However, it is in the proportion of the adult population with upper secondary education that Peru really stands out, with 34.4% of the population holding their highest degree against a regional average of 24.7%.

**Peru has ambitions to build on these past successes, but some relevant challenges remain ahead**

**Peru aspires to continue the path of economic and social development through productive diversification.** Peru has already taken steps to identify and support high demand sectors that may fuel economic growth and social progress in the near future. As part of the National Plan for Productive Diversification, the Ministry of Production (PRODUCE) and the Ministry of Tourism and Foreign Trade (MINCETUR) have been conducting exercises to identify sectors in the global economy whose goods and services are high in demand. By focusing on these sectors, Peru plans to expand its export capacity and integrate into global value chains with more complex goods and services (PRODUCE, 2015).

**Economic diversification and higher levels of productivity can reinforce each other.** A large strand of economic literature (Hausmann and Bailey, 2008; McMillan and Rodrik, 2011) emphasises the importance of sectorial diversification and structural change as drivers for helping developing economies to narrow income and productivity gaps with more developed economies. Productive diversification is needed because factors and advantages that generate high growth during an initial phase of rapid development – such as low-cost labour and imitation of foreign technology – disappear when middle- and upper-middle-income levels are reached, thereby requiring new sources of growth to sustain further increases in per capita income (Agenor and Canuto, 2012). Countries that manage to pull out of poverty and become more prosperous are those that can diversify away from agriculture and other traditional products (McMillan and Rodrik, 2011). Differences in productivity growth trajectories between Latin American and some Asian countries in the last decades may be explained by the greater success of the latter in diversifying the structure of their economies and adding more value to their export baskets (OECD, 2015).

**The lack of economic diversification may help to explain the high rates of informal employment, which has negative impacts for individuals and society.** In broad terms, informal employment refers to employment that is not under the protection of labour law and social security regulation. Informal employment in Peru stood at 72.8% in 2014, and is concentrated in traditional low-skilled/low-value-added sectors (INEI, 2015). Countries that have not managed to move away from agriculture and other traditional activities (and move to a more diversified economy) are more exposed to the risks of informality because of low productivity levels, less engaging human resource practices and lower employment conditions. On average, workers in the informal economy are less likely to receive training; less likely to participate in high-involvement human resource practices to use their skills more effectively; and more likely to be in precarious conditions that force them to work longer hours and do not allow for a good work-life balance. For society, having a large share of the workforce employed informally implies higher social costs and lower tax revenues. Firms operating in the informal sector tend to invest less in training workers and modernising production, which translates into low productivity and growth. A move to productive diversification, with emphasis on high-skilled/high-value-added activities, could therefore help to reduce informal activities in the country.

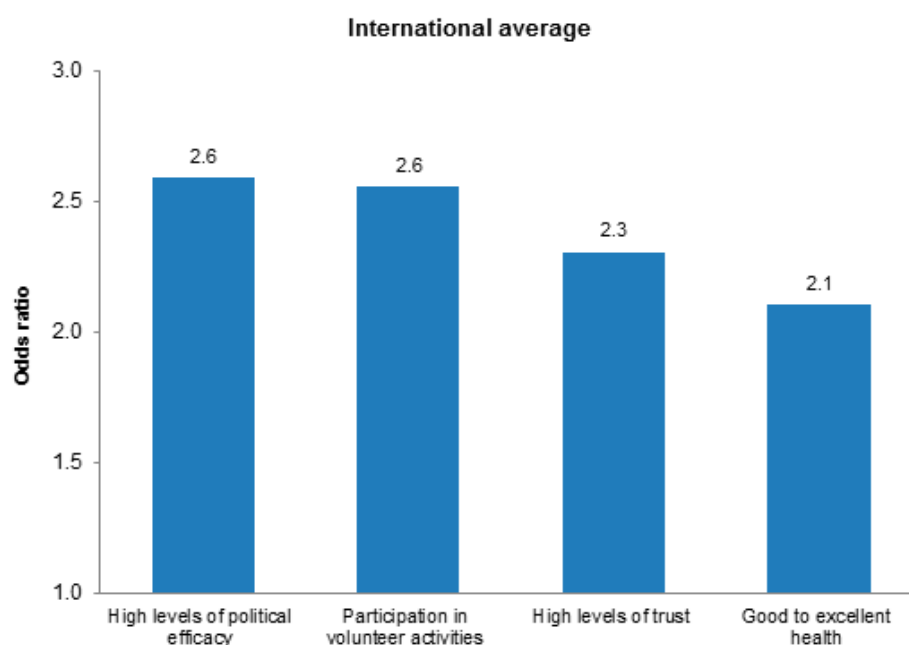
**Peru aims to boost growth in sectors that need more highly skilled workers.** For example, increasing the share of manufacturing in high technology and ICT goods could help to boost growth in Peru, as both are low when compared internationally. In Peru in 2015, the proportion of high-technology exports (as a proportion of total manufacturing exports) was about 4.7%, well below the Latin American average of 12.1% and OECD average of 16.9% for the same year (World Bank, 2016). In addition, in 2014, only 0.1% of total exports were ICT goods,<sup>2</sup> which is a very low proportion compared with that for the Latin American region (6.3%) and the OECD (6.6%) in the same year (World Bank, 2016). Conversely, the proportion of ICT goods as imports was 8.9% in 2014, while it was 11.1% in Latin America and 9.2% in the OECD in the same year (World Bank, 2016).

### **Skills will be key to achieving Peru's ambitions**

**Skills not only drive increases in labour utilisation and productivity, but also support employment in better job quality and lead to better social and health outcomes.** Skills are relevant to tackling inequality and promoting social mobility. For example, in three-quarters of OECD countries, and also in many non-member countries, income inequality has deepened over the past two decades. Investing in human capital is the single most effective way of promoting growth and of distributing its benefits more fairly. Investing in skills is far less costly, in the long run, than paying the price of poorer health, lower incomes, unemployment and social exclusion – all of which are closely tied to lower skills (OECD, 2012; 2013).

**Figure 1. Likelihood of positive social outcomes among highly literate adults**

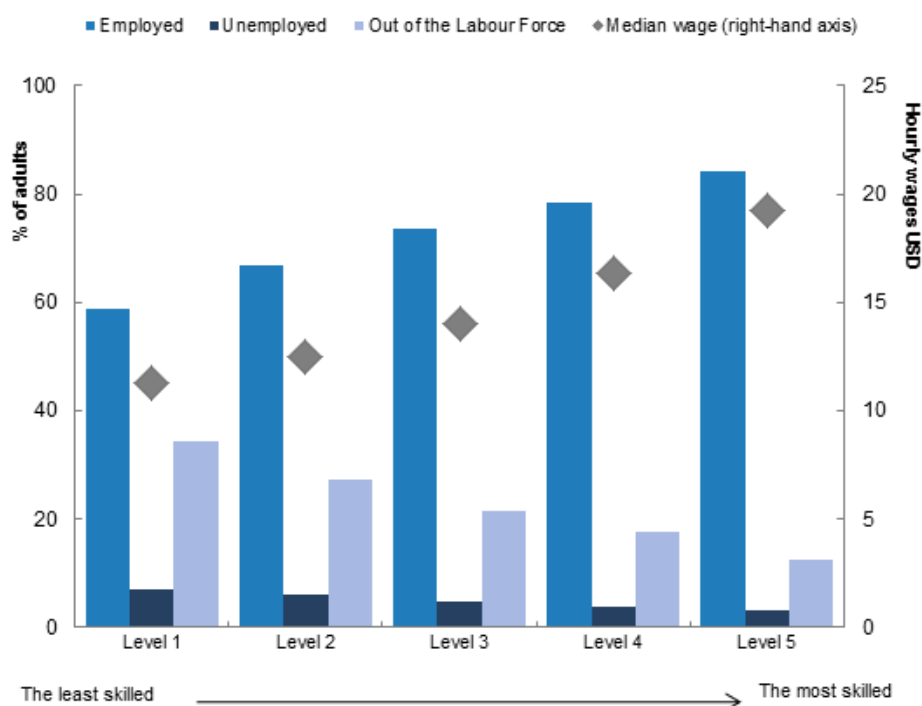
Increased likelihood (odds ratio) of adults scoring at Level 4/5 in literacy reporting high earnings, high levels of trust and political efficacy, good health, participating in volunteer activities and being employed, compared with adults scoring at or below Level 1 in literacy (adjusted)



Notes: Odds ratios are adjusted for age, gender, educational attainment and immigrant and language background. High wages are defined as workers' hourly earnings that are above the country's median.

Source: OECD (2016), OECD calculations based on the Survey of Adult Skills (PIAAC) 2012, (database), [www.oecd.org/skills/piaac](http://www.oecd.org/skills/piaac).

**There is a strong positive association between skills performance and labour market activation.** Evidence from the survey of adult skills (PIAAC) shows that, on average, individuals with better skills performance are also more likely to participate in the labour market and earn better wages. Figure 2 shows how, on average, individuals at the maximum level of skills performance in PIAAC (level 5) are less likely to be out of the labour force (less than half of the proportion of those with the lowest skills performance level), less likely to be unemployed, and have hourly wages well-above the four lower levels.

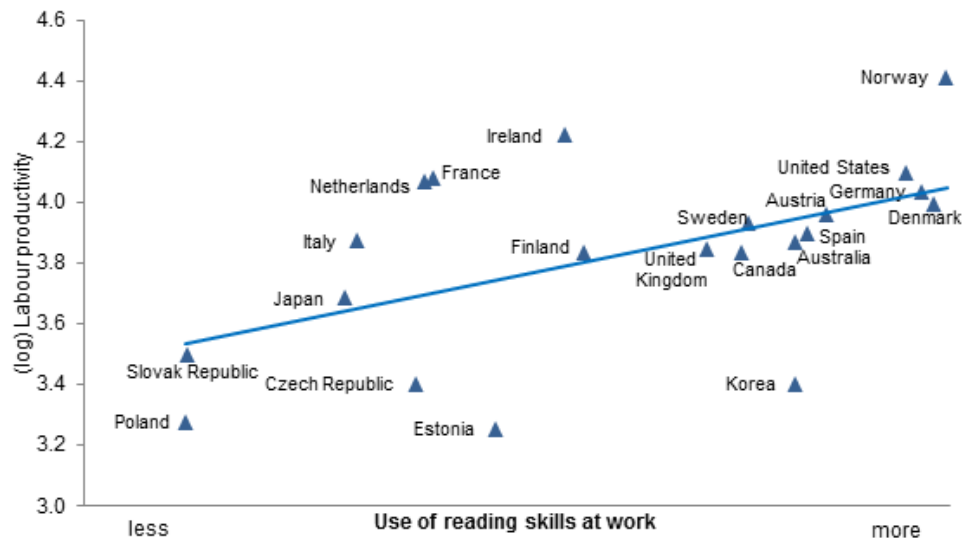
**Figure 2. Skills matter for labour market outcomes**

Source: OECD (2016), The Survey of Adult Skills (PIAAC) 2012, (database), [www.oecd.org/skills/piaac](http://www.oecd.org/skills/piaac).

**There is a strong positive relationship between skills performance, skills use and productivity.** The more positive labour market outcomes of people with better skills performance can be explained by higher productivity levels. As shown in the figure below, individuals undertaking activities that entail the regular use of their reading skills at work are more likely to be more productive. The level of skills performance can, therefore, be a good predictor of productivity levels in many countries.

**Figure 3. Labour productivity and the use of reading skills at work**

(Adjusted for literacy and numeracy proficiency)



Notes: Lines are best linear predictions. Labour productivity is equal to the GDP per hour worked, in USD current prices. Adjusted estimates are based on OLS regression, including controls for literacy and numeracy proficiency scores.

Source: OECD (2016), *The Survey of Adult Skills (PIAAC) 2012*, (database), Table A4.4, [www.oecd.org/skills/piaac](http://www.oecd.org/skills/piaac).

**Skills also matter for reducing informality.** Peru's comparatively low-skilled workforce and relatively high concentration in low value-added activities are major contributors to the prevalence of informal employment arrangements. The low productivity of many Peruvian workers means that they do not produce sufficient output to cover the costs of being hired formally by employers. These costs include minimum wages and social security contributions. By providing individuals with high quality and relevant skills, and employers with support and incentives to improve their human resource methods, Peru can raise its productivity and, by extension, the incentives for employers to hire individuals in the formal sector.

### The OECD Skills Strategy can help Peru to respond to skills challenges

**The OECD Skills Strategy provides an integrated, cross-government strategic framework to help countries maximise their skills potential to drive inclusive economic growth and improve well-being.** It helps 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 high quality and relevant skills from early childhood to adult education; activate skills in the labour market; and put skills to effective use in the workplace and the economy at large.

#### *Fostering a whole-of-government approach to skills*

**Maximising a country's skills potential requires a co-ordinated effort across ministries.** A whole-of-government approach to skills is needed to integrate the diverse fields of education and training, labour, economy, tax, local economic development, research and innovation. Each OECD Skills Strategy project is designed to foster greater interaction and exchange among relevant ministries in order to forge a common understanding of the skills challenges at stake as a basis for co-ordinated action.

The project on **Building an Effective Skills Strategy for Peru** involves an inter-ministerial project team in Peru that includes the **Ministry of Labour and Employment Promotion, the Ministry of Education and the Ministry of Economic Affairs and Finance**. This team was responsible for setting the strategic direction for the project by defining which outcomes of the OECD Skills Strategy Diagnostic Toolkit are most relevant to Peru, and ensuring that the diagnostic phase covered all relevant aspects of the national skills system.

### *Engaging stakeholders in strengthening the skills system*

Effective skills policy design and implementation requires a broad and shared understanding of the need to enhance skills, the current strengths and challenges facing a country's skills system, and priorities for action. The OECD Skills Strategy underlines the need to look beyond government and build strong partnerships with all actors involved, such as employers, trade unions, training institutions, students and other stakeholders.

Each national project is designed to ensure stakeholder engagement and ownership, and to build a shared commitment for concrete action. This is achieved by actively engaging with stakeholders throughout the process, notably through a series of workshops. Each workshop consisted of structured small group discussions among participants speaking in their native language as they worked through a series of exercises. In the case of Peru:

- More than 100 people took part in the diagnostic workshop with stakeholders in Lima on 26-27 November 2015, including employer organisations, trade unions, education and training providers, foundations, and private companies. A similar number of stakeholders also participated in the skills challenges workshop in Lima on 2-3 May 2016.
- Through their active participation in these events, Peru's stakeholders have played a central role in identifying the main challenges faced by Peru's skills system, and their input has helped to shape this diagnostic report.

### *Mobilising comparative data and international experience*

Working in close partnership with the national project team, the OECD has mobilised its resources to support analysis of Peru's skills challenges and opportunities. These resources include:

- The OECD Skills Strategy framework and diagnostic toolkit to structure the analysis and workshops.
- The design and delivery of interactive workshops that maximise discussion among diverse participants, forge a shared understanding among stakeholders of the skills challenges currently facing Peru, and generate concrete written outputs.
- Relevant OECD comparative data to analyse how Peru fares in relation to other OECD member countries on a number of important skills dimensions.
- A multidisciplinary team of OECD staff drawing on expertise from across the relevant OECD directorates: education and skills development, and science, technology and innovation.
- An external, independent perspective with which to create a "level playing field" for all actors in the skills system and foster constructive dialogue.



### *Drawing upon diverse sources of information when developing a skills diagnosis*

This diagnostic report draws upon three main sources of information: input from workshops and technical meetings with stakeholders, OECD comparative data, and relevant country case studies from other OECD countries.



#### **Peru's stakeholders and government**

The skills challenges identified by a diverse set of stakeholders and the government who participated in the workshops and technical discussions constitute the “backbone” of this report.



#### **OECD comparative data and analysis**

The wealth of OECD comparative data and analysis which serves to shed light on the challenges identified by stakeholders, placing Peru's challenges in a broader international context. Each section examines one skills challenge and provides international comparative data from the OECD and other sources.



#### **Country case studies**

The report features a selection of concrete case studies to illustrate how other OECD member countries have tackled similar challenges in their own contexts.

### *How stakeholders view Peru's skills challenges*

**The workshops held in 2015-16 were designed to encourage all stakeholders to express their diverse views and generate both quantitative and qualitative evidence on the main skills challenges facing Peru.** This information was captured through group discussions and bilateral meetings with the OECD. While many of these skills challenges are long standing and well known to all participants, the exercise also generated new insights into how different stakeholders perceived or formulated challenges.

**Workshop participants had clear views on the many strengths of Peru's current skills system.** Working in small groups, participants drew up a varied list that they agreed was a strong basis on which to build future success.

### **Peru needs to overcome nine key skills challenges to realise its ambitions**

These challenges were identified through workshops with stakeholders, experts and government representatives and through analysis of OECD, United Nations Educational, Scientific and Cultural Organisation (UNESCO), International Labour Organisation (ILO), World Bank and national data. The challenges are described under each of the main pillars of the OECD Skills Strategy and are framed as outcome statements. The first six challenges refer to specific outcomes across the three pillars of developing, activating and using skills. The next three challenges refer to the “enabling” conditions that strengthen the overall skills system. Success in tackling these skills challenges will boost performance across the whole skills system.



### Box 2. The OECD Skills Strategy: defining the concept of “skills”

The OECD Skills Strategy defines skills (or competences) as the bundle of knowledge, attributes and capacities that can be learned and that enable individuals to successfully and consistently perform an activity or task, and that can be built upon and extended through learning. The concepts of “skill” and “competence” are used interchangeably in this report. The sum of all skills available to the economy at a given point in time forms the human capital of a country.

The OECD Skills Strategy shifts the focus from traditional proxies of skills, such as years of formal education and training or qualifications/diplomas attained, to a much broader perspective that includes the skills people acquire, use and maintain – and also lose – over the course of a whole lifetime. People need both hard and soft skills to help them succeed in the labour market, and a range of skills that help them to contribute to better social outcomes and build more cohesive and tolerant societies.

Source: OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264177338-en>.

All of the challenges identified are strongly interlinked, and their connections with each other are identified throughout the report. Failure to look beyond policy silos will have implications for specific groups in Peru, such as youth, as well as for the economy and society’s ability to build a solid foundation for future prosperity.

### Pillar 1: Developing relevant skills

1. ***Improving school completion and foundation skills in compulsory education.*** Many Peruvian young people are not developing the skills needed for success in work and life. While both access to education and skills performance have been improving over time, a large share of Peruvian youth still have comparatively very low levels of achievement in reading, mathematics and science. The programme for international student assessment (PISA) found that about one quarter of Peruvian students perform at level 2 or above in mathematics, while the remaining three quarters achieve very basic or insufficient levels of proficiency, meaning that many are unable to perform even very direct and straightforward mathematical tasks (level 1 or less). Furthermore, certain groups are performing far worse than others. Those from lower socio-economic backgrounds, rural areas and households where Spanish is not the mother tongue, all perform far below average on a number of indicators of success in education. Recently implemented policies to ensure that quality education reaches all people in Peru should be sustained; but more needs to be done to make greater progress faster.
2. ***Improving access to quality higher education and transition to work.*** Many Peruvians face difficulties in making a smooth transition from compulsory education to further studies or work. Despite comparatively low levels of youth unemployment, around 18% of young adults in Peru were neither in employment nor education in 2013. Despite a large expansion in access, Peruvian universities and vocational education and training (VET) institutes fall below international standards in terms of quality. The rapid and unregulated expansion of higher education and VET has negatively impacted on the quality and relevance of skills acquired by students. Faced with an increased demand for a higher level of education, Peru liberalised the higher education and VET sector without first putting into place the necessary quality assurance mechanisms. This has generated great heterogeneity regarding programme quality and job relevance, with many institutions lacking both. Low institutional quality translated into course offerings that are not sufficiently responsive to the country’s skills needs.

## Pillar 2: Activating skills supply

3. ***Improving the labour market institutional setting to boost formal employment.*** A high level of informal employment is a defining characteristic of Peru's labour market. Despite recent increases in participation rates, and decreases in unemployment and inactivity rates, still around 70% of workers were employed informally in 2014. As mentioned, informal employment arrangements raise the risks associated with investment in skills for both the worker and employer, with the result being lower investment overall. Lower investment in skills also means that firms in the informal sector continue to suffer from low productivity and, as a result, continue to be unable to afford the costs associated with the transition into the formal sector. Encouraging greater investment in skills can increase productivity and reduce informality. By improving the skills of its workforce and, by extension, their productivity, Peru can raise incentives to employ workers formally. Peru can also reduce informality by decreasing the costs associated with the formal hiring of workers. This could involve developing mechanisms to better ensure that minimum wage levels are linked to worker productivity. It could also mean subsidising social security contributions for lower income workers, typically those with lower levels of skills. Finally, efforts to increase formalisation should be linked to the productive diversification strategy of the country. By encouraging growth in high productivity sectors that demand a higher use of skills, Peru could help to create the conditions whereby formal employment arrangements are better able to flourish.
4. ***Extending the reach of active labour market policies to improve workers' employability.*** Active labour market policies (ALMPs) are an important means of activating people who are inactive or unemployed and of promoting employment. In Peru, 12% of adults aged 30-64 are inactive or unemployed, while another 51% are employed informally. Only 35% of 30-64 year-olds are employed formally. Transitions out of employment informality towards employment formality are low in Peru, with only 20% of young men and 18% of young women transitioning from an informal job to a formal job. ALMPs and Public Employment Services (PES) can facilitate a better transition from school to work, assist the unemployed to find work that matches their skills, and support those employed in the informal sector to transition to higher quality jobs in the formal sector. However, ALMPs and the PES remain underdeveloped in Peru. Expenditures on ALMPs are below those found in many other large Latin American and Caribbean (LAC) countries, including Brazil, Chile and Argentina, and are well below the OECD average. Existing spending is highly concentrated on training programmes and PES. The reach of PES remains limited, but there have been some recent improvements, including the introduction of a "one-stop" employment service. Peru could improve its training programmes by increasing their duration, integrating work-based learning opportunities, and tailoring them more to the needs of specific target groups. PES could additionally be improved through the introduction of better performance management and accountability frameworks, more tailored job search assistance, and the expanded use of digital technologies to extend its reach, effectiveness, and efficiency.

## Pillar 3: Using skills effectively

5. ***Improving the alignment between skills supply and demand and fostering a better use of skills in the workplace.*** The use of skills at work in Peru is inefficient as many workers are over-qualified or under-qualified for their jobs. In 2013, the share of workers who were under and over-qualified was 50.5%, which represents a modest improvement since 2008, when it was 53%. Such mismatches are a drag on Peru's productivity. However, despite apparent high rates of skills underutilisation, firms in Peru report having problems finding employees with the cognitive, socio-emotional and technical skills they need. The prevalence of over-qualification may suggest an inefficient allocation of skilled workers across the economy and/or a lost opportunity on the part of firms to reorganise their workplaces to make better use of the available talent in a way that could boost their productivity and competitiveness. Collaboration between firms and educational institutions could reduce mismatches, while effective firm-sponsored training could improve skills gaps and skills use in the workplace. Greater efforts are needed to raise awareness among firms of the importance of making the effective and intensive use of skills in the workplace a central component of their business strategies. Better human resource practices can help

workers to make optimal use of their skills and set incentives for continuous learning and skills development. In this respect, increased adoption of high performance workplace practices may be very important for improving skills uses.

6. ***Putting skills to better use to foster a more diversified and productive economy.*** The complexity of Peru's production structure is lower than many countries benchmark countries. In 2012, Peru ranked 80th out of 144 countries for economic complexity and, in contrast to most Latin American economies, its positioning has worsened over the past two decades. To maintain current levels of economic growth, the Peruvian economy must undergo a process of structural change that will see the expansion of high demand sectors and the shifting of workers into more productive areas of the economy. Higher levels of skills enable the introduction of new products, markets and business ideas, while also ensuring that workers can adapt more quickly to the organisational and productive transformation generated by the transition towards a more diversified economy. However, productive diversification may come at the expense of low skilled workers employed in less productive firms who may face higher economic and employment insecurity. Upward labour mobility towards higher productive occupations should, therefore, rely on mechanisms of broader skills upgrading rather than taking the best existing workers from low productive occupations. Moreover, increasing the stock of highly skilled individuals who can perform innovation activities and design innovative products could address Peru's weak innovation performance regarding research and development (R&D) and patenting activities. Education and skills could play an important role in building an entrepreneurial culture and developing the skills needed to support the development of new products for high demand sectors.

### Strengthening Peru's skills system

7. ***Improving learning and labour market information to support better education and career choices, and evidence-based policy making.*** Peru has the institutional capacity to produce the indicators necessary to implement evidence-based skills policies. However, as in many OECD countries, challenges persist for ministries to make full use of indicators to inform policy making. Students in Peru, on average, do not have the information they need to make informed field of study and career choices, especially as the upper-secondary education system has become increasingly complex and somewhat opaque. Web portals, such as the "Ponte en Carrera" observatory (a web portal that collects relevant and quality information on educational offerings and labour market demands), and other instruments should be strengthened to provide students with information about available study options and professional career paths after graduation. Workers and job seekers could make better use of labour market information if it were provided in a more accessible format. Furthermore, skills assessment and anticipation exercises – such as those already conducted in a number of OECD countries – could be developed in Peru to provide guidance on future skills demands, thereby mitigating the incidence of skills shortages and mismatches.
8. ***Improving co-ordination across different actors and levels of government to achieve better skills outcomes.*** Peru could improve its skills outcomes by strengthening horizontal collaboration among different ministries and vertical collaboration across different levels of government. Many ministries and authorities in Peru have an impact on the development, activation and use of skills, but systems of inter-ministerial collaboration are relatively underdeveloped. To foster collaboration across ministries that have a stake in skills, the Ministry of Labour has recently launched three sector skills committees in the areas of sanitation services, construction and tourism. Sustaining this dialogue and transforming it into co-ordinated action will be critical for the long-term success of such initiatives. Co-ordination among different levels of governments is crucial given Peru's ambition to have a highly decentralised form of government. In many cases, more than one level of government has responsibility for the same policy area, with unclear division between national, regional and local levels. This issue is particularly visible in the case of education. To achieve a more efficient decentralisation, the capacity of regions and local authorities should be strengthened to allow for a more thorough implementation of place-based policies with the goal of reducing regional and urban-rural disparities in skills outcomes.

9. ***Building partnerships to ensure that policies are responsive to changing skills needs.*** To improve countries' performance in the development, activation and effective use of skills, governments must foster collaboration and co-ordination among the various actors with a stake in, and an influence on, skills outcomes. Stronger partnerships can increase the relevance of skills developed in VET and higher education. Peru's VET system is characterised by the existence of strong sectorial schools, which are designed to respond to the skills demand of specific economic sectors, and a weaker public and private system for the rest of the economy. Engaging firms in the co-design and running of training programmes in non-sectorial schools would ensure a better alignment between the skills developed and labour market demands. In addition, employers should play a more active role in the design and implementation of ALMPs. Their involvement in training and activation programmes would enhance the skills quality and relevance of those still searching for jobs and build up a ready-to-use talent pipeline. A more active participation of employers in skills assessment and anticipation exercises would ensure better alignment between skills supply and demand. Partnerships between higher education institutions and the private sector could ensure that local demand for highly skilled workers is met by a relevant tertiary education offering. Partnerships between academia and the private sector could help knowledge dissemination and foster a more productive use of academic researchers' skills.

### Box 3. The OECD Peru Country Programme

The Peru Country Programme was launched in December 2014. The Programme's main objective is to support Peru advance its reform agenda and improve its public policies in key priority areas. It has facilitated Peru's adherence to OECD legal instruments, participation in OECD bodies and programmes, and effective implementation of OECD standards and best practices.

The Peru Country Programme has been conducting a series of policy reviews providing the government of Peru with specific and actionable policy recommendations in five priority areas : removing barriers to growth, public governance, anti-corruption, human capital and environment. It also includes workshops and capacity building activities in areas such as tax policy, regulatory policy and statistics. To date seven reviews have been presented: Volumes 1 and 2 of the Multi-Dimensional Country Review, Environmental Performance Review, Regulatory Policy Review, Skills Beyond School Review, Public Governance Review and Territorial Review.

The Country Programme has also allowed Peruvian government officials to participate in various OECD bodies, exchanging best practices and benefiting from first-hand policy experiences from other countries in areas such as environmental policy, investment, financial markets, public governance, agriculture, trade and regional development, amongst others. Through Programme also includes Peru's adherence to selected OECD legal instruments in areas such as the fight against corruption, exchange of information for tax purposes, investment and public governance.

## NOTES

<sup>1</sup> Age dependency ratio is the ratio of dependents - people younger than 15 or older than 64 - to the working-age population - those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population (World Bank, 2016).

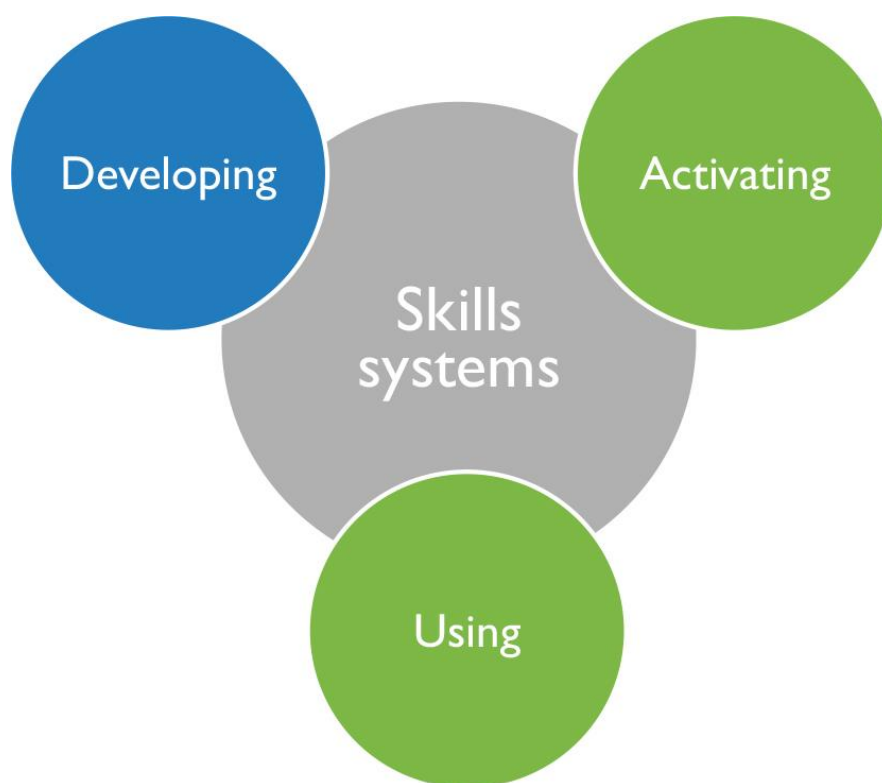
<sup>2</sup> Information and communication technology goods exports include telecommunications, audio and video, computer and related equipment; electronic components; and other information and communication technology goods. Software is excluded (World Bank, 2016).

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# DEVELOPING SKILLS







## INTRODUCTION TO DEVELOPING SKILLS

Skills are critical to people's success in the economy and society. When people have strong skills they are better equipped to succeed in higher education, adapt to the evolving skill needs of workplaces, and participate fully in society. Skills are a key driver of innovation, productivity and, ultimately, economic growth and higher living standards. Two main challenges related to the development of skills have been identified by the government and stakeholders in Peru: 1) improving school completion and foundation skills in compulsory education; and 2) improving access to quality higher education and transition to work.

Improving the learning outcomes of all students in compulsory education is critical for increasing participation in further education, which is important for achieving Peru's ambitions for economic diversity and growth. Better outcomes in compulsory education will also be important for ensuring success in work and life for those who do not advance to higher education. Improved learning outcomes translate into better skills, which then translate into higher productivity. Having higher skills and being more productive increase the chances that young people will find employment in the formal sector. Peru has taken significant steps to improve access to education: the average number of years of education among 15-year-olds reached 10.1 in 2013, up from 9.5 years in 2005. However, the skills of Peruvian young people remain low in comparison with peers in OECD countries, or even countries of similar levels of development. For example, the literacy proficiency of an average 15-year-old student in Peru lags behind that of the average Latin American student by the equivalent of eight months of secondary schooling, and behind the average OECD student by around three years. Additionally, there are large gaps in educational performance across socio-economic groups, genders and ethnic groups. PISA 2012 shows that students from the richest 25% of households outperform those in the poorest 25% by the equivalent of 2.5 years of secondary schooling. Furthermore, it is estimated that around 36% of Peru's variation in literacy performance between 15-year-old students can be explained by differences in socio-economic background.

In Peru, despite improvements in educational attainment and rising rates of participation in the labour market, a substantial portion of upper-secondary graduates does not continue on to higher education and does not get a job. Among the population aged 25 years and older, the proportion of upper-secondary graduates in Peru (35%) is larger than the average for Latin America (23%). However, graduation rates do not imply that all graduates will pursue a tertiary degree or enter the labour force immediately. In Peru, the share of young people that is neither employed nor in education or training (NEET) is substantial (15%), but still one of the lowest in the Latin American region. It is important for Peru to reduce the number of youth NEET, which will involve ensuring that young people have access to high-quality universities and vocational educational and training (VET) institutions that provide the right mix of guidance and skills to ensure that students succeed in the economy. Currently, too many of Peru's universities and VET institutions are not providing their students with high quality and labour market relevant skills.

## CHALLENGE 1. IMPROVING SCHOOL COMPLETION AND FOUNDATION SKILLS IN COMPULSORY EDUCATION

**A selection of challenges identified by Peruvian workshop participants:**

*“It is necessary to develop a curricula that is oriented towards improving learning outcomes.”*

*“Students need to improve their reading comprehension skills, hermeneutics should be taught in secondary schools.”*

*“The teaching profession needs to be improved: selection, training, teaching methods and evaluation.”*



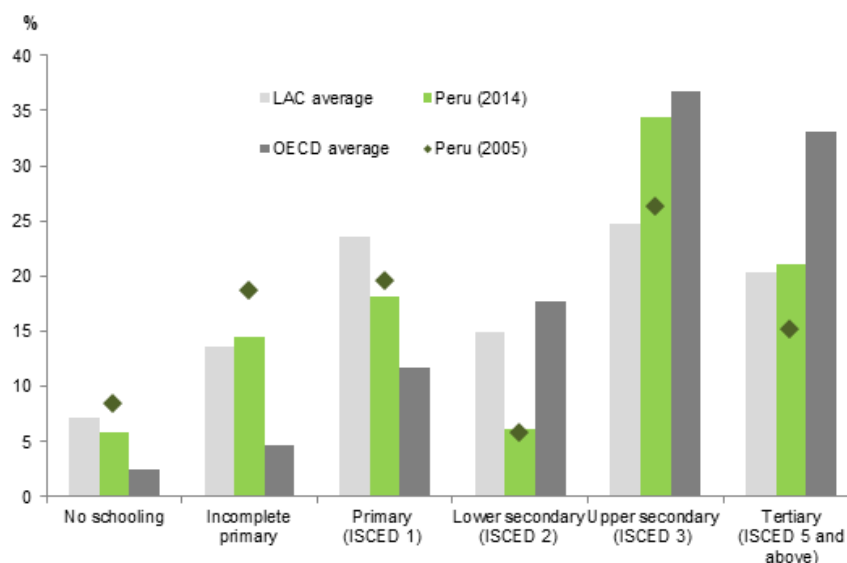
**School completion and strong foundation skills are critical for success in work and life.** Those who have completed upper secondary education and developed strong foundation skills (such as reading, mathematics and science) enjoy, on average, higher incomes, better health outcomes, and increased civic engagement. They are also less vulnerable to unemployment and less likely to be employed in the informal sector. An upper secondary credential and strong basic foundational skills also enable individuals to pursue higher education, the completion of which is associated with even better economic and social outcomes. Conversely, people with lower levels of education and foundation skills face a much greater risk of experiencing economic disadvantage and are at increased risk of unemployment and dependency on social benefits (when available). When less skilled individuals do find employment, they are more likely to be employed in the informal sector as their low productivity does not compensate for the cost of being hired formally. A more highly educated and skilled population benefits society as a whole by reducing inequality and boosting the country's productivity (OECD, 2012a).

**Access to education is improving over time, and is high relative to other Latin American countries**

**Peruvians are spending more years in education.** Expanding access to education is an essential first step for ensuring greater equality of opportunities and for boosting productivity. The average years of education among 15-year-olds has increased from 9.5 years in 2005 to 10.1 years in 2014 (INEI, 2015), and the share of the population with no schooling or incomplete primary education has declined from 26.3% in 2005 to 18.1% in 2014 (UNESCO/UIS, 2016).

**Peruvians are more highly educated than their counterparts in many other Latin American countries.** Among the population aged 25 and older, the share of Peruvians with no schooling (5.1%) is below the Latin American average (7.1%). At the other end of the educational spectrum, the share of adult Peruvians with a tertiary education (21.1%) slightly surpasses the regional average (20.3%). However, it is in the proportion of the adult population with upper secondary education that Peru really stands out, with 34.4% of the population holding their highest degree against a regional average of 24.7% (Figure 4).

Figure 4. Educational attainment of the population aged 25 years and older (for latest year available)



Note: Unweighted averages.

Source: UNESCO/UIS (2016), UNESCO Institute for Statistics, UNESCO, Paris, [http://data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT\\_DS](http://data.uis.unesco.org/Index.aspx?DataSetCode=EDULIT_DS), (accessed February 2016).

### Access to pre-primary education has improved, enabling a stronger start in children's education

**Pre-primary education is important for better child well-being and future participation and success in learning.** Pre-primary education improves the cognitive development of children, especially those from disadvantaged socio-economic backgrounds. Results from the Programme for International Student Assessment (PISA) show that 15-year-olds who have attended more than one year of pre-primary education outperform those who have not attended pre-primary education by the equivalent of more than one year of secondary schooling on average (OECD, 2013a). In Peru, this advantage amounts to 1.3 years of schooling, the second largest difference among the eight Latin American countries<sup>1</sup> participating in PISA (OECD, 2013b).

#### Box 4. CEI and PRONOEI programmes in Peru

The expansion of pre-primary access in Peru has been supported by formal centres run by the government called *centros de educación inicial* (CEIs). These institutions are designed primarily to provide educational services and school facilities for children, and to train parents and other community members to support the learning process. CEI objectives are to:

1. Provide comprehensive care for children under 6 years.
2. Detect and timely treat any bio-psycho-social disorder of the child.
3. Involve parents and the community in the promotion and management of childhood care.
4. Train parents to fulfil their role as the primary educators of their children.

CEIs are composed for two kinds of centre: 1) centres for children below 3 years of age (*Cunas*); and 2) centres for children from 3 to 5 years of age (*Jardines*).

Other non-formal community based programmes have contributed to increasing pre-primary access. The most significant is the *Programas No Escolarizados de Educación Inicial* (PRONOEI). Launched in the 1970s, PRONOEI has been mainly serving children aged 3-5 from rural and marginal urban areas in close collaboration with their communities (they provide most of the infrastructure). The objective of the programme is to provide quality care to children, bearing in mind their particular cultural context, and to involve the community and a network of local partners in the care of children. In doing so, these programmes help to get families and the communities actively involved in the planning of the education process. However, limited funding for PRONOEI has been linked to low attendance and high dropout.

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#### Access to pre-primary education for children up to 5 years old has improved significantly in Peru.

Net enrolment rates for those aged 3 to 5 reached around 77% in 2013, up from around 60% in 2005 (INEI, 2015). This is higher than the Latin America and the Caribbean (LAC) region average of 62% in 2012, but is still below the OECD average of 84%. This expansion has been supported mainly by the provision of pre-primary education through CEIs and PRONOEI (Box 4). Other social programmes, such as *Programa Juntos*, have also improved access to pre-primary education for households living in poverty or extreme poverty. They have done this by providing the right incentives for access, through the use of health services and by promoting a principle of shared responsibility (Box 5).

### Box 5. Juntos programme in Peru

The National Programme of Direct Support to the Poorest (JUNTOS) is a conditional cash transfer programme managed by the Ministry of Development and Social Inclusion (MIDIS) as part of the social policy and strategy for poverty reduction of the Peruvian Government. It was created in 2005 to reduce poverty, especially among children whose parents come from low socio-economic backgrounds. It aims to develop the human capital of those living in extremely impoverished households within a framework of shared responsibility between families and the government by providing access to, and use of, health nutrition and education services. The programme places a strong emphasis on restoring basic rights, increasing civic participation, and strengthening the monitoring of social conditions by community leaders.

This incentive is conditional on the fulfilment of certain commitments that seek to promote and ensure access to health and education of children and teenagers up to age 19 living in extremely impoverished households.

The structure of the JUNTOS programme represents a significant change from other social programmes in Peru. First, unlike previous programmes of poverty alleviation, the selection of users is made at the household level, ensuring that resources reach homes that are most in need. Additionally, JUNTOS promotes health and education in regional communities and towns and, in doing so, achieves better results in the fight against poverty and speeds up the development of human capital within households living in extreme poverty. Since its creation, important advances in access to health services, nutrition and education of the target population have been registered. These improvements include an increase of 4% in the coverage of children attending first grade.

Source: MIDIS (2016), Programa Juntos and Juntos en cifras 2005-2014, [www.juntos.gob.pe](http://www.juntos.gob.pe) and [www.juntos.gob.pe/images/publicaciones/Juntos%20en%20cifras%202005-2014.pdf](http://www.juntos.gob.pe/images/publicaciones/Juntos%20en%20cifras%202005-2014.pdf), Ministry of Development and Social Inclusion, Lima, Peru.

### Access to primary and upper secondary education has improved

**Access to primary education is high in international comparison.** Net enrolment rates in primary education for those aged 5 (first year of compulsory education) were around 93% in 2013, similar to the LAC average of 91.5%, and not far below the average for OECD countries of 97% (UNESCO/UIS, 2016). The percentage of students that had to repeat a year of primary education decreased significantly from 10.6% in 2000 to 4.1% in 2013 (UNESCO/UIS, 2016), and the cumulative dropout rate in primary education was also considerably reduced from 21.9% in 2001 to 9.5% in 2013 (UNESCO/UIS, 2016).

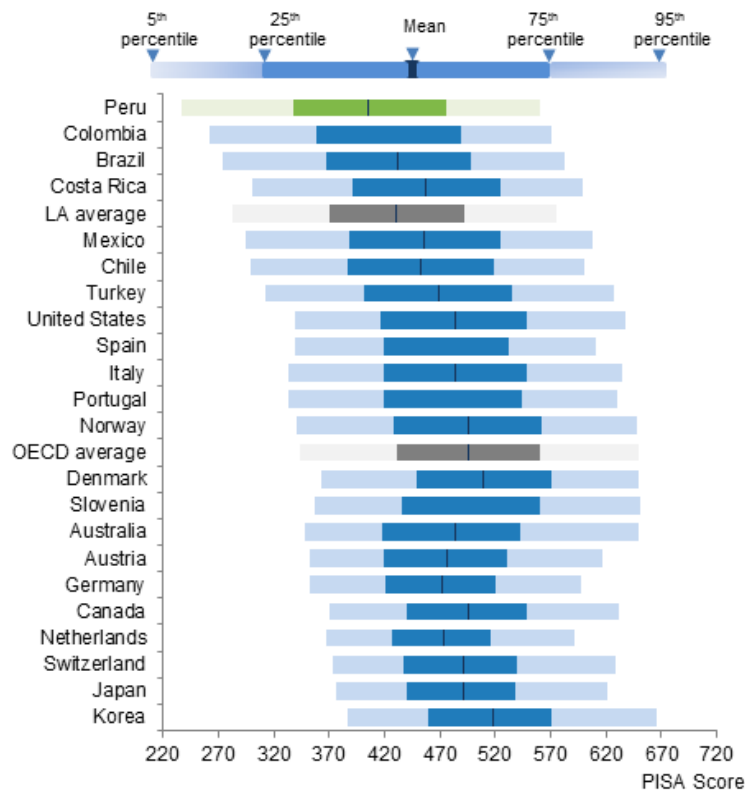
**Attainment rates in secondary education have improved.** There has been a large increase in the share of adults completing at least upper secondary education, rising from 26.3% in 2005 to 34.4% in 2014, which is similar to the rate for Chile (35.5%) and the average for OECD countries (36.7%), and significantly higher than the share in Mexico (17.4%), Costa Rica (16.6%), and many other Latin America countries. The percentage of students repeating a year in secondary education has decreased, from 5.6% in 2002 to 4.1% in 2013. Dropout rates at secondary levels have also decreased, from almost 18% in 2010 to less than 11.5% in 2013 (UNESCO/UIS, 2016). The reasons for dropping out are numerous and include the opportunity cost of studying and the need to support the household, especially among women (ESCALE, 2015).

### Despite improvements in school access and student performance, the skills of Peruvian young people remain comparatively low

**Peruvian students have comparatively low levels of foundation skills.** In all three PISA assessment areas (reading, mathematics and science), Peruvian students (15 year old) rank lower, on average, than their counterparts in other participating countries. However, it is worth noting that most of the countries participating in PISA have a much higher GDP per capita than Peru, which is positively correlated to educational and skills achievement.

**Comparatively few students in Peru perform above a basic level of skills proficiency.** As displayed in Figure 5, only about 25% of Peruvian students perform at level 2 proficiency in mathematics or above, while 77% of OECD students perform at the same level. This means that 75% of Peruvian 15-year-olds are unable to perform even very simple mathematical tasks.

**Figure 5. Proficiency in mathematics according to PISA 2012 results (selected countries)**



Note: LA includes Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Uruguay.

Source: OECD (2014), *PISA 2012 Results: What Students Know and Can Do* (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.

**The foundation skills of Peruvian students have improved over time.** Since the first round of PISA in 2000, no country has improved more than Peru, which experienced a 76 point increase in mathematics, 57 in reading and 40 in science. However, it should be noted that Peru started from a relatively low base. This improvement has happened in a context in which the net enrolment of 15-year-old students in the school system (PISA only evaluates children enrolled in formal schooling) has increased from 66% to 87% between 2001 and 2012. Mexico and Colombia have higher average PISA scores than Peru, but they had enrolment rates of about 70% of 15-year-olds around 2012. For any country, increasing performance in PISA while expanding enrolment is a significant achievement. Findings from other assessments of skills proficiency also confirm that the skills of Peruvian students have improved over time. Data from Tercer Estudio Regional Comparativo y Explicativo (TERCE, a regional evaluation that tests students in 15 Latin American countries in 3rd and 6th grade) show that Peru has improved its skills outcomes in primary education in recent years (see Box 6).

### Box 6. Regional evaluations of primary school students

The Third Regional Comparative and Explanatory Study (TERCE) was part of a series of regional evaluations that started in 1996 with the First Regional Comparative and Explanatory Study (PERCE) and was followed in 2006 by the Second Regional Comparative and Explanatory Study (SERCE). The principal objective of these evaluations, conducted in 3rd and 6th grade when students were 8 and 11 years of age, was to measure the learning achievements of primary school students in the region in mathematics, language, writing and science, and to identify factors that affect these results. Fifteen countries participated in the TERCE: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Peru, Dominican Republic, Uruguay and the State of Nuevo Leon (Mexico).

The test measured the writing skills of students in depth, allowing measurement of the level of students' skills in organisation, synthesis and the consistent and coherent expression of ideas. An innovation of TERCE in relation to the previous studies was to include a module to measure access, intensity and the use of information and communication technology (ICT) in the classroom, along with the effect on the learning achievements of the students. In addition, TERCE incorporated national modules with issues of that related to each country. These modules were part of the questionnaires on associated factors and were comprised of country-specific information. They were designed in co-ordination with participating countries, which were asked to select a research topic on which they would like to obtain further information, under the hypothesis that this is an important explanatory factor in the results of students in the country.

Results of TERCE for Peru show that the country seems to have improved its performance in primary education, with significant performance improvements since 2006 in the reading test for 3rd grade, which is now above the regional average for the test. Peru has also improved its results on the reading test for 6th grade students, but in this case still remains below the average for the region.

Source: UNESCO (2014), *Tercer Estudio Regional Comparativo y Explicativo (TERCE)*, *Primera Entrega de Resultados*, Oficina Regional de Educación para América Latina y el Caribe, UNESCO, Santiago, Chile.

### Student performance in Peru varies considerably across socio-economic groups

**Socio-economic background matters more for student success in Peru than in most countries.** In Peru, 30.4% of the variance in mathematics results in PISA is explained by differences in socio-economic background – the highest among all Latin American countries participating in PISA and the third highest among all participating countries (OECD, 2013a). Students from the richest 25% of households outperform those in the poorest 25% by the equivalent of around 2.5 years of secondary schooling. Differences in socio-economic background also account for most of the performance gap between students enrolled in private and public schools. The correlation between the socio-economic status of students and the level of educational resources of their schools is higher in Peru than in any other Latin American country participating in PISA, and well above the OECD average (OECD, 2013a).



### Box 7. Tackling low-performance by strengthening social and emotional skills in Portugal

Mediators for School Success was established in 2006 by the Entrepreneurs for Social Inclusion Association (Associação de Empresários pela Inclusão Social, EPIS) with the objective of tackling under-performance at school and reducing dropout rates.

The programme is intended for children and young people aged 6-24. Informed by Prof. James Heckman's research, it places raising social and emotional skills at the centre of its work. Students are helped to individually develop skills that are compatible with traditional school learning, such as discipline, perseverance, self-motivation and emotional control. Collaboration, agreeableness and other social skills are also targeted through a range of teamwork activities.

In seven years, the project has trained 1 700 students with the support of trained mediators, which has helped contribute to a 12% increase in school success rates across 60 Portuguese municipalities. In 2013, 67% of students successfully passed a grade. The project currently exists in 120 schools and there are plans to extend it to more schools throughout the country every year.

A new programme intended to focus on youth employability is also planned for 2015 in collaboration with the Institute for Employment and Vocational Training (IEFP). At the moment, implementation plans only cover the Portuguese archipelagos of the Azores and Madeira.

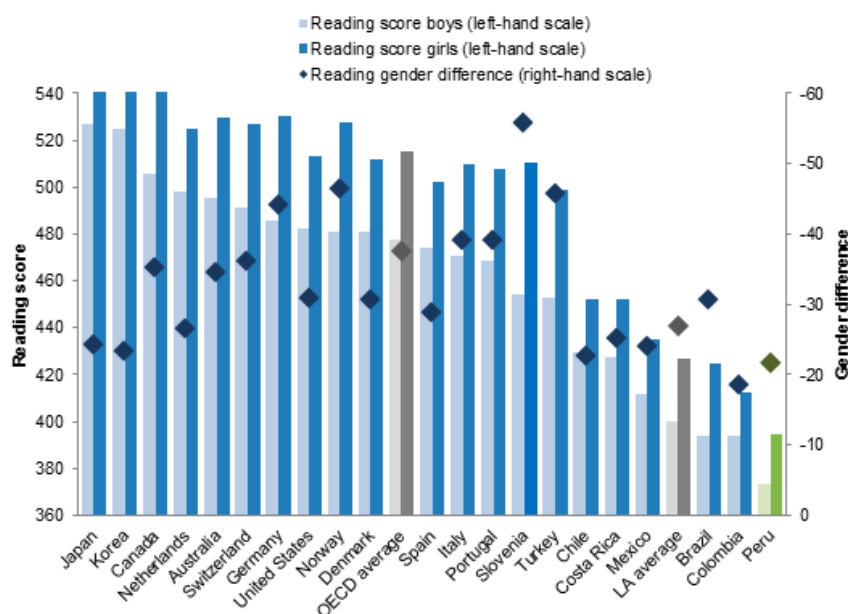
Source: EPIS (2014), Programa Mediadores para o Sucesso Escolar, Associação de Empresários pela Inclusão Social, [www.epis.pt/homepage](http://www.epis.pt/homepage).

**Performance varies significantly across ethnic groups.** Students who report speaking Spanish at home outperform those who report speaking Quechua in mathematics by the equivalent of more than two years of secondary schooling. This gap may arise from differences in access to education. Enrolment and completion rates at all levels of education are lower among Amazonians, Quechuas and Aymaras than among those of Caucasian background (Castro and Yamada, 2011).

**The gender skills gap is comparatively small, but the educational attainment gap is large.** As in most other countries, girls outperform boys in reading and boys outperform girls in mathematics. The gender gap is the smallest among all countries participating in PISA, however, the scores for both boys and girls are, on average, amongst the lowest across participating countries. The gender gap in educational attainment has closed over the last year in urban areas, but is still substantial in rural areas, where women have completed on average only 7 years of education compared to 8.5 years for men (OECD, 2014).



Figure 6. Mean score, variation and gender differences in student performance in reading



Note: Data has been ranked in descending order by reading score of boys.

Source: OECD (2014), *PISA 2012 Results: What Students Know and Can Do* (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264208780-en>.

### Peru could do more to tackle inequalities in skills performance

**Helping low-performing students to succeed is a priority.** Low-performing students are one of the biggest challenges of any educational system, and they require special support. Such support might target the specific needs of low-performing students, but also increase the resources available to tackle the challenges. These resources are not just financial but include teaching quality and the commitment of the family and the community to support students requiring special help. Box 8 summarises two different examples: in one case, the school completion programme in Ireland aims to support students with a set of mostly extracurricular activities while, in the other case, the school curricula in Finland is individualised so that it can be adapted to the specific conditions of the student.

### Box 8. Supporting low-performing students

**Ireland's school completion programme (SCP)** aims to prevent students from falling behind and dropping out at both primary and secondary school levels. The programme includes different activities to support students, depending on the particular circumstances of each school. Activities include breakfast clubs, afterschool support, homework clubs, out-of-school and holiday programmes, mentoring, learning support, social and personal development, and therapeutic support.

**In Finland, individualised learning and differentiated instruction have become basic principles.** Students build their own learning schedules from a menu of courses offered in their school or by other education institutions. Courses selected can be completed at a different pace depending on students' abilities and life situations. Students may repeat courses that were not passed satisfactorily.

*Sources:*

OECD (2012b), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264130852-en>;

Välljärvi, J. and P. Sahlberg (2008), "Should 'failing' students repeat a grade? A retrospective response", in *Journal of Educational Change*, Vol. 9/4, pp. 385-389.

### Peru could improve the performance of its education system by investing more and making better use of existing resources

**Investment in education is comparatively low in Peru**, and well below the OECD average. At lower levels of investment, higher spending on education has been found to have a positive effect on the performance of education systems. For example, PISA shows that before a threshold of 50 000 USD is reached,<sup>2</sup> countries with a cumulative expenditure of USD 10 000 higher than others score, on average, 27 points higher in mathematics (OECD, 2013b).

**Total spending on education in Peru amounted to only 3.6% of GDP in 2014.** This spending was distributed the following way: pre-primary education accounted for 16%; primary education accounted for 39%; secondary education accounted for 31%; and tertiary education accounted for 14% (UNESCO/UIS, 2016). In comparison, OECD countries spend on average 5.3% of their GDP on education (of which 28% just on tertiary education, a proportion three times larger than Peru's in terms of GDP per capita).

**To achieve better education and skills outcomes, Peru should commit to higher investment and making better use of existing resources.** The increase in spending on education in recent years (from around 3% of GDP in 2004 to 3.6% of GDP in 2014 for primary to tertiary education) indicates a commitment from the Peruvian authorities to improve educational outcomes (UNESCO/UIS, 2016). Furthermore, one of the commitments expressed in the *Acuerdo Nacional* (an agreement on the long-term objectives of Peru) is to reach a level of expenditure on education equivalent to 6% of GDP. Most new investment has been allocated to the *Programa Nacional de Infraestructura Educativa* (PRONIED), a public programme that aims to expand and improve public educational infrastructure. The Peruvian government has also taken measures to make more efficient use of resources by designing an incentive scheme called *Bono Escuela* that links the professional development of teachers with the educational outcomes of their students. At the subnational level, a new financing scheme has been implemented that links resources (60 million USD in 2015) directed to regional governments with the achievement of several performance objectives (PCM/MEF, 2016).

### Box 9. Improving public educational infrastructure in Peru

The *Programa Nacional de Infraestructura Educativa* (PRONIED, the National Programme of Educational Infrastructure) is a dependent programme of the Vice Ministry of Institutional Management of the Ministry of Education that aims to maintain, expand, improve, replace, rehabilitate and construct new public educational infrastructure at all levels of education (basic, higher and VET Institutes).

Infrastructure investment is channeled through PRONIED to local and regional authorities. PRONIED is also responsible for promoting the involvement of the private sector and civil society in the financing, management, maintenance, implementation and evaluation of public education infrastructure.

Between 2011 and 2015, investment in educational infrastructure exceeded 3.5 billion USD, the highest figure in recent decades. This has allowed the rehabilitation or building of around 4 000 schools, while at the same time increasing the resources devoted to maintenance. PRONIED has played an important role in guaranteeing appropriate schools for the educational system, investing 1 066 million soles (322 million USD) in 2015, which is equivalent to all that was invested in 2013 and 2014. More than 50% of the investment was devoted to new projects and the rest to new classrooms and equipment in existing schools.

Source: PRONIED (2015), *Boletín 01*, [www.pronied.gob.pe/wp-content/uploads/Boletín-Nº-01-inversión.pdf](http://www.pronied.gob.pe/wp-content/uploads/Boletín-Nº-01-inversión.pdf).

### Good quality teaching is essential to the success of students in schools

**Teachers play an important role in determining skills outcomes.** Empirical research indicates that the quality of teaching has an impact on future wages and qualification choices of students; it also explains a great share of the variation in student performances (Rockoff, 2004; Rivkin et al., 2005; Chetty et al., 2014). PISA findings suggest that positive and constructive teacher-student relations are strongly associated with performance in mathematics and the social and emotional well-being of students (OECD, 2013b).

**Teachers in Peru face a number of challenges that may negatively impact on their performance and the skills outcomes of students.** For example, teachers' salaries are more than 30% lower than those of other professional workers in the country (Bruns and Luque, 2014). At the same time, teachers receive insufficient training and work within a regulatory framework that does not reward good teaching (Rivero, 2010). In 2012, a law (*Ley de Reforma Magisterial*) was passed to reform the teaching profession and improve the quality of teachers. This reform aimed to introduce meritocracy in teaching careers by offering better labour conditions and salaries to teachers with better performance through incentive schemes that promote teachers' professional development (see Box 10).

### Summary and policy implications

**Peru has made substantial progress in improving access to education.** More Peruvians are attending school and completing higher levels of education than in the past. Peru's success in improving access to early education and care deserves particular recognition given its importance to later success in school.

**However, many Peruvian young people are not developing the skills needed for success in work and life.** While access to education and skills performance have been improving over time, a large share of Peruvian youth still have comparatively very low levels of achievement in reading, mathematics and science. Furthermore, certain groups are performing far worse than others. Those from lower socio-economic backgrounds, rural areas and households where Spanish is not the mother tongue all performs much worse than the average on a number of indicators of success in education. Recently implemented policies to ensure that quality education reaches all people in Peru should be sustained, and more needs to be done to make greater progress faster.

**Peru should devote more resources to education while at the same time making better use of existing resources.** Peru should increase its expenditure on education as a share of GDP so that it approaches the OECD average. In addition, Peru needs to place greater emphasis on improving teaching quality in ways such as providing teachers with better salaries and greater opportunities for continuous professional development.

#### Box 10. Improving the quality of teachers in Peru

In 2012, a law (*Ley de Reforma Magisterial*) was passed to reform the teaching profession and improve the quality of teachers. This reform aims to introduce more meritocratic criteria in teaching career development, better labour conditions, salaries linked to performance, and incentive schemes to promote continuous professional development. This is one of the main strategic areas of action for the current administration in the field of education.

A single labour regime was established for all teachers in the public sector so that current and future teachers can enjoy similar benefits and opportunities. The new law is aimed at establishing the necessary conditions to allow for, among other things, good teacher selection, progression and professional development processes.

The law also gives teachers the opportunity to access a profession with good career opportunities and merit-based pay rises. In terms of professional development, the law acknowledges the peculiarities of the teaching profession and has expanded the number of professional areas where teacher performance can be evaluated, including the extent to which they experiment new teaching practices. The reform also allows teachers to reach positions of greater responsibility, such as principals or assistant principals of educational institutions, or even directors of an UGEL (administrative unit in charge of several schools). The new law opens up a number of alternatives for teachers and professors' professional development and career opportunities.

Teachers are critical for the success of any education system, and the new law aims to provide teachers with opportunities and continuity in their professional development so that they can provide a high quality education to Peruvian children.

*Source:* Congreso del Peru (2012), Ley de Reforma Magisterial no. 29944 Reglamento de la Ley de Reforma Magisterial.

## NOTES

<sup>1</sup> Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Uruguay.

<sup>2</sup> Above this level the relationship between spending per student and performance does not seem to be clearly associated.

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## CHALLENGE 2. IMPROVING ACCESS TO QUALITY HIGHER EDUCATION AND TRANSITION TO WORK

### A selection of challenges identified by Peruvian workshop participants:

*“Gender and ethnic gaps in participation and rate of success in education and transitions to labour market should be addressed.”*

*“Ensure that career guidance in secondary education is conducted with an eye on labour market needs.”*

*“Universities should help more students coming from a lower socio-economic background.”*

*“Strengthen scholarships systems like Beca 18.”*

*“Introduce public incentives to strengthen work-based learning in CETPROs.”*

*“Promote systems of dual VET.”*

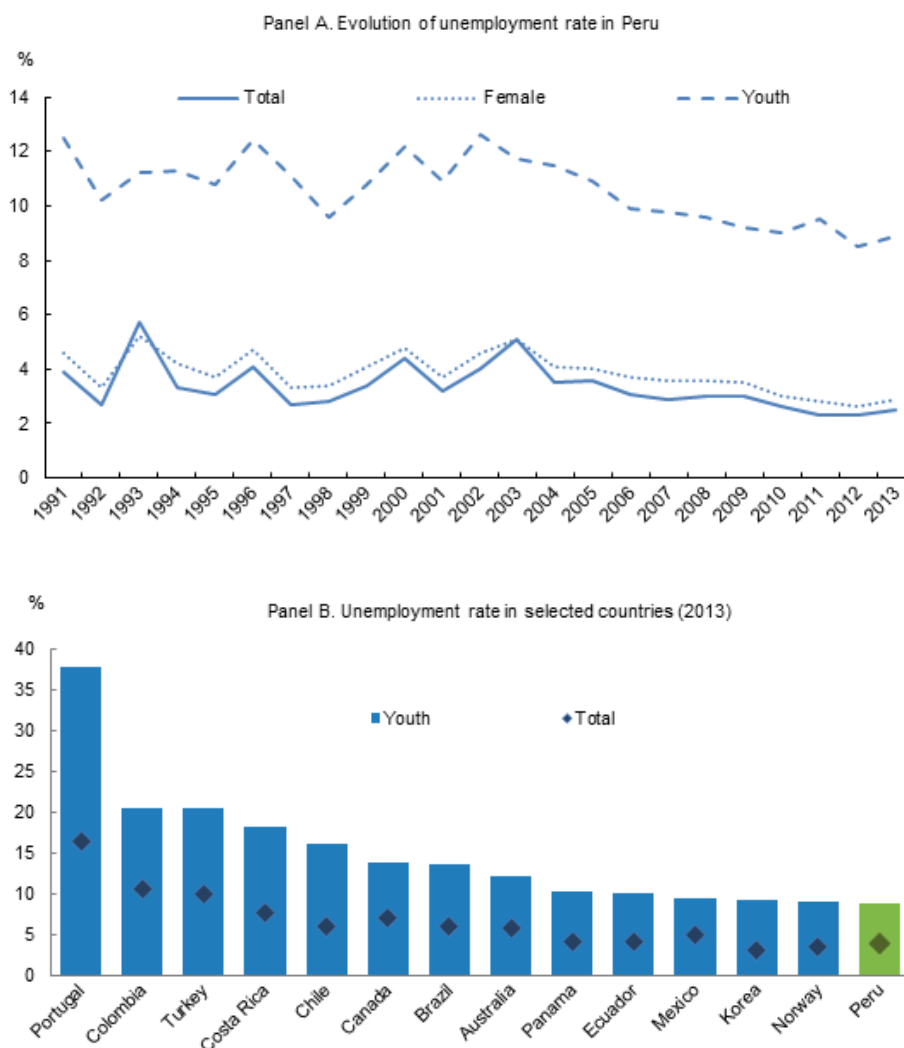


**Enabling successful transitions from compulsory education to higher education and formal employment is critical for the long-term success of young people, the economy and society.** For individuals, higher levels of educational attainment and skills are associated with higher employment and earnings (OECD, 2012). Young people who do not acquire high levels of education and skills are more likely to find themselves unemployed. Young people who are unable to make successful transitions from school to employment are also at increased risk of unemployment later in life, have on average lower earnings, and participate less in society (OECD, 2012). Transitions from school to work can be hindered if education is of poor quality (Bedi and Edwards, 2002). For the economy, a more skilled population is a major driver of productivity growth, thereby supporting economic prosperity and higher standards of living. This relationship is well documented by empirical evidence. For example, Hanushek and Woessmann (2012) show that raising cognitive skills by one standard deviation leads to a two percentage point increase in annual growth in per capita GDP. For society, a more highly educated and skilled population is associated with increased civic participation, greater political engagement and better health outcomes (OECD, 2012).

**Young people and women are at high risk in Peru of not making a successful transition into higher education and work**

**Youth unemployment in Peru is not high in international comparison, but is high relative to unemployment in the total population.** The youth unemployment rate in Peru (8.8%) is lower than the OECD average (13.9%), and much lower than many other Latin American countries such as Chile (16.8%) and Costa Rica (26.1%), as shown in Figure 7. However, since the 1990s, the youth unemployment rate in Peru has been approximately three times higher than the total unemployment rate.



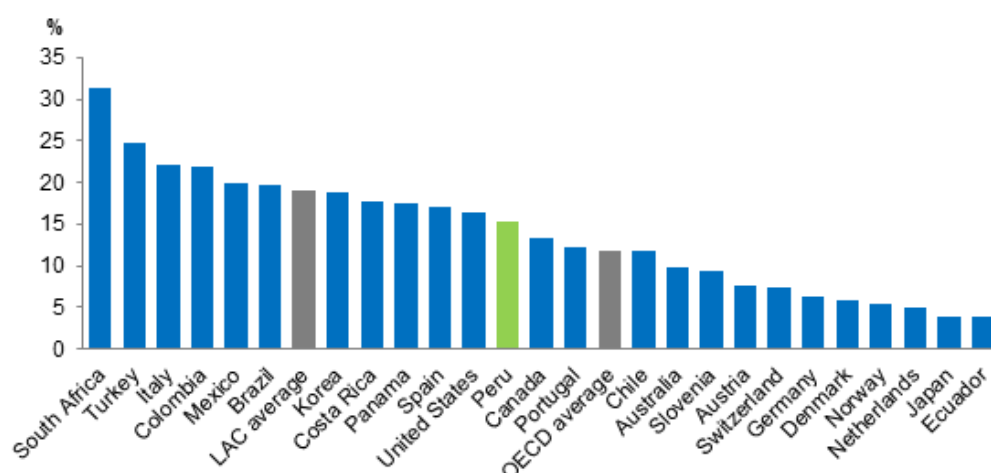
**Figure 7. Unemployment rate in selected countries, 2013**

Source: ILO (2014), *Key Indicators of the Labour Market*, 8th Edition, International Labour Office, Geneva.

Many young people leave education, delay their entry into the labour market or become discouraged and withdraw from the labour force. In 2013, 1.4 million young adults in Peru were neither in employment nor in education or training (NEET). This represents approximately 15% of young adults aged 15-24, below the average of the Latin America and Caribbean (LAC) region (19.1%), but higher than the OECD average (11.8%), as shown in Figure 8. Among other issues, one of the main obstacles that Peruvian young people encounter in transitioning to the labour market is a lack of available career guidance services. Only 7.6% of young Peruvians report having received formal support and advice to find a job, and many rely on family networks or direct interaction with firms (Ferrer Guevara, 2014).



**Figure 8. Share of youth not in education, employment, or training (% of youth population), 15-24 years old, 2014 or latest available data**



Note: 2012 data for Australia, United States, Mexico, LAC average. 2011 data for Korea. 2010 data for Chile.

Source: World Bank (2016), Share of youth not in education employment or training, World Bank Database, [http://data.worldbank.org/indicator/SI.UEM.NEET.ZS?cid=DEC\\_SS\\_WBGDataEmail\\_EXT](http://data.worldbank.org/indicator/SI.UEM.NEET.ZS?cid=DEC_SS_WBGDataEmail_EXT), World Bank, Washington DC, (accessed October 2016).

**Women, especially those with children, and individuals from low socio-economic backgrounds are over-represented among those who are NEET.** In 2013, the share of NEET was more than two times higher among women (24.2%) than among men (10.5%) (ILO, 2014). Early parenthood is preventing young Peruvians from pursuing higher education (Chacaltana and Ruiz 2012). Moreover, the opportunity cost of completing education and lack of interest are also prompting young Peruvians to abandon their studies (Ferrer Guevara 2014).

**Access to higher education is improving, but many students graduate with low quality skills that are not relevant to the needs of the labour market.**

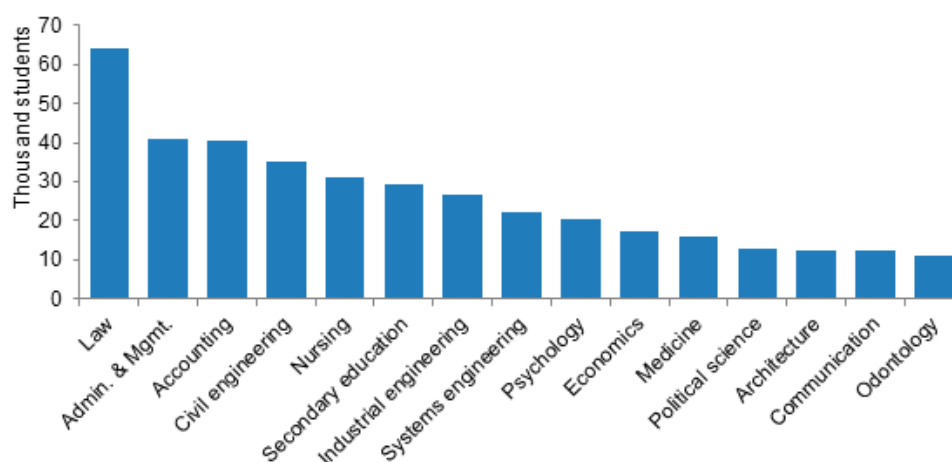
**The expansion of the higher education system has increased opportunities for Peruvians to pursue higher-level education.** Though still lower than the OECD average, the proportion of upper-secondary and tertiary graduates aged 25 years and older in Peru is higher than the average for Latin America (UNESCO/UIS 2016). This is the result of rapidly rising attainment at the tertiary level in recent decades. The expansion in access to tertiary education began in 1995 with the approval of the Law no. 26439, which liberalised higher education in Peru and created the *Consejo Nacional para la Autorización del Funcionamiento de Universidades* (CONAFU). This autonomous agency was responsible for evaluating and issuing resolutions on applications for new operating licences for universities. The approval in 1996 of the “Law to promote investment in Education” allowed investors to finance the creation of new universities. These legislative changes have led to a rapid expansion of tertiary education, fuelled in large part by the growth of private higher education institutions. As a consequence, the gross enrolment rate in tertiary education grew from 31.2% in 2001 to 40.6% in 2010 (UNESCO/UIS, 2016). The share of students enrolled in private universities increased from 45% in 2004 to almost 69% in 2013 (INEI, 2015).

**However, the expansion in access to higher education may have come at the expense of quality.** Many universities have emerged in the last 15 years, but this expansion has been accompanied by a deterioration in their quality. Expansion has led to a decline in admissions selectivity, which has a lower average level of skills among incoming students. It has also resulted in a greater reliance on more part-time lecturers and fewer full-time professors (Castro and Yamada, 2013; Brunner and Hurtado, 2011), which may

imply a decline in the quality of teaching and course content. Furthermore, private financial incentives and funding allocation formulas that prioritise higher enrolment numbers over responsiveness to labour market demands have prompted higher education institutions (HEIs) to expand their course offerings in popular subjects (e.g. business administration and communication), thereby generating field of study and qualification mismatches (see Challenge 5).

**Students may not be adequately aligning their field of study choices with the needs of the labour market.** Students are heavily concentrated in fields such as law, administration and accounting (Figure 9), for which labour market demand may be low (Brunner and Hurtado 2011), while few are studying in technical fields for which demand may be higher.

**Figure 9. Main university subjects studied in Peru, 2010**



Source: ANR (2012), Asamblea Nacional de Rectores, Datos Estadísticos Universitarios, [http://censos.inei.gob.pe/cenaun/redatam\\_inei/doc/ESTADISTICA\\_UNIVERSITARIAS.pdf](http://censos.inei.gob.pe/cenaun/redatam_inei/doc/ESTADISTICA_UNIVERSITARIAS.pdf).

**The lack of quality assurance procedures in HEIs contributes to low skills outcomes in higher education.** The uncontrolled expansion of HEI programmes was not accompanied by appropriate monitoring and oversight processes on the instructional quality of the many private for-profit universities that were established as a result of the liberalisation process. While public universities are heavily dependent on government transfers, the for-profit mission of some private universities enabled them to better respond to the increased demand for higher education (Brunner and Hurtado, 2011). However, these newly established universities are of poorer quality when indicators such as student performance, teacher-students ratio and academic quality are considered (Yamada et al., 2015). While monitoring and quality assurance mechanisms can regulate and address structural deficiencies in private universities, the key to enhancing student skills outcomes in tertiary education is largely linked to improving the skills developed in compulsory education (see Challenge 1).

### **Disparities in access to high quality higher education institutions exacerbates social inequalities**

**Current patterns of access to higher education institutions tend to reinforce social inequalities and reduce social mobility.** The expansion of higher education in Peru, and the related decrease in the selectivity of institutions, has increased opportunities for students from low-income families to access higher education, but, at the same time, has increased their chances of ending up in low quality HEIs (Yamada et al., 2015). Private secondary schools in Peru have more resources and are of typically higher quality than public schools (Alvarez-Parra, 2012). Graduates of private schools are historically more likely to pursue higher education in Peru (Leon and Sugimaru, 2013) and, therefore, private institutions generally have better

information on institutional quality and can better support their students in making informed choices about applications to HEIs. Students in private secondary schools are generally also from higher socio-economic backgrounds (Alvarez-Parra, 2012). As a result of such factors, more economically advantaged students from private schools are typically better able to gain access to high quality tertiary institutions than their less economically advantaged peers from public schools. By relegating low-income students to lower quality institutions, these dynamics increase the risks that these individuals will find themselves in jobs for which they are over qualified (Yamada et al., 2015). In Peru, the most selective HEIs are typically publically funded. Out of the 20 most selective universities in the country, 19 were public in 2004 (Diaz, 2008). This creates a situation in which the children of families who can afford private secondary schools are disproportionately able to access HEIs that are not only of higher quality but also publically funded. Conversely, students from less wealthy backgrounds attend public secondary schools that are more likely to lead to HEIs that are both of lower quality and more expensive (Yamada et al., 2015). This dynamic tends to reinforce existing inequalities and inhibit social progress.

**There are a number of ways that Peru can improve equality of access to high-quality higher education.** Peru needs to ensure that all institutions meet certain basic minimum standards, and increase the number of publically funded universities for those from less advantaged backgrounds. Additionally, more funding should be allocated to those institutions that service less advantaged populations. The government could also introduce quotas that require publically funded universities to accept a certain minimum number of people from designated disadvantaged groups (e.g. based on gender, socio-economic backgrounds, ethnicity).

**The vocational education and training (VET) system in Peru has expanded rapidly, but there are concerns about the quality and relevance of skills students are acquiring**

**The emergence of privately provided VET has increased access to further education and programme variety.** There are over 700 *Institutos de Educación Superior Tecnológico* (IEST) that offer two and three-year programmes leading to nationally recognised qualifications as “Technicians” and “Professional Technicians”, and 1 800 *Centros de Educación Técnico Productivo* (CETPRO) that deliver short-cycle training (one to two years). The IEST sector has grown significantly over the last two decades, particularly following the passage of *Decreto Legislativo 882*, which allowed for the establishment of private post-secondary institutions. As in the university sector, post-secondary VET has come to be dominated by private providers. Just over 70% of IEST students are enrolled in private institutions, with the remaining third in public institutions (MTPE/MINEDU, 2015). The private schools receive no direct funding from the Ministry of Education and depend primarily on student tuition and fees for their financing. The schools are free to set their own tuition levels, which vary widely across institutions, from as little as USD 100 per semester to as much as USD 8 000 (McCarthy and Musset, 2016).

**As with higher education, rapid expansion of the VET system may lead to skills that are not well aligned with the needs of the labour market.** A key aim of any VET system is to ensure that programme offerings, and the skills they generate, meet the needs of employers. In the case of Peru, internal and external reviews and labour market analyses have found a poor alignment between the skills supplied by VET programmes and the skills needs of the labour market (OECD, 2015; OECD/CAF/ECLAC, 2015; MTPE/MINEDU, 2015). More specifically, the system is over-supplying graduates from less technical fields and under-supplying graduates in more rigorous science and technology-oriented fields. Education liberalisation in Peru has prompted VET schools to focus on attracting the largest number of students rather than on improving learning quality and relevance, thereby exacerbating the disconnect between skills supply and demand.

**Peru lacks an adequate set of policies to ensure quality across programmes and providers.** Heavy reliance on private providers that operate with considerable operational autonomy limits the ability of the government to shape how programmes are delivered. At the same time, low investment in public VET institutions constrains their ability to keep up with industry practices. The segmentation of the VET market

between those governed through the Ministry of Education (MINEDU) and those run by private entities further complicates efforts to build frameworks to monitor and assess programme quality. As a result, there is wide variability in the content and quality of programmes, with detrimental impacts on labour market relevance. The segmentation can also exacerbate existing inequalities for those students who can only afford public institutions of lower quality (McCarthy and Musset, 2016).

**Access to work-based learning opportunities should be expanded to improve the quality and labour market relevance of VET in Peru.** Well designed and delivered work-based learning delivers benefits to employers in the form of workers with the skills they need, and to students in the form of relevant skills that will lead to employment and higher income. However, in Peru, some schools and programmes provide extensive exposure to the workplace, while others provide little or none, which diminishes their labour market relevance. The sectorial initiatives – in manufacturing, construction, and tourism – have the most well developed work-based learning approaches, which is a product of their close connection to the employer community they serve (Challenge 9). The network of technical schools serving the industrial and manufacturing sector (SENATI) has a robust apprenticeship programme modelled on European dual systems. Students in IEST and CETPROs, however, suffer from poor access to work-based learning opportunities. For students in mainstream IESTs, the availability and quality of work-based learning opportunities varies considerably. Some schools have very strong linkages with relevant employers in sectors such as financial services or commercial exports and are well positioned to help students obtain internships. But many others are not, which leaves many students, often those from low-income families who are more likely to attend public schools, with fewer opportunities to participate in work-based learning experiences.

### Box 11. Skills beyond Schools review of Peru: Vocational Education and Training

The *Skills beyond School* review of Peru is part of a series of country reports on VET prepared by the OECD. Since 2007, the OECD has been reviewing VET systems through more than 40 country studies that cover: Australia, Austria, Belgium (Flanders), Canada, Chile, China, Costa Rica, the Czech Republic, Denmark, Egypt, Germany, Hungary, Iceland, Indonesia, Ireland, Israel, Kazakhstan, Korea, Mexico, the Netherlands, Norway, Peru, Romania, the Slovak Republic, Spain, Sweden, South Africa, Switzerland, the United Kingdom, the United States and Viet Nam.

The reviews involve an in-depth analysis of a country system leading to a set of policy recommendations backed by analysis. The *Skills beyond School* review of Peru was prepared at the request of the Peruvian government, and the process included two country visits from OECD staff in September and November 2015. The visits included meetings with a wide variety of policy makers, employers, teachers, students, and other stakeholders in the country's skills development systems, as well as visits to education and training institutions serving both young people and adults. In conjunction with the review, the Peruvian authorities provided a background report with summary information on the country's VET programmes and policies (MTPE/MINEDU, 2015).

The report begins with a look at the broad economic and social context of Peru's skills development efforts and describes the main features, including strengths, of the country's existing VET infrastructure. Peru has a well-developed educational infrastructure with a wide array of VET offerings, especially compared with many OECD and non-OECD countries. The VET system has committed stakeholders across the public and private sectors, and Peru is building strong data systems that can support high quality VET. Particularly notable is the Ministry of Education and Labour's website, [www.ponteencarrera.pe](http://www.ponteencarrera.pe) (get into a career), which provides data on the cost and labour market outcomes of specific programmes of study at all of the country's technical institutes and universities. There are several programmes that aim to open educational opportunities to young people from poor families (for example *BECA 18*) and school leavers (*Jóvenes Productivos y Doble Oportunidad*). Peru has also developed mechanisms for recognising prior learning and has created certification centres where workers can receive qualifications for the skills learnt informally on the job.

Despite its many strengths, Peru's education and training system faces significant challenges that need to be addressed for the country to reach its economic and social development goals. Chapter 2 of the *Skills beyond School* report explores how Peru can improve the alignment between the supply of VET programmes and the demands of the labour market. Chapter 3 focuses on strategies for improving the quality in its VET programmes. Chapter 4 examines the fragmented architecture of Peru's education and training system and provides recommendations on how to facilitate student transitions from one system or level to the next. Chapter 5 focuses on the need to address inequities in access to high quality VET, particularly for students from low-income, rural, and historically disadvantaged groups. Chapter 6 explores how Peru can help students make informed choices about their education and training through better career navigation and consumer information services.

For more information about the OECD reviews of VET please see [www.oecd.org/education/vet](http://www.oecd.org/education/vet).

#### Sources:

OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264087460-en>;

OECD (2014), *Skills beyond School: Synthesis Report*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264214682-en>;

MTPE/MINEDU (2015), *Informe base sobre "Competencias más allá de la escuela en el Perú"*, background report prepared for the OECD Directorate for Education and Skills, Lima;

McCarthy and Musset (2016), *A Skills beyond School review of Peru*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264265400-en>.

### Box 12. Benefits of work-based learning

Work-based learning (WBL) encompasses a diversity of arrangements including apprenticeships, informal learning on the job, work placements that form part of formal vocational qualifications, and internships of various types. Managed effectively, work-based learning delivers benefits for all participants and contributes to better labour market and economic outcomes. Described in *Learning for Jobs* (OECD, 2010) these outcomes include:

- **For students:** WBL provides a strong learning environment. It offers realistic experience and makes it easier to acquire practical skills on up-to-date equipment and through colleagues and supervisors familiar with the most recent technologies and working methods. Soft skills, such as dealing with customers, are also more effectively learnt in workplaces than in classrooms and simulated work environments.
- **For both students and employers:** there is a clear link between skills learned and labour market demand. The employer offer of work placements signals that a vocational programme is of value in the labour market. In systems where the offer of places in vocational programmes is tied to the availability of work placements, employers can influence the mix of training provision through their willingness to offer placements.
- **For both students and employers:** WBL is an effective recruitment tool. In the workplace, employers get to know and assess trainees, who in turn get to know the workplace and the employer, providing both parties with valuable information that may lead to recruitment, or alternatively may lead them to look elsewhere.
- **For employers:** the work performed by trainees provides a productive benefit. This is not only important for apprenticeships, but also in longer-term work placements where trainees have the time to master productive skills.
- **For public authorities:** WBL provides value for money. Delivering high-quality vocational programmes outside the workplace can be very expensive, particularly in fields where modern equipment is expensive and requires continuous updating, and where expert practitioners command substantial salaries.

*Sources:*

OECD (2014), *Skills beyond School: Synthesis Report*, OECD Publishing, Paris, [www.oecd.org/edu/skills-beyond-school/Skills-Beyond-School-Synthesis-Report.pdf](http://www.oecd.org/edu/skills-beyond-school/Skills-Beyond-School-Synthesis-Report.pdf);  
 OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264087460-en>.

**Sectorial schools are better positioned to provide their students with work-based learning experiences due to their close relationships with employers.** Sectorial schools are in a good position to design curriculum that meet current and anticipated industry requirements. However, sectorial schools represent only a small slice of the overall enrolment in VET (around 10-15%) and have very selective admission processes, which include cognitive ability tests (McCarthy and Musset, 2016). As a result, these schools are in the position to get the best candidates, who are then seamlessly integrated into the labour market, while the remaining candidates are unable to access similar work-based learning opportunities and forgo the opportunity to develop skills that are well aligned with the needs of the labour market.

**Peru can learn from the efforts of other countries to increase work-based learning opportunities for their students.** As shown in Box 13, countries have explored different options to make sure their students (particularly in VET) have an adequate work-based learning experience. However, these types of practices require close co-operation with employers in order to be successful.



### Box 13. Efforts to facilitate the school-to-work transition for young people in OECD countries

**Switzerland's vocational and professional education and training system (VET/PET system):** Switzerland's system is strongly employer and market driven, and is a successful partnership between Confederation, cantons, and professional organisations. School and work-based learning are well integrated. The system is well resourced and able to include up-to-date equipment. Its apprenticeship-based VET programmes pay for themselves, in the sense that the benefits to most employers outweigh the costs. There is a broad spectrum of tertiary VET offerings. Flexible pathways have been introduced to allow for mobility and to avoid the risk of dead-ends. Vocational teachers and trainers, examiners, and directors are well prepared. Quality control is ensured and national assessment procedures are in place. Career guidance and counselling is systematic and professional. However, current demographic changes, with shrinking cohort numbers, may sharpen competition between academic and vocational education. Entry of international companies without a training tradition threatens the Swiss dual-track learning arrangements. Several equity concerns are confronting the VET system (Hoeckel, Field and Grubb, 2009).

**Norway's apprentice promotion:** Norway does not have a tradition of apprenticeships, but it has recently successfully developed an apprenticeship system. The standard upper-secondary VET in Norway is two years in school followed by two years of apprenticeship in a company, although those who do not find an apprenticeship can stay on in school-based VET for a third year. In 2013, the Norwegian government launched a new initiative that aimed to increase the number of better quality apprenticeships and to recruit new companies as training establishments for apprentices.

**Youth guarantees schemes:** Active labour market policies aim to ensure a smooth school-to-work transition and prevent long-term unemployment. In 1984, **Sweden** introduced the first genuine youth guarantee, followed by Norway in 1993 and Denmark and Finland in 1996. More recently, other countries have embarked on similar youth employment programmes, including **Austria, Germany, the Netherlands and Poland**. On 15 January 2014, 17 EU Member States submitted Youth Guarantee Implementation Plans (European Commission). Their differences mostly concern the types of measures, eligibility criteria, duration and compensation. Despite the limited evidence of its impact, Youth Guarantees, an evaluation of the **Swedish** youth guarantee, found that unemployed young participants aged 24 in 2008 were able to find a job faster than a control group of participants in other public employment service (PES) measures.

In **Finland** statistical evidence has shown that the Finnish Youth Guarantee resulted in a reduction in unemployment through either direct employment assistance or further training leading to a job. In **Austria**, despite the high dropout rates experienced by young participants in the guarantee, about 58% of young people who participated in the apprenticeship in 2010 were integrated into the labour market after 3 months, and 63% after 12 months. The success of Youth Guarantees will depend upon the strength of underlying institutions (like the PES and the apprenticeship system) and co-ordination mechanisms between the various stakeholders. In countries where such institutions and mechanisms are not yet well developed, the success of Youth Guarantees will be limited (OECD, 2014).

Many PES in the OECD are offering websites or web pages and other media campaigns particularly tailored for young people. Many aim to use modern media (e.g. SMS services or applications for smart phones) and “speak the language” of young people. **Sweden's** PES has launched a Facebook account to represent the organisation at the national level and to reach out to young people. This initiative was launched in January 2011 with the aim of creating a forum for people to meet and discuss issues related to employment and job search. It is maintained by two PES experts who initiate discussions, answer questions, and mediate debates, but who are not supposed to engage in individual counselling (if requested they refer clients to their local PES). Postings typically pass on links to news and information, but can also be just a question to stimulate discussion (e.g. the most popular one so far asked: “what is your dream profession?”) (Scharle and Weber, 2011).

#### Sources:

Hoeckel, Field and Grubb (2009), OECD Reviews of Vocational Education and Training. A Learning for Jobs Review of Switzerland 2009, OECD Reviews of Vocational Education and Training, <http://dx.doi.org/10.1787/9789264113985-en>; Cedefop (2012), Norway – The social contract for VET, Cedefop, [www.cedefop.europa.eu/node/12431](http://www.cedefop.europa.eu/node/12431); OECD (2014b), OECD Skills Strategy Diagnostic Report: Norway, OECD, Paris, [http://skills.oecd.org/developskills/documents/OECD\\_Skills\\_Strategy\\_Diagnostic\\_Report\\_Norway.pdf](http://skills.oecd.org/developskills/documents/OECD_Skills_Strategy_Diagnostic_Report_Norway.pdf).

**Peru has taken action in a number of areas to improve the quality and labour market relevance of skills acquired in higher education and VET institutes**

**Peru has recently reformed its university and VET systems with the aim of strengthening the quality and relevance of their course offerings.** The new 2014 law of higher education aims to improve the quality of higher education by giving the Ministry of Education authority to regulate the sector through the creation of SUNEDU (see Box 14). On 20<sup>th</sup> October 2016, a new law was passed by the Peruvian Congress regarding the functioning of higher education institutions (VET included) (see Box 14 also).

#### **Box 14. The new laws on higher education and VET in Peru**

##### **A. The new law on higher education and the establishment of SUNEDU**

A University Law was passed in 2014 to strengthen the quality and relevance of Peru's higher education system. The law focuses on the quality of higher education, now managed by the Ministry of Education.

One of the milestones of this law is the creation of the SUNEDU (*Superintendencia Nacional de Educación Superior Universitaria*). The main objectives of this body are to authorise university education service under basic quality conditions, monitor the quality of this service, and supervise and monitor the use of public resources and benefits granted to universities that intended for educational purposes and quality improvement. With the new law, only those universities that meet the comprehensive accreditation process may be eligible to obtain tax benefits. The board of SUNEDU is composed of seven members, five chosen in open competition and the two other representing the Ministry of Education and the National Council for Science, Technology and Innovation (CONCYTEC).

Another important aspect of the law is its commitment to improve transparency by establishing a higher education information system. The law also includes substantial changes in the elections of authorities of Higher Education Public Universities by establishing direct universal suffrage.

Source: Congreso de la República (2014), Perú, Ley Universitaria Peru <https://es.scribd.com/doc/231556208/Ley-Universitaria> and MINEDU (2016).

##### **B. The law on institutes and schools of higher education (including VET)**

The new law on institutes and schools of higher education was passed on 20th October 2016 by the Peruvian Congress. This Law introduces five major changes:

- A new institutional framework for educational services
- Provides flexibility in the academic system
- Establishes basic quality requirements for accreditation
- Creates a public teaching career in technical higher education
- Strengthens the general management of institutes and schools of technical higher education



#### **Box 14. The new laws on higher education and VET in Peru (continued)**

##### **A new institutional framework for educational services**

Higher education technical institutions will aim at providing technical education offering the technical bachelor's, professional and technical degrees with a pedagogical emphasis on applied training. The bachelor's degrees offered by technical institutions will be valid to continue with post graduate studies.

##### **Provides flexibility in the academic system**

The law proposes granting greater freedom to educational institutions so they can better adapt to changing labor market needs. In this regard, the new law sets new standards for academic management with more flexible mechanisms to adapt the curriculum in each institution, as well as the academic procedures associated with each curriculum.

##### **Establishes basic quality requirements for accreditation**

The new law establishes a number of basic quality requirements for the accreditation of higher education technical institutions concerning the areas of: basic quality assurance for institutional and academic management; relevance of academic programmes; adequate infrastructure, equipment and learning resources; adequate teaching staff; and appropriate funding resources. These basic requirements aim at ensuring good quality for all the programmes offered.

##### **Creates a public teaching career in technical higher education**

Currently, teachers in higher education (technical institutes, educational institutes and art schools) do not have a formal/institutional career. This gap affects not only the wages or teaching staff but also their promotion opportunities and other potential benefits. The new law establishes a public competition for tenure positions in technical higher education institutions.

##### **Strengthens the general management of institutes and schools of technical higher education**

The new law strengthens the role of regional governments for the management of technical institutes and schools of higher education. The new law also creates an Office of Management of Institutes and Schools of Higher Education (EDUCATEC), which will be responsible for the planning technical higher education system and managing the national network of public technical institutions of higher. EDUCATEC will undertake the development and establishment of public technical higher education in close coordination with regional governments.

The act of promulgating exercised by the President of the Congress comes when the President of the Republic has not used its constitutional powers of promulgation laws within fifteen working days, and also when Congress adopts the decision to insist on its original text.

Source: MINEDU 2016.

**Peru is making efforts to improve the alignment between the skills supplied by VET programmes and the skills demanded by employers.** Recent reforms, such as the new Law of Institutes and Schools of Higher Education (*Ley de Institutos y Escuelas de Educación Superior*), aim to improve the alignment between the supply of VET graduates and the actual demands of the economy. The law aims to improve the quality of technical careers and their connection with the labour market. It has created an Office of Management of Institutes and Schools of Higher Education (*Educatec*), which is designed to better manage the resources of these institutions and their links with the economy. The law has also created a new career path for teachers that uses a merit-based approach as a way of improving the training and capabilities of teachers, as well recruiting the best professionals to the system. The law also promotes work-based learning. Together, these reforms are designed to improve the quality of VET and to foster the development of the skills that the economy needs.

**Peru has taken steps to improve the regulation of work-based learning.** Peru has developed a legal framework that seeks to guarantee the rights of the parties involved in apprenticeship schemes, such as firms, students and educational institutions. The Peruvian law provides a special framework for labour agreements in the context of work-based learning experiences, and sets some guiding principles that should govern these working arrangements. Specifically, the law establishes principles governing a broad set of initiatives through which firms contribute to professional training. Within this framework, work-based learning experiences are defined as those where most of the instruction takes place in the firm. To this end, article 11 of law n. 28518 establishes that all work-based learning experiences (firm-based apprenticeships - *Aprendizajes con Predominio en la Empresa*) should be defined by a learning agreement that sets commitments and responsibilities between: 1) a hosting firm; 2) an apprentice who completed primary education and is older than 14; 3) a centre for vocational training (CETPRO, IEST, etc.) (MTPE, 2012). Most work-based learning programmes in Peru are subject to this regime.

**However, ensuring there are adequate pathways to higher education is still a challenge in VET.** A high quality VET programme must not only teach relevant skills, both academic and technical, but also be able to facilitate successful student transitions into employment or higher education (OECD, 2014). However, as the Peruvian VET system is highly fragmented, programmes tend to be terminal and there are no pathways into further education. Students who earn a VET degree at a CETPRO without a secondary level qualification are still unable to pursue further studies at a university or an IEST. The lack of clear pathways represents a waste of resources as students may take repeated courses, or worse, it may discourage students from enrolling in a VET programme in the first place. Many countries have co-ordination arrangements between different types of institutions to ensure there are no dead ends (see Box 15). Qualification frameworks can provide a useful structure for student mobility and facilitate transitions; they also help employers to understand the usefulness of certain qualifications.

#### Box 15. International examples of arrangements between VET institutions and universities

Some examples of co-ordination arrangements are given below:

- In Canada, articulation policies vary from a systematic, province-wide credit transfer process in British Columbia, to credit transfer negotiated bilaterally by institutions in Ontario.
- In France, it is possible for Institut Universitaire de Technologie (IUT) students after the first two years of study to be admitted by the Grandes écoles, whose masters-level graduates may, in turn, pursue doctoral programmes in universities.
- In Norway, where credit recognition between institutions has been mandatory since 1981, between 10% and 20% of students change institutions during the course of their studies, mostly from universities to university colleges during the first three years, while the flow reverses afterwards.
- In the United Kingdom, legislation allows two-year foundation degree students to progress to an honours degree (normally three years full-time) through one additional year full-time, or two years part-time. In 2007-08, 59% of full-time and 42% of part-time students pursuing a foundation degree went on to study for an honours degree in 2008-09. Most students who continued their studies did so at the same institution.

Source: OECD (2014a), *Skills beyond School: Synthesis Report*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264214682-en>.

**Peru is making efforts to reduce inequalities in access to education by introducing new scholarship programmes.** PRONABEC (*Programa Nacional de Becas y Crédito Educativo*) has put in place several initiatives to reduce inequalities in education. For example, *Beca 18* supports access to higher education among students from disadvantaged socio-economic backgrounds, while *Beca Doble Oportunidad* supports early dropouts from basic education. *Beca Presidente de la República* supports university graduates who want to pursue further studies abroad. *Beca 18* also aims to tackle regional disparities as the field of study of funded courses is determined by the existing local needs. Selected students should be committed to return to their region of

origin after finishing their studies (see Box 16). *Beca Doble Oportunidad* offers those who have left the education system the opportunity to return and complete their basic education, and subsequently enrol in a training course to enter their regional labour market.

### Box 16. Programmes to reduce educational inequalities in Peru

#### Beca 18

Implemented by PRONABEC, *Beca 18* is a scholarship programme that support students coming from poor and extremely poor socio-economic backgrounds who have excelled in secondary education. The objective of the programme is to reduce inequalities in access to higher education by financing full scholarships to technical and professional programmes related to science and technology. The programme supports low-income students in their access to higher education with grants to pay tuition, and guarantees resources for successful completion and subsequent job preparation. Between 2011 and 2015, *Beca 18* granted scholarships to more than 49 000 young people in poverty or extreme poverty, covering 94% of districts nationwide, with 75% of young people coming from districts in extreme poverty. The granting of scholarships has focused on keeping gender equity, with 45% granted to young women and 55% to young men.

Public funds (in the form of student financial aid) go to schools that have met eligibility criteria that align with the government's goal of widening access to high quality post-secondary education for low-income students. Institutions participating in *Beca 18* are chosen based on quality assessment parameters that are approved in a selection methodology approved by the programme and adjusted to each call. The careers identified to the scholarships awarded are related to the needs of productive development and labour market requirements in the region of origin of the beneficiaries. *Beca 18* recipients have been admitted to higher education institutions, mainly private (over 90%). Regarding the type of institution, 69% of recipients have chosen to study in higher technological or teaching institutes, and 31% in universities; 60% of all students study degree programmes in the areas of engineering and technologies.

#### Beca Doble Oportunidad

Implemented in 2015 by PRONABEC, *Beca Doble Oportunidad* is aimed at young people aged 17 to 25 who have been outside the basic education system for three or more years, but have not completed the last two years of high school and are at a severe disadvantage in the labour market. According to the National Institute of Statistics and Informatics of Peru (INEI), only 65% of teenagers finish secondary education on time. Evidence shows that young men from regions outside Lima are overrepresented (51% in the mountains, 17% in the jungle, and 22% along the coast) among early leavers, with 40% leaving education early for economic reasons and the need to start working.

Through this programme, students who are missing at least three years of schooling are offered the opportunity to return to the education system to complete basic studies, participate in productive training, and complete extension courses to enter their regional labour market. The scholarship covers the cost of tuition and a living subsidy for two years. The programme has benefitted 1 754 students to date, and over 90% of students have chosen to study in two technical institutes of the country: SENATI (technical training for the manufacturing industry) and TECSUP (technological training). The most in demand fields of study are mechanics and maintenance of computer equipment. Most of the recipients are men (61%), and 88% come from different regions of the country (12% come from Lima). According to the Ministry of Education, 41% of recipients come from a low socio-economic background, and 20% at least have a child.

Source: PRONABEC (2015), Institutional Report 2012-2015, [www.pronabec.gob.pe/modPublicaciones/descarga/MemorialInstitucional\\_2012-2015\\_Ingles.pdf](http://www.pronabec.gob.pe/modPublicaciones/descarga/MemorialInstitucional_2012-2015_Ingles.pdf).

### Summary and policy implications

**Many Peruvians face difficulties in making a smooth transition from compulsory education to further studies or work.** Despite comparatively low levels of youth unemployment, around 18% of young adults in Peru were neither in employment nor in education in 2013. In the future, this generation may be at greater risk of becoming long-term unemployed, and those that do find work are at increased risk of being over qualified and/or employed in the informal sector.

**Transitions to employment are hindered by the lack of high quality higher education and training programmes.** Despite a large expansion in access, Peruvian universities and VET institutes fall below international standards in terms of quality. Existing course offerings are not sufficiently responsive to the country's skills needs.

**The rapid and unregulated expansion of higher education and VET has negatively impacted on the quality and relevance of skills acquired by students.** Faced with an increased demand for a higher level of education, Peru liberalised the higher education and VET sector without first putting into place the necessary quality assurance mechanisms. This generated great heterogeneity of programme quality and job relevance, with many institutions lacking both. To improve quality in higher education, Peru should improve skills development in compulsory education so that future students are better equipped for success in higher education (Challenge 1). Additionally, there is a greater need for monitoring and oversight to ensure that universities and advanced VET institutions are meeting the needs of students, the economy and society.

**Unequal access to the best higher education institutions is exacerbating inequalities and hindering social mobility.** Individuals from wealthy families disproportionately attend the best quality, and publically subsidised, higher education institutions; while those from less advantaged families disproportionately attend lower quality, private higher education institutions that charge high tuition fees. These patterns reinforce existing inequalities and inhibit social mobility.

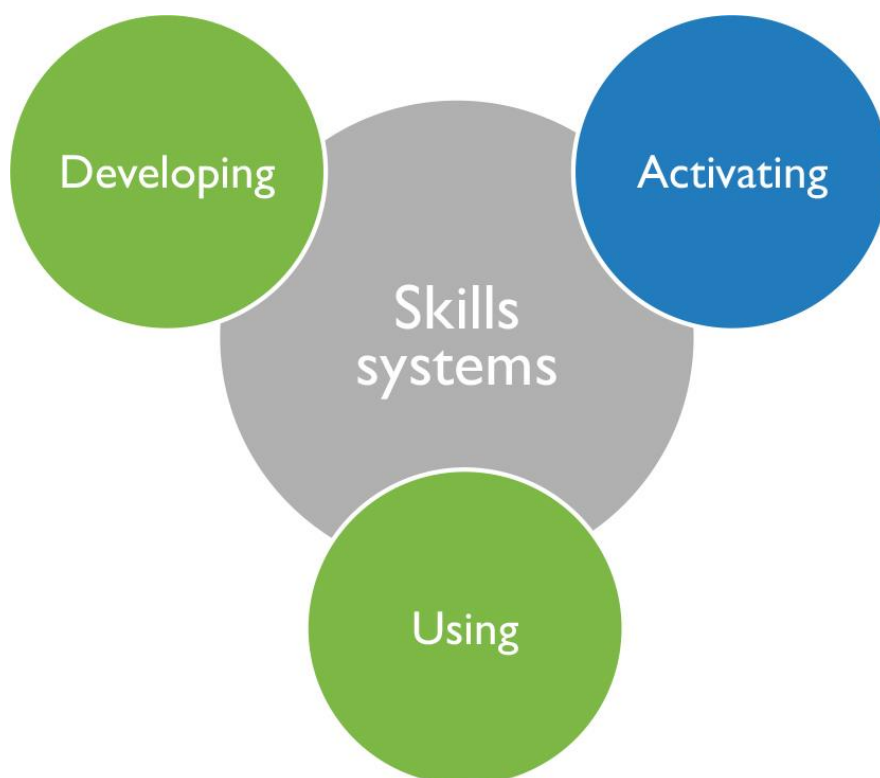
**Both the higher education and VET systems should strengthen their links with employers.** The poor alignment between the skills produced by universities and VET schools and the needs of the labour market hinders Peru's aspirations for economic diversification. Boosting work-based learning experiences in the framework of VET programmes, as is successfully implemented in sectorial schools, and internships in higher education would foster the alignment between skills supply and demand.

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# ACTIVATING SKILLS







## INTRODUCTION TO ACTIVATING SKILLS

**To realise the full benefits of investments in skills, the skills of working-age individuals must be fully activated in the labour market.** Individuals who supply their skills in the labour market enjoy better economic and social outcomes. By activating all available skills, a country can maximise its economic growth and support the transition towards a more productive, knowledge-based economy.

**The skills of people may not be fully activated in the labour market for a variety of reasons.** In all countries, many individuals are outside of the labour force, either by circumstances or choice. Reasons range from personal or family situations and choices to financial disincentives for working. Certain groups in particular face greater barriers to supplying their skills to the labour market. These include women, youth, ethnic minorities and older people. Assisting these under-represented groups to participate more fully in the economy involves a variety of measures, including: identifying inactive individuals; offering opportunities for re-training; ensuring that the benefit system offers them financial incentives to enter or return to the labour market; and removing demand-side barriers to employers hiring. Two main challenges have been identified regarding the activation of skills in Peru: promoting more formal and stable employment, and strengthening active labour market policies to improve employability.

**The prevalence of informal employment arrangements is a drag on individual well-being and national productivity.** Informality has negative consequences for the individual, for public finances and for the broader economy (see Box 17). Improving skills outcomes in initial education (Challenges 1 and 2) and increasing incentives to further develop skills in adulthood (Challenges 4 and 5) can increase worker productivity, thereby increasing incentives for employers to hire workers formally. Peru could boost employment in the formal sector by reducing the costs associated with hiring formally. This could involve calibrating minimum wage levels to better reflect worker productivity, or subsidising social security contributions for low-skilled workers.

**Active labour market policies (ALMPs) could play a more important role in improving the activation of skills in Peru.** ALMPs can facilitate transitions from school to work, assist the unemployed to find work, and improve the alignment between skills supply and demand. Unfortunately, ALMPs remain underdeveloped in Peru. The country could improve its training programmes by increasing their duration, integrating work-based learning opportunities, and tailoring them more to the needs of specific target groups. Additionally, the public employment service could be improved through the introduction of better performance management and accountability frameworks, more tailored job search assistance, and the expanded use of digital technologies to extend its reach, effectiveness, and efficiency.

### Box 17. Activating skills in the context of high rates of informal employment

In Peru, as in many low- and middle-income countries, comparatively high rates of labour market participation and employment coexist with high rates of informal employment. In broad terms, informal employment refers to employment that is not under the protection of labour law and social security regulation. High rates of employment in the informal sector reflect, in part, the comparatively lower skills of the workforces in these countries. The low output of low-skilled workers decreases the incentives for employers to offer the wages and social security contributions normally associated with hiring workers formally. As a result, employers may only offer these workers employment under informal working conditions. Workers themselves may self-select the informal economy if the wages they earn are low and employment in the formal economy means paying high taxes and social security contributions.

High rates of informal employment are a concern for both individuals and society. On average, individuals employed informally earn lower wages, enjoy fewer protections, and have fewer opportunities to maintain and further develop their skills. For society, having a large share of the workforce employed informally implies higher social costs and lower tax revenues. Additionally, firms operating in the informal sector tend to invest less in training workers and modernising production, which translates into low productivity and growth.

### CHALLENGE 3. IMPROVING THE LABOUR MARKET INSTITUTIONAL SETTING TO BOOST FORMAL EMPLOYMENT

A selection of challenges identified by Peruvian workshop participants:

*“Too many types of working arrangements.”*

*“Fiscal incentives to employ workers formally.”*

*“Strengthen SME capacities to hire workers formally with respect to labour law and fiscal regulations.”*



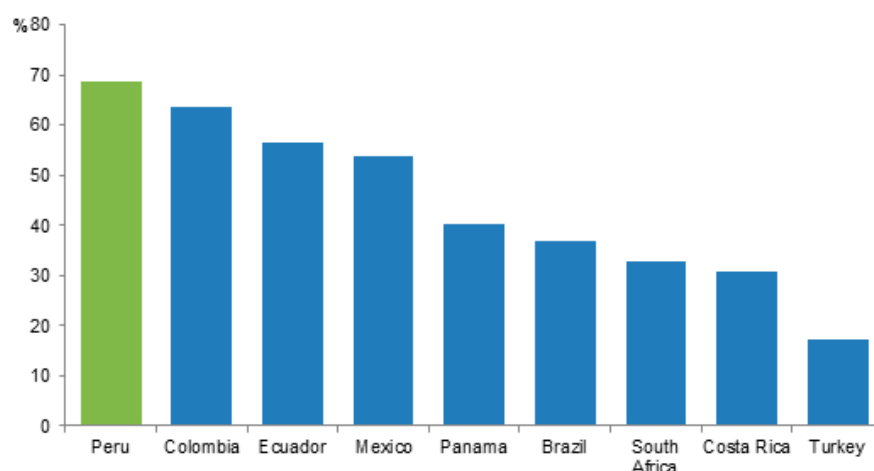
**Informal employment imposes a high cost on both individuals and society.**<sup>1</sup> Beyond lacking certain social protections, individuals employed informally typically earn lower wages and have fewer opportunities to further develop and maintain their existing skills. For society, a large informal economy implies higher social costs and forgone tax revenues that could be used to make investments in skills and capital that could boost productivity and growth (OECD, 2016; Jutting and de Laiglesia, 2009; Loayza, 2007). This is an important issue in a country such as Peru, where despite strong labour productivity growth over the last decade, the level of productivity remains low at only 24% of the level in the United States.

**Informal working arrangements are seldom a stepping-stone to formal employment.** If informal employment arrangements provided people with opportunities to learn new skills and progress into better paying and more secure jobs in the formal economy, then it would be of lesser concern. However, there is very limited mobility between informal and formal employment, with most never leaving informal employment once they have joined (Jaramillo, 2013).

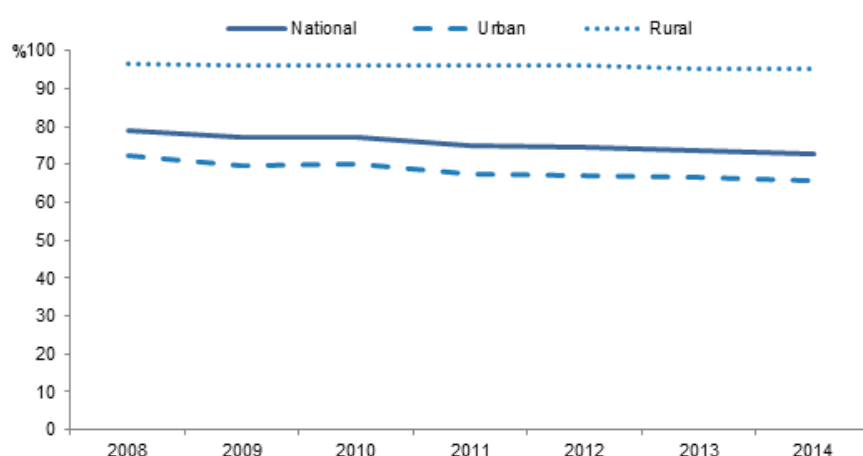
**Informality is a large and persistent problem in Peru,** with informal employment at 72.8% in 2014 (INEI, 2015). The International Labour Organisation's (ILO) definition of informal employment – which applies only to non-agricultural employment<sup>2</sup> – shows that the share of informal employment in Peru (72.8%) is one of the largest in the Latin America and Caribbean (LAC) region (Figure 10, panel A) (ILO, 2016; OECD, 2015). However, the share of informal employment fell slightly after a recent period of economic expansion (declining from 80% in 2007 to 72.8% in 2014) (Figure 10, panel B) (INEI, 2015). Most of this reduction took place in urban areas, while in rural areas, informal employment was relatively stable.

**Figure 10. Informal employment in Peru (2007-2014)**

Panel A. Rate of informality in selected countries (% of non-agricultural employment)



Panel B. Evolution in time (2008-2014)



Source: OECD (2015), *Multi-dimensional Review of Peru: Volume 1. Initial Assessment*, Graph 2.28, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264243279-en>.

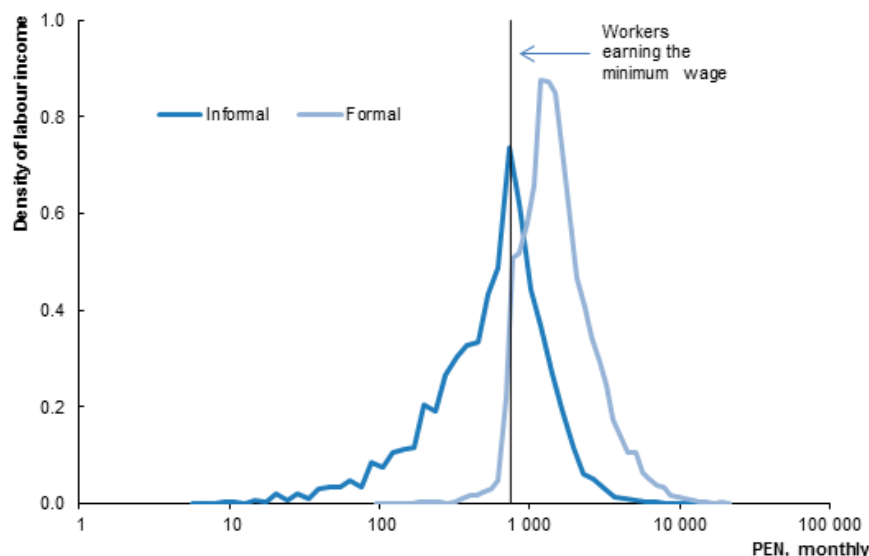
**Certain socio-economic groups are more likely than others to be hired informally.** Employment in the informal economy is more prevalent among young (aged 15-29) and older (aged 65+) workers, women, those with lower levels of education and those living in rural areas (OECD, 2015). Employment in the informal sector, especially for these groups, is highly correlated with income. For example, among 29-year-olds, those working in the informal economy account for: around 9 out of 10 of those living in extremely impoverished households; 6 out of 10 of those living in moderately impoverished households; 5 out of 10 of those living in vulnerable households; and only 2 out of 10 of those living in middle-class households.<sup>3</sup>

**The low skills of many Peruvian workers help explain the widespread use of informal employment arrangements**

**The low productivity of many Peruvian workers makes it difficult for them to find formal employment.** The low-productivity of the Peruvian workforce means that workers do not produce enough

output to cover the costs of being hired formally. This pattern of lower skills leading to low productivity and high informality is seen across many developing countries (Laporta and Shleifer, 2014). The labour income of more than 50% of informal wage earners in Peru is below the minimum wage (see Figure 11). Using income as a proxy for worker productivity, the interpretation is that these predominantly low-skilled workers have productivity levels that are below the minimum threshold of output that would be needed to justify earning the minimum wage offered in the formal economy.

**Figure 11. Labour income of formal and informal workers, distribution relative to the minimum wage in Peru (in Peruvian Soles, 2014)**



*Note:* Kernel estimates of monthly-equivalent labour market incomes for dependent workers depending on their classification as formal or informal on the basis of the INEI methodology. The black bar represents the minimum wage (PEN 750, although it was set at PEN 850 in May 2016).

*Source:* OECD (2016), *Multi-dimensional Review of Peru: Volume 2. In-depth Analysis and Recommendations*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264264670-en>.

**Improving the skills of Peruvians can help them to escape informal employment.** The challenges related to improving skills in Peru are discussed in Challenge 1 (compulsory education), Challenge 2 (higher education), Challenge 4 (training for the under- and unemployed), and Challenge 5 (the workplace).

**Informal employment arrangements create a disincentive to further invest in skills that may increase worker productivity and facilitate transitions to formal employment**

**A large informal sector inhibits skills development activities that could lead to higher productivity and higher employment in the formal economy.** Since informal employment arrangements are tenuous, they raise the risks associated with investment in skills for both the worker and employer, with the result being lower investment overall. Lower investment in skills means that firms in the informal sector continue to suffer from low productivity and, by extension, continue to be unable to afford the costs associated with the transition into the formal sector. At the same time, workers employed in the informal sector generally do not qualify to benefit from active labour market policies (discussed in Challenge 4) – mostly training and intermediation services aimed at improving skill levels and employability of workers – because they either have not paid taxes and social security contributions or because they are more difficult to identify and reach. As a consequence, workers do not develop the higher levels of skills and productivity that might permit them to find formal employment. This vicious circle means that low levels of skills lead to employment in low productivity in industries where there are limited opportunities to further improve skills (see Figure 12).

Figure 12. The vicious circle between low skills and high informality

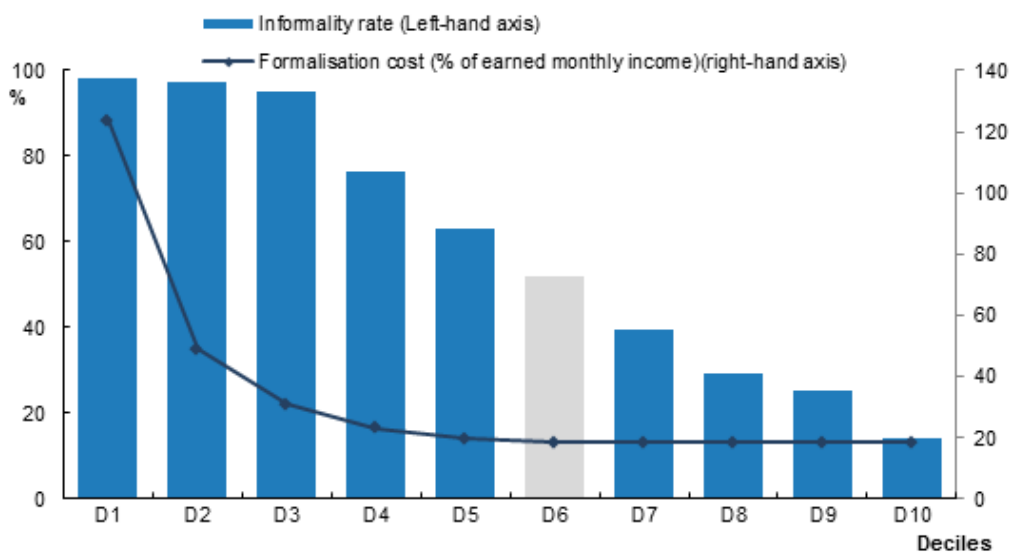


Source: Author's own work.

### Reducing social security costs could increase formal employment opportunities

**The cost of social security programmes is one of the main barriers to formal employment for low-skilled individuals.** One of the reasons informality remains high in Peru is that formalisation costs (mainly social security contributions, including health insurance and pension contributions) are high relative to the income of many workers, but especially for those with low levels of skills. For an employee who earns an average labour income of the first decile (the lowest in the income distribution), the cost of contributing to social security programmes is 124% that of the labour income, thus rendering participation in the formal economy unaffordable (see Figure 13). The cost of becoming formalised diminishes as income rises, as evidenced in Figure 13 by the trend towards both lower costs of social security contributions (as a share of the worker's income) and rates of informality as incomes rise.

**The high cost of social security contributions is a particularly important barrier for low-income earners.** The cost burden of social security contributions is particularly high for wage earners in the first three deciles of income distribution. Due to the positive association between skills and productivity on the one hand, and productivity and income on the other, low-income earners are more likely to be low-skilled individuals. The price of social security contributions stabilises at the level of the minimum wage (sixth decile), but overall levels of informality remain high even after costs to social security schemes become constant. Despite the lower relative costs of social security contributions, 14% of the population in the wealthiest decile of income is employed in the informal economy.

**Figure 13. Informality and costs of formalisation for different income groups in Peru, 2014**

Source: OECD (2016), Multi-dimensional Review of Peru: Volume 2. In-depth Analysis and Recommendations, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264264670-en>.

**Peru can reduce informality by decreasing the costs associated with hiring low-skilled workers.**

Minimum wages represent one of the main components of total labour costs. If minimum wages are set too high they can create a disincentive for employers to hire workers formally. Mechanisms that link minimum wages with productivity or price levels can help to reduce such disincentives. A related action would be to allow for a differentiated minimum wage across different regions in Peru so that they are more closely linked to actual levels of worker productivity and/or price levels in the region. Subsidising social security contributions (fully or partially) for lower income workers, usually those with lower levels of skills, could also favour formal hiring, particularly among those for whom social security contributions represent a high share of their labour income (OECD, 2016).

**Certain policy changes have already contributed to declining informal employment in recent years.** The introduction in 2007 of the obligation to submit an electronic payroll system (*planilla electrónica*) to the National Tax Authority (SUNAT) with information on workers, pensioners, and service providers, among others, has been one of the main institutional changes conducive to formalisation, as it has increased the capacity of the Ministry of Labour to supervise and inspect the labour market through the use of the registries and installed capacity of SUNAT. Other potential factors that help explain the reduction in informal employment are increases in the coverage of the different types of health insurance in Peru, and the small and medium-sized businesses (SME) law approved in 2003 that aimed to provide SMEs with different tax regimes to provide incentives to formalisation (FORLAC-ILO, 2014).

### Summary and policy implications

**A high level of informal employment is a defining characteristic of Peru's labour market.** Despite recent increases in participation rates, and decreases in unemployment and inactivity rates, around 73% of workers were employed informally in 2014. For individuals, informal employment arrangements are associated with lower wages, fewer social protections, and fewer opportunities to further develop and maintain their existing skills. For society, a large informal economy implies higher social costs and forgone tax revenues that could be used to make investments in skills and capital that could boost productivity and growth.

**A large informal sector inhibits skills development activity that could lead to higher productivity.**

Informal employment arrangements raise the risks associated with investment in skills for both the worker and employer, with the result being lower investment overall. Lower investment in skills also means that firms in the informal sector continue to suffer from low productivity and, by extension, continue to be unable to afford the costs associated with the transition into the formal sector.

**Encouraging greater investment in skills can increase productivity and reduce informality.**

By improving the skills of its workforce and, by extension, their productivity, Peru can raise incentives to employ workers formally. This could involve increasing incentives and opportunities for skills development in compulsory education, in higher education, among the unemployed, and in the workplace.

**Peru can also reduce informality by decreasing the costs associated with hiring workers formally.**

This could involve developing mechanisms to better ensure that minimum wage levels are linked to worker productivity. It could also mean subsidising social security contributions for lower income workers, typically those with lower levels of skills.

## NOTES

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- <sup>1</sup> Informally employed workers in Peru are those who fall into any of the following categories: 1) firm owners or self-employed workers with a unit of production that is part of the informal sector; 2) salaried workers with no social security financed by the employer (measured, in practice, by affiliation and payment of health insurance contributions); and/or 3) contributing family workers, regardless of the formal or informal nature of the productive unit they work in (INEI, 2014).
- <sup>2</sup> Informal employment in non-agricultural activities is used in this case for the sake of comparability, given the international availability of this indicator.
- <sup>3</sup> Socio-economic classes are defined using the World Bank classification: “Extreme poor” = youth belonging to households with a daily per capita income lower than USD 2.50. “Moderate poor” = youth belonging to households with a daily per capita income of USD 2.50-4.00. “Vulnerable” = individuals with a daily per capita income of USD 4.00-10.00 “Middle class” = youth from households with a daily per capita income higher than USD 10.00.



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## CHALLENGE 4. EXTENDING THE REACH OF ACTIVE LABOUR MARKET POLICIES TO IMPROVE WORKERS' EMPLOYABILITY

**A selection of challenges identified by Peruvian workshop participants:**

*“Strengthen public employment services by increasing their co-operation with employers and introducing monitoring and evaluation procedures.”*

*“Micro and small entrepreneurs cannot afford labour counselling services.”*

*“Implement and diffuse a National Qualification Framework.”*



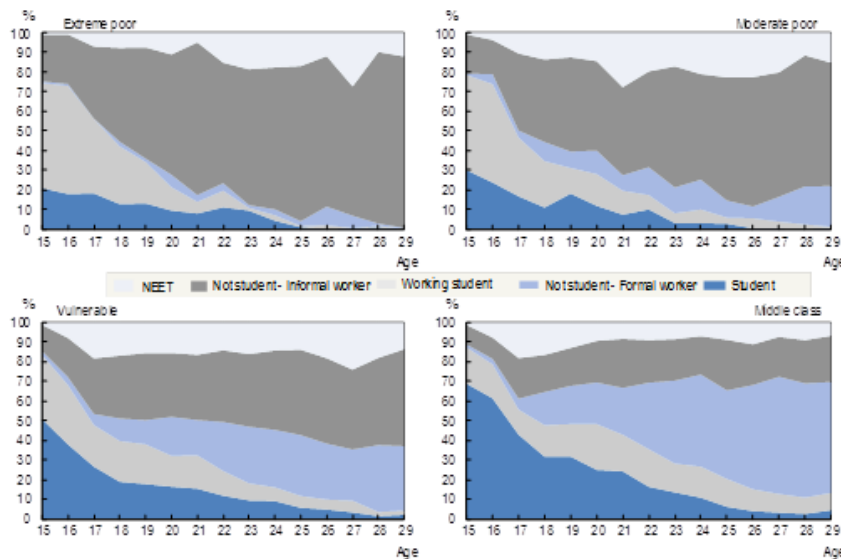
**Activating and improving the skills of the labour force is essential for sustaining economic growth and promoting inclusiveness.** Skills that are not activated represent not just wasted resources today, but also a waste of the resources invested to develop these skills. Unused skills are likely to atrophy over time, whereas the more individuals use their skills and engage in complex and demanding tasks in their job or training, the more likely it is that skills decline due to ageing can be prevented.

**The skills of too many Peruvians are not being fully supplied to the labour market**

**The skills of many Peruvians are not being fully activated in the labour market.** Peru has high rates of informality (in 2014, 72.8% of all workers were employed informally) (OECD, 2016a), a high incidence of underemployment<sup>1</sup> (12% in 2015), and a comparatively low, but not insignificant, rate of unemployment (4.5% in 2014 in urban areas). Only around 28% are employed in the formal sector (OECD/CAF/ECLAC, 2016).

**Many young people experience difficult transitions from school to work.** Among 15-24 year-olds, around 15% are neither employed nor in education or training (NEET), 30% are employed informally, and only 22% are employed formally. The remaining 36% are either studying, or working and studying (OECD/CAF/ECLAC, 2016). Labour market outcomes vary greatly across socio-economic groups. The transition from school to work is particularly worrying for young people living in poor and extreme poor households, while those in the middle-class show a better performance (Figure 14). For example, at age 29, virtually all young people living in extreme poor households are either NEET or working in informal employment, while this situation is less pressing for young people living in middle-class households, where only around 3 out of 10 are either NEET or working in an informal job. Differences between young men and women are also significant: 34% of young men and 45% of women are either NEET or working in an informal job. This gender variation is mainly explained by a much larger rate of NEET among women (30%) than among men (11%). However, it is worth noting that some NEETs, particularly young women working in households, are productive and contributing to the economy: 70% of NEET women are engaged in unpaid domestic work or caregiving, compared to 10% of NEET men (OECD/CAF/ECLAC, 2016).

**The skills of many prime-working age adults are not being fully activated.** Transitions out of informality and towards formality are low in Peru, with only 20% of young men and 18% of young women transitioning to a formal job after one year in an informal job (OECD/CAF/ECLAC, 2016). Among adults 30-64 years of age, 12% are inactive or unemployed, while another 51% are employed informally. Only 35% of 30-64 year-olds are employed formally, and the small remaining share is students or working students (OECD/CAF/ECLAC, 2016).

**Figure 14. Activity status for youth (15-29) in different income groups in Peru, 2014**

Notes: Socio-economic classes are defined using the World Bank classification, and refer to youth belonging to households with a daily per capita income: lower than USD 2.50: "Extreme poor"; between USD 2.50-4.00: "Moderate poor"; between USD 4.00-10.00: "Vulnerable"; and higher than USD 10.00 = "Middle class". Poverty lines and incomes are expressed in 2005 USD PPP per day (PPP = purchasing power parity).

Source: OECD/CAF/ECLAC (2016), Latin American Economic Outlook 2017: Youth, Skills and Entrepreneurship, OECD Publishing, Paris, <http://dx.doi.org/10.1787/leo-2017-en>.

**Active labour market policies also play an important role in supporting fuller participation in the labour market**

**Developing high quality and relevant skills in initial education is the best way to support success in the labour market.** Individuals with higher levels of education and skills are more likely to be employed in the formal sector, and earn higher wages. The challenges of doing a better job of developing high quality and relevant skills in Peru is discussed in Challenges 1 and 2.

**Active labour market policies (ALMPs)<sup>2</sup> are also critical for facilitating labour market participation and gainful employment.** ALMPs help to facilitate better transitions from education to labour markets, as well as to support those already in the labour market but underemployed or experiencing difficulties in accessing good quality jobs. According to the OECD, ALMPs aim "to bring more people into the effective labour force, to counteract the potentially negative effects of unemployment and related benefits on work incentives by enforcing their conditionality on active job search and participation in measures to improve employability, and to manage employment services and other labour market measures so that they effectively promote and assist the return to work" (OECD, 2013).

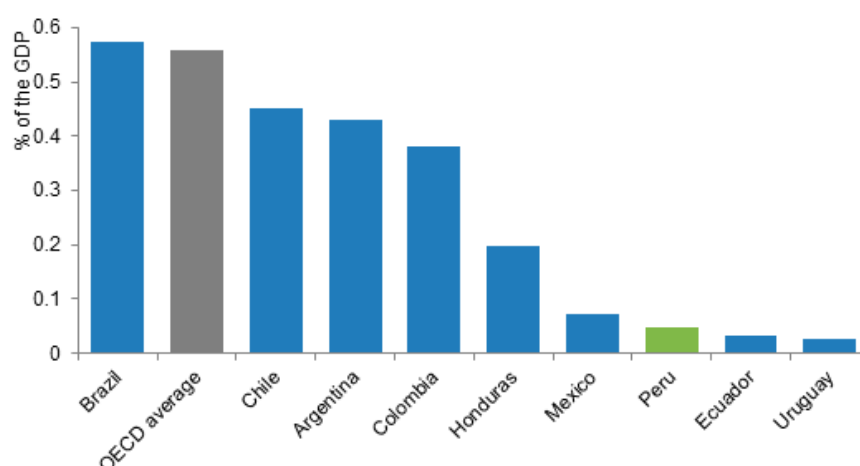
**ALMPs remain in limited use in Peru, despite the recent increase in expenditure**

**In Peru, ALMPs comprise a diverse array of policies and programmes, including training, intermediation and public employment services.** Despite the expansion of ALMPs in Latin American countries in recent years, they are still much less developed than in OECD countries. Due to the range of data that the International Labour Office (ILO) has collected on ALMPs in Peru and the Latin American and Caribbean (LAC) region, this report adopts the ILO's classification of ALMPs, which has five categories: 1) training; 2) direct job creation, mainly through public job programmes; 3) employment incentives; 4) incentives for self-employment and micro-entrepreneurship; and 5) labour market services, mainly public

employment services (ILO, 2016). In Peru, ALMPs in the last two decades have been largely concentrated in training and labour market services.

**Despite an expansion in ALMP expenditure over the last decade, spending remains comparatively modest.** LAC countries have experienced (in the last decade or two) an expansion of expenditure on ALMPs (ILO, 2016). However, in Peru, public expenditure on ALMPs as a share of total GDP increased from almost zero to only 0.05% between 2000 and 2010 (Cerutti et al. 2014). This compares poorly with other LAC countries, such as Brazil, Chile or Argentina, which have experienced much higher growth in spending, reaching 0.57%, 0.45%, and 0.42% respectively (Figure 15). Spending in Peru is well below that found among OECD countries, where average spending was 0.55% of GDP in 2012. In Denmark and Sweden, spending on ALMPs as a share of GDP reaches as much as 2.1% or 1.32% respectively (OECD, 2015). ALMPs in the LAC region have focused mainly on youth, but also on unemployed or vulnerable groups, among other categories (these categories overlap in many cases) (ILO, 2016). In Peru, spending on ALMPs is mainly concentrated in training and in public employment and labour market services.

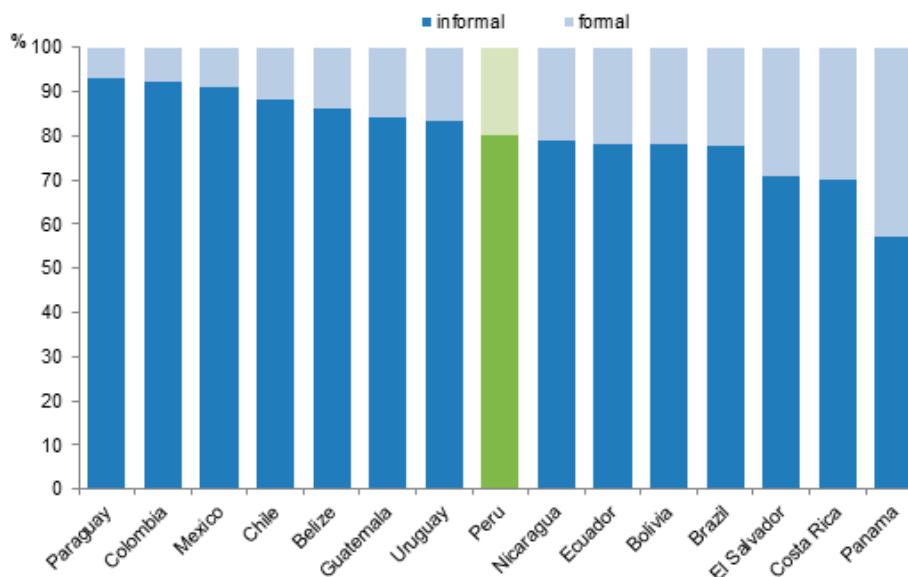
**Figure 15. Expenditure in active labour market policies in Peru and selected countries (as a % of GDP)**



*Notes:* Data for the OECD average are from 2012 and not directly comparable due to the different source used to data from LAC countries. Data shown for Chile and Mexico, though members of the OECD, come from Cerutti et al. (2014) to make it directly comparable with the other LAC countries.

*Source:* OECD (2016b), "Labour market programmes: expenditure and participants", OECD Employment and Labour Market Statistics (database), OECD Publishing, Paris <http://dx.doi.org/10.1787/data-00312-en>  
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**The lack of development of ALMPs in Peru may help explain why informal job searches remain the dominant channel by which individuals seek work.** In Peru, only around 20% of workers in 2010 looked for jobs through formal channels, while the remaining 80% searched for jobs through networks, people they know, direct contact with employers, etc. (Figure 16). Informal job searches lead to inefficiencies in the process of job matching, mainly because individuals do not have information about all the job opportunities and firms do not have all the information on workers looking for a job. In addition, it can reinforce existing inequalities as those who have lower levels of education and skills – and who are more likely to belong to disadvantaged socio-economic groups – usually have networks and social connections that are less favourable for finding high quality jobs in the formal sector (Mazza, 2011).

**Figure 16. Job search through formal and informal channels in selected LAC countries, 2009**

Source: Mazza, J. (2011), "Dinamizando el Empleo: Avances y Próximos Pasos para los Servicios de Intermediación Laboral en América Latina y el Caribe", Notas Técnicas IDB-TN-344, Banco Interamericano de Desarrollo.

**Training programmes are one of the most important types of ALMP in Peru, but their impact has been mixed**

**Training programmes are the most widely used active labour market policy in the LAC region** (Betcherman et al, 2007) **and in Peru** (ILO, 2016). Training programmes range from institutional training (i.e. classroom training), "on-the-job" training, or alternate training, which combines both classroom and workplace learning (OECD/CAF/ECLAC, 2016). In Peru, training programmes started to gain prominence after 1997, when the programme ProJoven was created for young people aged 18-29. ProJoven, which ran until 2011, combined both classroom and workplace learning. Currently, there are three main programmes administered by the Ministry of Labour that are particularly relevant: *Jóvenes Productivos*, *Impulsa Peru*, and *Trabaja Peru* (see Table 1).

**Table 1. Main training programmes currently in place in Peru**

Programme	Target group	Objectives	Modalities	Budget & beneficiaries
<b>Trabaja Peru (2011-ongoing in 2016)</b>	Unemployed and underemployed people living in poverty or extreme poverty	To create quality jobs in a sustained manner	Short-term employment for vulnerable population through the “ <i>Unidades Zonales desconcentradas</i> ”	137 804 temporary jobs 190 072 beneficiaries
<b>Impulsa Peru (2009-ongoing in 2016)</b>	Aged 18-59 people who are unemployed, underemployed or at risk of losing their jobs	To promote employment, and improve skills and employability	Job training, certification of skills, and training for self-employment	109 000 people. 134.6 million soles
<b>Jóvenes Productivos (2011-ongoing in 2016)</b>	Youth aged 15-29 in a situation of poverty, extreme poverty or vulnerability, both from rural and urban areas	To develop and strengthen skills for jobs and entrepreneurship	Training for employability Training for entrepreneurship	89 623 beneficiaries 166 million of soles in the whole period 40 million soles for 2016

Source: Author's elaboration with data from the Ministry of Work and Employment Promotion, Peru, March 2016.

**Training programmes have had mixed results in Peru.** Impact evaluations have shown that they have helped to create jobs in the formal economy, but their overall impact has been limited due to their relatively small size. For example, the first long-term evaluation of the ProJoven programme showed that the programme increased the likelihood of finding a formal job, and that these results seemed to be stable as they were observed three years after the beneficiaries completed the programme (Diaz and Rosas, 2015). “*Construyendo Perú*”, a programme that ran between 2006 and 2011 and focused on those unemployed or underemployed from disadvantaged groups of all ages, was found to increase women’s wages and their probability of finding a job in the formal economy, but the results for men were not statistically significant (ILO, 2016). Evaluations of training programmes in other LAC countries show that they have had similar results. There are some lessons that can be drawn from these experiences. Specifically, training programmes typically have greater impact when: more time is spent on training at the workplace; the overall duration of the programme is longer; they target specific groups; and when they train in multiple skills and integrate different types of complementary training, among other things (OECD/CAF/ECLAC, 2016).

**The public employment service plays an important and growing role in Peru, but its performance can still be improved**

**Public employment services (PES) are an important and cost-effective means of supporting greater activation.** PES help to address certain labour market failures, including poor matches between labour demand and supply, information asymmetries, job-search costs, and prolonged unemployment (OECD, 2015; IDB, 2015; Mazza, 2011). In OECD countries, PES typically support workers to search for jobs and match them with existing vacancies, they also provide or make referrals for training. PES also provide support to firms that are looking to fill vacancies. They have been found to be one of the most cost-effective ALMPs, with usually low costs of implementation (Card, Kluve and Weber, 2010).

**Peru’s PES is comparable to those found in many larger Latin American countries, but falls below the standard of most OECD countries.** PES in the LAC region can be categorised into three broad levels of service. The first, or most basic level, only provides a basic employment service (i.e. mainly setting up the service with basic functions) and can be found in countries such as Bolivia and Paraguay. Peru’s PES falls

within the mid-level of service as it offers broader coverage and establishes mechanisms for the assessment and evaluation of its services. It also provides a “one-stop service”, among other things. Other countries with PES in the second stage of development include Brazil, Chile, Colombia and Mexico. The third level of PES more strongly integrates social, labour, and economic policies. PES of this type can be found in many OECD countries, but so far not in any Latin American country (Mazza, 2011).

**Peru has taken steps in recent years to improve its PES.** Peru’s PES provides a wide range of services. To support people in finding a job, Peru has introduced labour intermediation with both face-to-face and virtual services, as well as services targeted at specific sectors, geographical areas or socio-economic groups. Peru’s PES also provides a counselling service that teaches and coaches individuals to identify their main skills and prepare for the job-search process (e.g. how to prepare a CV or for a job interview). Additionally, it provides young people aged 18-25 with a “*Certificado Unico Laboral*”, a certificate that includes a range of information to support effective job searches, including previous job history, criminal records certificate, and place of residence. Having all of this information available in a single document reduces red tape, time waste, and the economic costs of a job search. The PES also provides other services to improve the employability of workers, such as training and services to formally recognise skills acquired in the workplace. While these services are provided to those looking for jobs, Peru’s PES has also been developing services for those wanting to start-up a business and for firms needing to find suitable workers to fill their job vacancies. The integration of all these services into a “one-stop service” (“*Centro de Empleo*”) in 2012 was an important step towards the improved articulation of all the employment services provided by the Ministry of Labour and the integration of services at the national and subnational level.

#### **There are a number of ways for Peru to improve the effectiveness of ALMPs and the PES**

**Important lessons can be learned from OECD countries about how to improve ALMPs and the PES in Peru.** OECD economies have a long history with the provision of ALMPs and PES. These experiences, and the knowledge gained from them, can be very useful to guide Peru to improve, strengthen and expand its own services. For example, the experience of OECD countries suggests that the effectiveness of Peru’s PES can be improved through better performance management and accountability. This entails measuring programme performance to: improve understanding of their effects and allow for their continuous improvement; terminate ineffective or inefficient programmes and reallocate funding to those that work; and increase the accountability of expenditures on PES and ALMPs more broadly. The experiences of OECD countries also suggest that effective job search assistance services are of high quality and tailored to the needs of individuals. Furthermore, PES systems should be modernised and improved by taking advantage of digital and other technologies that are changing the way people interact, and that offer opportunities to extend PES’ reach (OECD, 2015).

**ALMPs and PES must be designed to reflect the particularities of the Peruvian labour market, including a large informal sector.** In a country like Peru, where high rates of employment coexist with high rates of informal employment arrangements, the recognition of skills acquired at work is important for helping workers to access jobs in the formal sector and to improve their job prospects. Peru has taken a number of steps to improve the recognition of skills acquired in the workplace, with a variety of institutions – usually created for particular sectors – now in place. However, the system for the assessment, validation and recognition of skills is still weak and fragmented, and there is no National Qualifications Framework (Chacaltana et al., 2015). In 2012, a law (*Ley del Sistema de Normalización y Certificación de Competencias Laborales*, Law of the System of Normalization and Certification of Labour Competencies) deliberated the *Comisión Multisectorial del Sistema de Normalización y Certificación de Competencias Laborales* (Multisectoral Commission for the System of Normalization and Certification of Labour Competencies, which made a proposal for a system to certificate skills acquired at the workplace. However, to date the law has not been approved.

**ALMPs and PES could be better integrated with the economic development strategy for the country.** Ensuring that ALMPs and PES provide Peruvians with the better opportunities to develop and



activate their skills will help increase productivity and growth. In this respect, to maximise their impact, ALMPs and PES should be designed to support Peru's broader economic and diversification strategy. For example, training provided through ALMPs should be leveraged to help ensure that Peru has the skills it needs to achieve its economic growth and diversification ambitions.

**The adoption of a national qualification framework could facilitate the increased activation of skills in the formal sector**

**Qualification frameworks and skills recognition and validation systems can validate skills acquired in informal employment.** The recognition of prior learning, understood as a process of certifying pre-existing skills and knowledge, can be particularly helpful in Peru because labour market informality is high, and, as a result, many people may have acquired different kinds of relevant skills without any formal record (Field, Musset, and Álvarez-Galván, 2014). In addition, recognition of prior learning can encourage adults in the informal sector to re-enter education by validating the competences they have already acquired through work. Qualification frameworks can make skills systems more transparent, so that the value of different qualifications can be recognised by students, employers and other stakeholders. However, these frameworks cannot operate in isolation and, to be effective, require the engagement of all relevant stakeholders (Field, Musset and Álvarez-Galván, 2014).

**National qualification frameworks help improve communication and collaboration across actors in the skills system.** National qualification frameworks demonstrate the equivalence of education, training, qualifications and work experience based on the amount and level of learning. Qualification systems are often regulated and sometimes subject to an overarching framework that locates them in an ordered sequence of levels. National qualifications frameworks include all education qualifications in a country's education and training system. They organise qualifications into distinct levels, with the lower levels corresponding to basic-level skills and each additional level requiring the mastery of more complex skills and knowledge. Frameworks clarify what learners may be expected to know, understand and be able to do on the basis of a given qualification (OECD, 2014).

**Peru has implemented a number of mechanisms that recognise the acquisition of competencies in formal and informal educational settings.** However, a single and integrated system for the certification of work-related competencies does not yet exist. The fragmented reality of the Peruvian professional education system leaves the responsibility of certifying competencies in the hands of different ministries and authorities. The National System of Evaluation and Accreditation of Educational Quality (SINEACE) issues a series of certificates covering basic competencies acquired through working in occupations such as carpentry, coffee production and cattle farming. It is also in charge of the certification of competencies of those completing programmes in post-secondary technical institutes (IEST), such as nursery, pharmaceutical technicians and physiotherapy. These certificates are also applied to a number of graduates of private technical education centres (CETPRO). The Ministry of Labour (MTPE) is in charge of developing occupational profiles and has recently issued a National Catalogue of Qualifications. In 2011, MTPE launched a service that enables workers in select fields to certify their skills through a third-party assessment process that also awards them an official qualification. The Ministry has authorised a variety of skill certifying entities – including a number of schools, industry associations, and local job centres – to administer the certification exams (OECD, 2016b).

**Harmonising existing mechanisms for the recognition of work-related competencies may foster social mobility and improve the allocation of skills.** In a fragmented, yet vibrant, vocational education sector, such as in Peru, and in a context of high economic informality, a national qualification framework may ensure a better level playing field for all actors in the skill system. Many Peruvian stakeholders recognise the benefits that such framework may bring. Employers in medium and large enterprises see qualification frameworks as an instrument to certify the process of continuous learning that happens within the firm. For workers in small and medium-sized enterprises, a qualification framework is an opportunity for labour mobility across firms. For those who did not complete any level of formal education and are employed in the informal

sector, qualification frameworks may translate into social recognition and brighter career perspectives (SINEACE, 2015).

#### Box 18. Examples of national qualification frameworks

##### Belgium (Flanders)

The use of a qualifications framework since 2009 aims to make qualifications more transparent and comparable. The intention of the framework is to clarify which programmes lead to the same qualification level and to the same job, making qualifications equivalent regardless of where the students have been taught – in a centre for adult education, a university college, or a competence centre. It also gives more visibility to the different qualifications for both students and employers. Creating a new professional qualification starts with an assessment of how the qualification will translate into an education programme and identifies providers best suited to deliver the programme. The fact that the qualifications are defined by competences should help to support recognition of prior learning.

##### South Africa

South Africa implemented a national qualifications framework in 1995. It is intended to: 1) create an integrated national framework for learning achievements; 2) facilitate access to mobility and progression within education, training and career paths; 3) enhance the quality of education and training; and 4) accelerate the redress of past unfair discrimination. Recent reforms aimed to simplify the framework and limit the proliferation of qualifications. The framework identifies ten levels of learning achievement, and includes three sub-frameworks covering: 1) general and further education and training qualifications; 2) higher education qualifications; and 3) trades and occupations qualifications. It is expected that these reforms should help to improve articulation and support more effective career guidance and recognition of prior learning, while also improving co-ordination across the different institutions and shareholders involved in the educational system.

##### Sources:

Musset, P. (2013), *A Skills beyond School Commentary on Flanders*, *OECD Reviews of Vocational Education and Training*, OECD, [www.oecd.org/edu/skills-beyond-school/ASkills\\_BeyondSchoolCommentaryOnFlanders.pdf](http://www.oecd.org/edu/skills-beyond-school/ASkills_BeyondSchoolCommentaryOnFlanders.pdf);  
DHET (2013), *White Paper for Post-School Education and Training*, Department of Higher Education and Training-Republic of South Africa, Pretoria.

#### Summary and policy implications

**ALMPs and PES play an important role in improving the activation of skills.** ALMPs and PES can facilitate a better transition from school to work, assist the unemployed to find work commensurate with their skills, and support those employed in the informal sector to transition to higher quality jobs in the formal sector. In achieving this, ALMPs and PES can help improve the alignment between skills supply and demand, thereby supporting Peru's economic growth and diversification aspirations.

**ALMPs and PES remain underdeveloped in Peru.** Despite recent spending increases, expenditures on ALMPs are below those found in many other large LAC countries, including Brazil, Chile and Argentina, and are well below the OECD average. Existing spending is highly concentrated on training programmes and PES. Public training programs in Peru have had mixed results. Firm-sponsored training is relatively uncommon, but public tax incentives for firm training have had positive results in the past. However, these tax incentives have since been discontinued. The reach of PES remains limited, but there have been some recent improvements, including the introduction of a “one-stop” employment service.

**Peru could undertake a number of measures to improve its activation services.** Building on lessons learned in Peru and OECD countries, Peru could improve its training programmes by increasing their duration, integrating work-based learning opportunities, and tailoring them more to the needs of specific target



groups. Consideration might also be given to reintroducing tax incentives for firm training. The PES could additionally be improved through the introduction of better performance management and accountability frameworks, more tailored job search assistance, and the expanded use of digital technologies to extend its reach, effectiveness, and efficiency.

**The implementation of a national qualifications framework facilitates the activation of skills developed in informal employment arrangements.** The recognition of prior learning can be particularly helpful in Peru to validate and activate in the formal sector the different kinds of relevant skills developed by Peruvians without any formal record. In addition to activating previously invisible skills, such a framework will facilitate policy coherence and ensure that designed policies result in commonly understood and measurable skills outcomes.

## NOTES

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<sup>1</sup> Underemployment is defined by INEI (National Institute of Statistics of Peru) in two forms: visible underemployment (measured per hours) is that experienced by workers who work fewer than 35 hours a week while willing to work more; and invisible underemployment (underemployment by income), which includes those who work more than 35 hours a week but earn less than the minimum consumption basket.

<sup>2</sup> ALMPs include a broad range of actions and programmes that have been categorized by the OECD (OECD, 2015). There are seven categories: 1) public employment services; 2) training; 3) job rotation and job sharing; 4) employment incentives; 5) sheltered and supported employment and rehabilitation; 6) direct job creation; and 7) start-up incentives.

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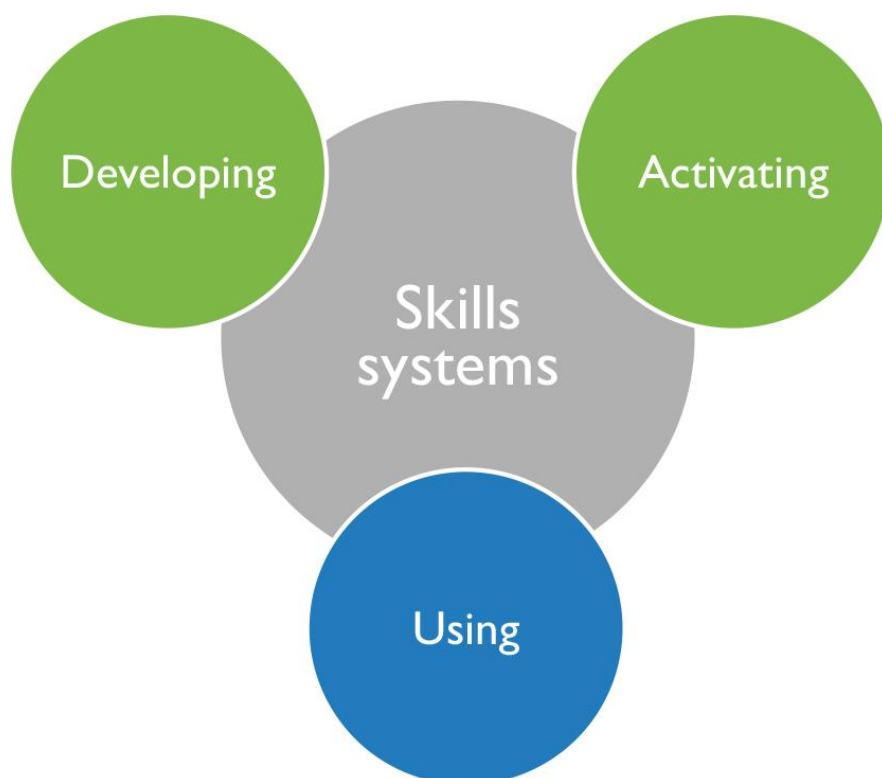
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# USING SKILLS





## INTRODUCTION TO USING SKILLS

Investments in developing and activating skills are critical for ensuring that individuals have the skills they need for economic and social success, and the opportunities to use these skills. However, successful skills policies also need to ensure that skills are used effectively so that investments in skills provide maximal returns to the individual and society. In adulthood, skills are, to a large extent, developed informally through work experience. Skills that are not fully utilised tend to atrophy. Skills that are not fully used in workplaces represent a lost opportunity to increase innovation, productivity, competitiveness and growth for the benefit of individuals, firms and society as a whole.

Peru is currently not making optimal use of the skills of its workforce, and the use of skills in the workplace is insufficient. Firms in Peru are less likely than their counterparts to adopt innovative workplace practices that might make them more productive and competitive. This implies a waste of talent that could otherwise be used to improve firm competitiveness and productivity. Making fuller use of the skills of Peru's workforce will entail greater efforts to raise awareness among firms about the importance of ensuring that the effective and intensive use of skills is a central component of their business strategies.

Firms and countries can improve their performance by making highly-skilled workers, entrepreneurs, and universities and research institutes central to their innovation systems. Workers with advanced degrees conduct research that leads to new innovations that contribute to substantial process improvements and the introduction of new products and services. They also embody the know-how needed to adopt, adapt and implement new innovations and technologies in the workplace, thereby boosting productivity and profits. Entrepreneurs are needed to bring new ideas to market; universities and research institutes are needed to generate and transfer new knowledge to firms and train the highly skilled workers and entrepreneurs that the private sector needs to grow the economy. Currently, few Peruvian firms are actively engaged in innovation. Peru invests comparatively little in knowledge-based capital and employs relatively few knowledge-based capital workers. In addition, there are high barriers to entrepreneurship, while university spending on research and development is comparatively low.

Peru will not realise its full economic and social potential unless it improves how it uses the skills it has already invested in to increase innovation and productivity. For firms, this means making skills central to their business strategies. For the country, this means ensuring that investments in skills, research and innovation are aligned with broader economic goals.

## CHALLENGE 5. IMPROVING THE ALIGNMENT BETWEEN SKILLS SUPPLY AND DEMAND AND FOSTERING A BETTER USE OF SKILLS IN THE WORKPLACE

### A selection of challenges identified by Peruvian workshop participants:

*“Provide incentive to firms for training their workforce.”*

*“Enhance workers’ soft skills.”*

*“Need for human resource practices that take into account workers’ skills.”*

*“Identify those senior workers who, thanks to their experience, can train and guide new hires into the firm’s culture and processes.”*



**Better utilisation of skills in Peru would lead to higher levels of labour productivity.** With an increasing number of Peruvians completing higher education (MTPE, 2014), there are questions as to whether firms can, and have the room to, fully reap the benefits of a more educated labour force. OECD research has demonstrated that different levels of skills utilisation in the workplace explain a large share of the differences in labour productivity across countries (Quintini, 2014), while the presence of skills and/or qualification mismatches negatively affects labour productivity (Adalet, McGowan and Andrews, 2015). As a result, ensuring that firms are fully aware, and make the best use, of their available human capital is essential for boosting the country’s labour and total factor productivity (TFP) in line with the goals of the National Strategic Plan towards 2021.

### The effective use of skills improves economic and social outcomes for individuals, firms and society

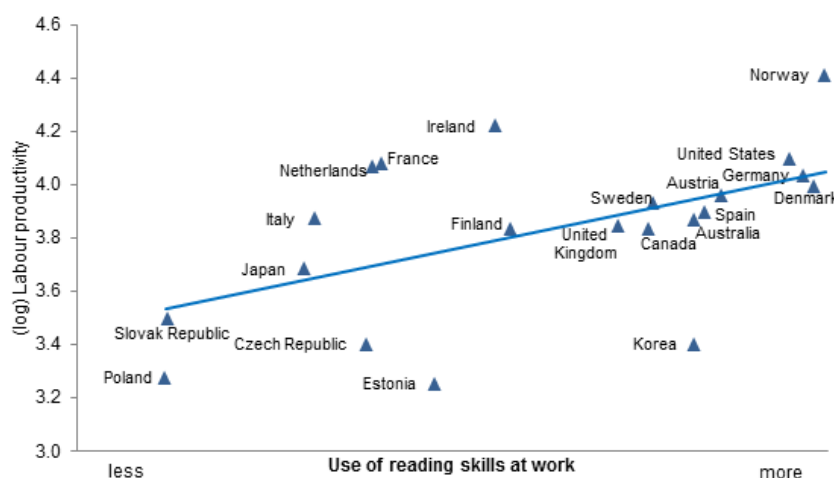
**Individuals who are well matched for their jobs enjoy higher earnings and better job satisfaction.** OECD research has demonstrated that over qualification and skills have significant consequences on an individual’s earnings and job satisfaction. While an over-qualified worker may earn more than a well-qualified one in the same job (4% more on average among OECD countries), he or she will nonetheless earn less than someone with the same levels of qualifications who is working in a job that is well matched to his or her qualifications (Quintini, 2014). In addition, individuals who are well matched to their job are more likely to be happy in their work and engage proportionally less in job search than workers who are over-qualified or under-skilled (Quintini, 2011).

**Improving skills use can help boost national productivity and growth.** The use of reading and writing skills are positively correlated with labour productivity across OECD countries (Figure 17). Even after adjusting for average proficiency scores in literacy and numeracy, the average use of reading and writing skills explains a considerable share (50% and 44% respectively) of the variation in labour productivity across countries (Quintini, 2014). In other words, how skills are used at work has an important impact on productivity above and beyond that of the impact of proficiency in the same skills.



**Figure 17. Labour productivity and the use of reading skills at work**

Adjusted for literacy and numeracy proficiency



Notes: Lines are best linear predictions. Labour productivity is equal to the GDP per hour worked in USD current prices. Adjusted estimates are based on OLS regression including controls for literacy and numeracy proficiency scores. Standard errors in parentheses.

Source: OECD (2012), Survey of Adult Skills (PIAAC), (database), Table A4.4, [www.oecd.org/site/piaac/surveyofadultskills.htm](http://www.oecd.org/site/piaac/surveyofadultskills.htm).

### Peru is currently not making full and effective use of the skills it has invested in developing

**The overall levels of skills have improved in recent years, with an increasing number of students completing higher education studies, either at tertiary or upper secondary non-tertiary level.** The share of workers having completed higher education increased by 21.4% between 2008 and 2013. This increase was particularly large for workers having completed university studies, which grew by 23.4%, compared with an increase of 13% for those having completed non-university higher education. As a result of these positive trends, 1.6 million workers in Peru had completed university education in 2013, and almost 1.5 million had completed non-university higher education (MTPE, 2014).

**There is a misalignment between the skills of workers and skill needs of jobs in Peru.** Evidence about the match between the skills of workers and the skill requirements of their jobs in Peru is typically in the form of studies examining the match between credentials and jobs. Credentials can be interpreted as packages of skills. In 2013, the share of workers who were under or over-qualified was 50.5%, which represents a modest improvement since 2008, when it was 53%. In the same year, 42% of those who had completed university and 58.6% of those who had completed non-university higher education were over-qualified for the jobs they held (MTPE, 2014). Over qualification is high among higher educated workers, a persistent problem in Peru.

**The high rate of skills underutilisation in Peru may be a drag on productivity.** Over-qualification and high rates of employment informality may help to explain differences in productivity levels across sectors. Productivity in Peru is lowest in sectors with the largest share of over-qualified workers, such as agriculture, commerce and construction (Céspedes et al., 2014). Productivity levels and the match between workers' qualifications and use of skills at work both improve with increased firm size (Céspedes et al.; 2014; MTPE, 2014). This suggests that the higher productivity of larger firms in Peru may in part be due to their more effective use of skills in the workplace. However, while more effective skills utilisation may foster productivity, some sectors are intrinsically less productive than others because they require lower levels of skills. As a result, it is essential to strike the right balance between encouraging firms to become more productive by hiring more

highly skilled workers (see Challenge 6) and ensuring that the supply of highly educated individuals is fully absorbed into the labour market.

**Over-qualified workers are those who possess qualifications that exceed the requirements of their jobs.** This may be explained by workers having lower levels of skills than would normally be expected from someone with a given qualification, or by workers having completed fields of education for which there is limited demand in the labour market. This problem is not unique to Peru. OECD (2013) finds that on average across OECD countries, more than 75% of those who are over-qualified are well-matched for their jobs on the basis of the literacy required for those jobs. In such circumstances, this type of over-qualification may be a reflection of poor educational quality or relevance, discussed further in Challenge 2. Over-qualification may also reflect workers being hired into jobs that typically require lower levels of qualifications, and, by extension, lower levels of skills than they possess. In such cases, the skills of workers can be said to be not fully utilised.

**Under-qualified workers are those who possess qualifications that do not meet the standard usually required for the jobs they hold.** This may be due to people having acquired further skills on the jobs that make them well-matched on the basis of the skills needs of those jobs. Once again, OECD (2013) finds that on average across OECD countries, more than 75% of those who are under-qualified are well-matched for their jobs on the basis of the literacy required for those jobs. Under-qualification could also be a sign that employers are being forced to hire workers with lower levels of skills than they actually require due to a lack of well-qualified workers.

**The incidence of qualification mismatches varies across population groups and firm types.** Young and poor workers from rural areas, and those working in small firms and/or in the informal sector, are most likely to have skills that are not well matched with the requirements of their jobs: 57.2% of those aged 18-29 years are over-qualified for their jobs, compared to 43.2% of those aged 45-59. The incidence of workers with higher qualifications than those required for their jobs is 60% for those living in rural areas, compared to 49% for those living in urban areas; it is 68.3% for the poor and only 49.2% among other income groups. Over-qualification is also more prevalent among the self-employed (72.1%) than among wage earners (42.7%), and is more prevalent among those working in small firms (59.2%) than among those in medium (39.9%), and large firms (55.3%) (MTPE, 2014).

**The extent of the workforce's over-qualification levels varies significantly across economic sectors in Peru.** According to data from the National Household Survey (ENAH), workers with higher education (either in the professional or in the university track) are most likely to be over qualified for their jobs if they are employed in agriculture, fishery and livestock feeding (88.7%); commerce (81.4%); industry (61.7%); and construction (53.7%). In comparison, the share of workers whose higher education qualifications are well matched with the needs of their jobs exceeds the share over qualified in the mining (51%) and services (60.3%) sectors (MTPE, 2014). The higher prevalence of informal employment arrangements in certain sectors and in smaller firms may help to explain this sectorial heterogeneity in the rates of over qualification. Among workers with higher education, rates of over qualification are much higher for those working in the informal (77.5%) than formal sector (36.6%), as informal firms are generally less productive and make less use of workforce skills. This is further reinforced by the observation that workers who have completed post-secondary education, are also more likely to be over-qualified if they work in economic sectors characterised by low rates of formality, such as agriculture (6.5%), commerce (23.4%) and industry (30.3%) (Chacaltana and Yamada, 2009).

**Workers in Peru whose skills are well matched with the needs of their jobs are more likely to be employed in “high quality” jobs.** According to the MTPE’s job quality index (ICE) – which includes indicators of earnings, contractual arrangements, social security and working hours – workers whose skills are well matched with the requirements of their jobs are, on average, more likely to be employed in “high quality” jobs than workers whose skills are not well matched (MTPE, 2014).

#### Box 19. OECD Job Quality Initiative

The OECD framework for measuring and assessing job quality considers three objective and measurable dimensions of job quality that are both important for worker well-being and relevant for policy. Together, they provide a comprehensive assessment of job quality.

**Earnings quality** refers to the extent to which the earnings received by workers in their jobs contribute to their well-being. Although the level of earnings provides a key benchmark for assessing their contribution to material living standards, the way earnings are distributed across the workforce also matters for well-being. The OECD measures earnings quality with an index that accounts for both the level of earnings and their distribution across the workforce.

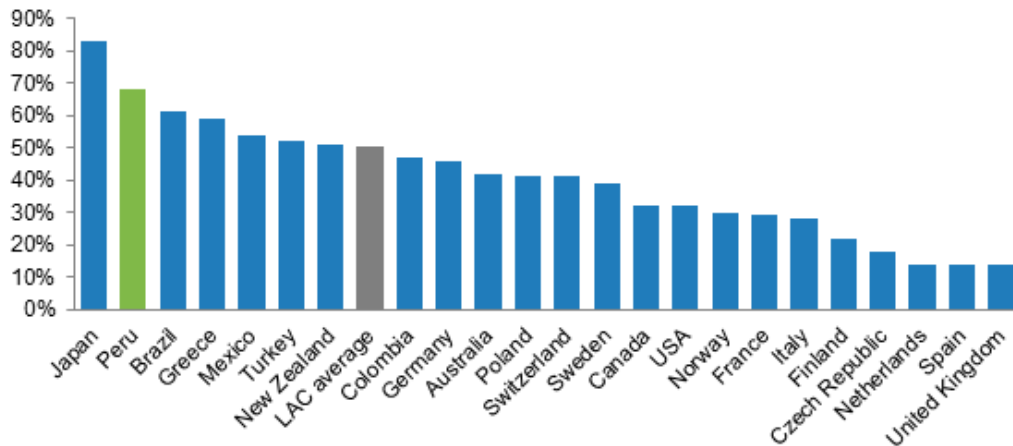
**Labour market security** captures the aspects of economic security related to the probability of job loss and its economic cost for workers. This is measured by the risk of unemployment that encompasses both the risk of becoming unemployed and the expected duration of unemployment. It is also measured by the degree of public unemployment insurance, which takes into account both the coverage of the benefits and their generosity.

**Quality of the working environment** captures non-economic aspects of job quality and includes factors that relate to the nature and content of work performed, working-time arrangements and workplace relationships. Jobs that are characterised by a high level of job demands, such as time pressure or physical health risk factors, combined with insufficient job resources to accomplish the required job duties, such as work autonomy and social support at work, constitute a major health risk factor for workers. Therefore, the quality of the working environment is measured by the incidence of job strain, which is a combination of high job demands and limited job resources.

Source: OECD (2016b), *How good is your Job? Measuring and Assessing Job Quality*, OECD, Paris, [www.oecd.org/std/labour-stats/Job-quality-OECD.pdf](http://www.oecd.org/std/labour-stats/Job-quality-OECD.pdf).

**Despite the large numbers of people who are over skilled for their jobs, many firms report having difficulty finding workers with the skills they need**

**In Peru, firms are experiencing difficulties in finding the skills they need.** According to the latest enterprise surveys conducted by the World Bank, nearly 34% of employers in Latin America struggle to find skilled workers, the highest level in any region in the world. This is despite decades of increasing enrolments in primary and secondary education (World Bank, 2015). The situation in Peru is slightly better, with about 28% of firms identifying an inadequately educated workforce as a major constraint for their business. A similar survey completed by the Manpower group, a recruitment company, found that in 2014, a much larger share (69%) of firms in Peru faced difficulty finding the workers they need: the second highest share of firms in Latin America (Manpower, 2015). Despite the significant variation in their findings, both studies suggest that a great number of firms are experiencing challenges in finding the skills they need.

**Figure 18. Percentage of firms reporting having difficulties filling jobs, 2015**

Note: LA Average based on eight countries: Peru, Brazil, Mexico, Colombia, Costa Rica, Panama, Guatemala and Argentina.

Source: Manpower (2015), Talent Shortage Survey.

**Many Peruvian firms find that graduates do not have the cognitive and social and emotional skills needed at work.** Regardless of the education level that they are looking for, firms appear to place as much importance on social and emotional skills, such as “teamwork” and “perseverance”, as on technical skills. In addition, behaviours and personal qualities, such as honesty and being responsible, appear to matter as much as having initiative and being organised (Lavado et al., 2015). Recent OECD research has demonstrated the importance of social and emotional skills (also known as non-cognitive skills) on a variety of life outcomes, including health, civic participation and engagement (OECD, 2015a), and has shown that they can be taught. To close this skills gap, there is a need to focus not only on improving the development of technical skills, but also on social and emotional skills. This is a challenge that Peru shares with other countries in the Latin America Region (Melguizo and Perea, 2016).

#### **There are a number of measures that Peru could implement to use skills more effectively**

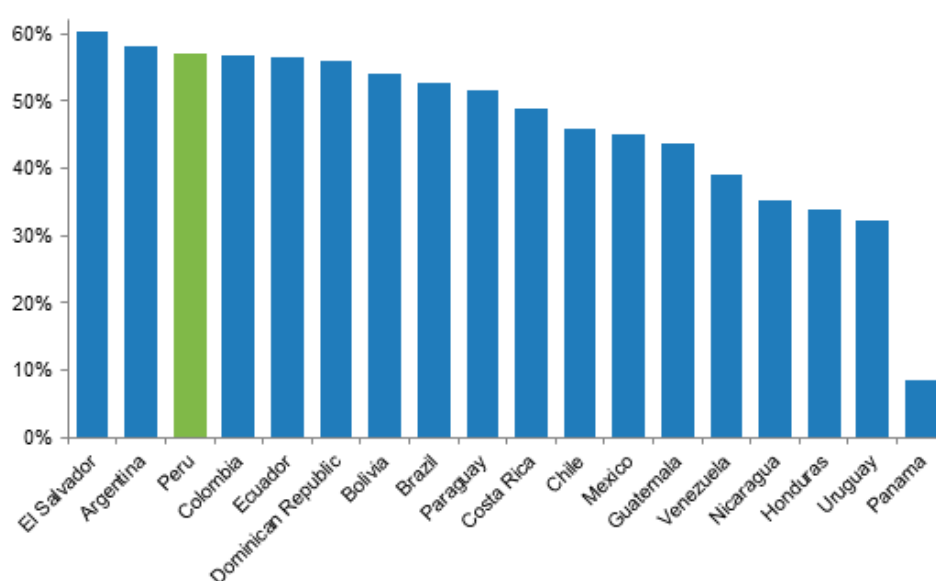
**Matches between skills and labour market needs can be improved by strengthening collaboration between education and the private sector.** A stronger collaboration between education and firms can improve the curricular relevance of what is taught and improve the responsiveness of educational institutions to labour market needs (Challenges 7 and 9). It can also result in increased work-based learning, which can improve the alignment between skills supply and demand by allowing employers to test prospective workers for a good match before hiring (OECD, 2014a). For example, the use of apprenticeships or internships in certain fields may give employers inside information about a candidate’s “actual” skills levels. In some cases, this can even lead to hiring the candidate even if she/he has lower qualifications than those theoretically needed.

#### **Firm-sponsored training can improve skills use at work**

**By investing in the skills of their employees, firms can improve their productivity and competitiveness.** Employer-sponsored education and training can help employees to improve their cognitive, social and emotional and occupation-specific skills. Higher levels of these skills can, in turn, raise productivity and innovation within the firm and in the broader economy. In addition, workforce training helps firms to reduce recruitment and human resources costs, while at the same time improving worker job satisfaction and firm reputation in the labour market. This can then increase firm competitiveness and facilitate the hiring of more productive workers, thereby creating a virtuous circle of innovation and productivity. By increasing such practices broadly, Peru could also enhance national productivity and competitiveness.

**Peru could do more to promote increased skills development in workplaces.** Employer investment in training in Peru is comparatively low, but the relevant data is scarce. One study found that 57% of manufacturing firms operating in the formal manufacturing sector offer training in Peru, which is relatively high compared with other countries in the region (Figure 19). However, given that the number of informal firms in Peru is high – around 87% of all firms (INEI, 2014) – the share of all firms providing training is much lower (Diaz et al., 2015). Estimates based on ENIVE, a household survey carried out in the Lima metropolitan area between 2004 and 2011, suggest that training directly administered by firms in both the formal and informal sectors reaches only 8.4% of the working population (Lavado et al., 2015). The World Economic Forum Competitiveness report ranks Peru 93<sup>rd</sup> out of 144 countries in terms of corporate investment in training, well below the OECD average and below countries that are comparable to Peru in terms of their GDP per capita.

**Figure 19. Share of firms in Peru and in other Latin American countries offering workplace training, 2010**



Source: Diaz, J.J., Chacaltana, J. and Rosas Shady, D. (2015) "Hacia un sistema de formación continua de la fuerza laboral en el Perú" ILO-IADB, Lima.

**The incidence of firm-sponsored training varies greatly by firm size.** Overall, 62% of workers in Peru declare that the firms they work for provide training, with small firms providing training to 40% of their workers, medium-sized firms providing training to 80%, and large firms to 90% (Diaz et al., 2015). Some large firms in Peru have sufficient scale to establish their own universities and technical centres, such as the Peruvian conglomerate Interbank, which owns and operates an array of top service providers such as banks, insurance companies, retailers, department stores, restaurant and drugstores chains, universities, technical institutes and schools. However, these centres do not have official recognition and cannot, therefore, certify the acquisition of skills. Some other leading companies have established agreements with prestigious technical centres for the direct training of new technicians. For example, Ferreyros, the supplier of Caterpillar equipment for mining and construction, runs a hands-on training programme using Caterpillar equipment with 33 technical schools (Lavado et al., 2015). Firm-sponsored training is also provided by sectorial vocational schools that belong to national services of sectorial formation, such as the *Servicio Nacional de Adiestramiento en Trabajo Industrial* (SENATI), in collaboration with prominent multinationals.

**Peru could do more to incentivise firms to invest in skills development.** A number of public policies to support firm training have had positive results in Peru, but they are no longer in place. Between 2010 and

2012, the Law for Promotion of Investment in Human Capital provided incentives for workplace training by allowing for a tax deduction up to a certain threshold for funds invested in the training of workers inside the firm. In 2011, training plans were presented by 2 080 firms, and investment by firms reached a level of PEN (Peruvian Sols) 488 million, with 105 000 workers being trained under this scheme (Díaz et al., 2015). When compared with the impact of some training programmes provided directly by the public sector, the impact of these policies was relatively strong. In 2013, a law was passed to promote investment, productive development and firms' growth. In particular, this law gives SMEs a credit against income tax for training expenses. Initially, this credit was up to 1% of their payroll; later it increases up to 3%. This law will be in place, at least initially, for the period 2014-2016 (Government of Peru, 2013). These policies can mitigate the disincentives faced by some, mainly smaller, firms to fund training for workers to develop general skills (as opposed to firm-specific skills) that are transferable to other firms (see Box 20). More specifically, under these schemes the cost is shared by the firm and the state, thereby decreasing the financial risks associated with the provision of training to develop general or firm-specific skills.

**There is a particular need to incentivise investment in skills among smaller firms.** In addition to tax credit/deduction schemes, such as that envisaged by the Law for Promotion of Investment in Human Capital, which tended to benefit large enterprises and skilled workers, government transfers could directly incentivise small and medium-sized enterprises (SMEs) and workers, who bear the largest share of training costs in Peru, to undertake further training. Direct government funding of workplace training for workers in informal and micro enterprises could help to address the issue of missing income declarations among informal firms and boost workforce training (Lavado et al., 2015). Moreover, consideration could be given to improving equity by extending subsidies to cover programmes that improve literacy and non-cognitive skills development among workers in the less productive sectors of the Peruvian economy.

#### **Box 20. Identifying barriers to employer engagement in skills investment**

The OECD has gathered some common themes and experiences regarding the most frequent barriers to employer engagement in skills development (OECD, 2013b). In general, there is a need to achieve greater reciprocal understanding of the perspectives, terminology and approaches to skills used by government and employers in designing and implementing policies for employer engagement in skills.

A number of internal and external barriers to employer engagement have been identified, including:

- Lack of a strong business case to convince top management that skills are central to future business viability.
- Limited time, resources and capacity to analyse own skills needs, engage with training providers and offer high quality apprenticeships – especially among SMEs.
- Employer reluctance to invest in in-house training or collaborate with other businesses to develop skills due to the risk that competitors will “poach” trained employees.
- Many young people lack basic skills and are not ready for work or apprenticeships.
- Limited flexibility and responsiveness of education and training institutions to employers' fast-changing needs.
- Complexity and inconsistency of government policy design, delivery and funding.

Source: OECD (2013b), OECD Skills Strategy Spotlight: Employer Engagement to Enhance Skills Investment, no 02, February 2013, <http://skills.oecd.org/developskills/documents/employerengagementtoenhanceskillsinvestment.html>.

**Peru can learn from other countries how to boost training in small and medium-sized firms.** In an economy where SMEs are dominant, policies targeted at enhancing skills utilisation in these firms may help to



boost productivity. Recent OECD analyses provide examples of how policy makers can stimulate networks among employers, particularly SMEs, to co-invest and design workplace-training initiatives in partnership with vocational education institutions and government. For example, in Ireland, Skillnets (Box 21) relies on strong local networks of small and medium-sized employers to develop and deliver training to unemployed and employed individuals. It also provides training to managers of SMEs.

### Box 21. Training programmes for existing workers and SMEs

#### Korea

All training programmes for existing workers in Korea are financed through the Employment Insurance Fund. Most programmes comprise subsidies paid to employers who provide skills development programmes for their employees. The government refunds training expenses to insured employers when they provide, either directly or through outsourced providers, vocational training authorised by the Ministry of Education and Labour. A subsidy can also be paid to cover training costs and the minimum wage when an employer offers training leave to employees with one or more years of service.

There are a number of programmes to encourage SMEs to provide training to their employees. SMEs can be reimbursed for all or part of the training costs for their employees who take part in authorised training programmes to improve their performance of “core tasks”, such as sales, marketing, production and quality management, human resources and organisation management.

There is support for groups setting up a “training consortium” to help provide vocational training to SME workers. The government subsidises training expenses and facility and equipment expenses to the consortium, which could be comprised of companies, employers’ federations, universities or other training providers. Around 250 000 employees from 120 000 SMEs participated in the consortium project in 2011, a very small proportion of all SME employees in Korea.

#### Ireland

Ireland’s Skillnets was established in 1999 to promote and facilitate workplace training and upskilling by SMEs. It is the largest organisation supporting workplace training in Ireland. In 2011, it had 70 operational networks, through which it trained over 40 000 people for a total expenditure of EUR 25 million. It is a state-funded, enterprise-led body that co-invests with enterprises, particularly SMEs, when they co-operate in networks to identify and deliver training suited to their workforces. A network of SMEs, which are mostly sectorial or regional, is guided by a steering group of the local enterprise representatives. The steering group gives strategic direction and guidance to a network manager who co-ordinates all operational activity leading to the delivery of an agreed training plan with learning interventions suited for the member company workforces. A network of SMEs, which are mostly sectorial or regional, is guided by a steering group of the local enterprise representatives. The steering group gives strategic direction and guidance to a network manager who co-ordinates all operational activity leading to the delivery of an agreed training plan with learning interventions suited for the member company workforces. The national programme is co-ordinated by Skillnets, who contract with all networks and provide programme support and monitoring to ensure the delivery of agreed quantitative and qualitative target outputs. In 2011, Dublin had 30 networks, but these were predominantly sectorial networks with a national remit and company membership. Among Skillnets member companies, 25% are Dublin-based, as are 33% of trainees.

#### Sources:

OECD (2014b), *Employment and Skills Strategies in Ireland*, OECD Reviews on Local Job creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264207912-en>;  
 OECD (2013c), *Korea: Improving the Re-employment Prospects of Displaced Workers*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264189225-en>.

### High performance workplace practices can boost the use of skills at work

**Workplace practices and environments have a strong influence on effective skills use.** The OECD (2016a) notes that: “What happens inside the workplace – the way work is organised and jobs are designed as

well as the management practices adopted by the firm – is a key determinant of how skills are used. In particular, it has been argued that better skills use and higher productivity can be achieved by implementing what are called High Performance Workplace Practices (HPWP)...” HPWP, which include work organisation and management practices, are found to be positively related to the use of information-processing skills at work (OECD, 2016a). They explain between 14% and 27% of the variance in skills use across individuals. The way work is organised – the extent of teamwork, autonomy, task discretion, mentoring, job rotation and applying new learning – influences the degree of internal flexibility to adapt job tasks to the skills of new hires, and promotes a better allocation of workforce to required tasks. Some management practices, such as bonus pay, training provision and flexibility in working hours, provide incentives for workers to deploy their skills at work more fully.

**High performance work practices are not widespread in Peru.** For example, Peruvian enterprises have generally not established adequate procedures for aligning workforce-training objectives with their broader organisational objectives. A survey conducted among 87 large Peruvian firms shows that although training policies are designed taking into account a firm’s competitive advantages, as these depend to some extent on employee knowledge and skills, they are not necessarily aligned with the firm’s strategic objectives (Sibina, 2014). Major barriers have been identified in the lack of planning and dissemination capabilities within firms. Workers seem, among other things, to not communicate enough and enjoy only a small degree of autonomy. These are work and organisational practices that usually characterise high performing organisations.

**Dialogue between workers and employers can facilitate the adoption of working practices that promote better skills use.** In Sweden, for example, employee involvement in the management of businesses is mandated by legislation. Sweden’s co-determination laws require employers to negotiate with unions in the workplace before making changes to business strategy or practice. HPWP are both widespread and largely unquestioned in Sweden. Even in countries where there is no (or a much more limited) legislative requirement for employers to involve unions in management decisions, there are many examples of collaboration between employers and unions on developing and applying vocational skills. For instance, Unionlearn is the United Kingdom’s Trade Union Confederation’s education, learning and skills arm. It trains workers and engages with employers to develop training plans, and has successfully trained more than 30 000 representatives who have, in turn, provided training to more than 220 000 people over the past 12 years. Evaluations have pointed to an increased awareness and disposition towards training for both employers and workers (OECD, 2016a).



### Box 22. Policies to encourage workplace innovation: Examples of good practice

In **Finland**, the Workplace Development Programme ran as a national government programme from 1996 to 2003 (TYKE programme) and continued from 2004 until 2010 with expanded resources (TYKES programme). It supported more than 1 800 development projects in Finnish workplaces during this time. The programme's introduction was motivated by the belief that sluggish productivity growth in Finland, and the ensuing weakened competitiveness of firms in many traditional industries, were due to inadequate utilisation of skills in the workplace. The programme aimed to disseminate new work, organisational and management practices, models and tools, and to develop a "learning organisation" culture in Finland.

The programme initially focused on individual enterprises, but networks played an increasing role and there was also a strong emphasis on disseminating good practice and mutual learning. A special focus in the programme was on innovative solutions to work-related and organisational issues. In 2008, the programme was transferred to Tekes (the Finnish Funding Agency for Innovation) and the promotion of workplace innovation was given a permanent position in the agency's service production to companies. Today, Tekes funds the development of work organisation through a new programme entitled: Liideri – Business, Productivity and Joy at Work. Qualitative evaluations suggest that the TYKE and TYKES programmes were effective in promoting workplace innovation and productivity (Oosi et al., 2010; Arnkil, 2003).

In Australia, policy engagement with HPWP has been driven by a perceived need to increase innovation and productivity. A number of Australian initiatives have sought to promote best practice in this area, dating from the Best Practice Demonstration Programme in the early 1990s, to the more recent Partners at Work Grants Programme currently operated in Victoria (Stone, 2011; Wiesner, McDonald and Banham, 2007). This programme offers competitive grants to assist workplace changes that benefit all stakeholders, and is designed to encourage the development of co-operative practices in the workplace. It provides funding to support the appointment of consultants to work with organisations and for relevant training investments. There is evidence to show that some targeted firms have successfully adopted HPWP, and that these firms have experienced improved performance.

Various initiatives take place in the Netherlands aimed at increasing the awareness and managerial applicability of High Performance Workplace Practices led by the government, companies, and knowledge institutes. For example, in the Dutch province of Noord-Brabant, the regional government collaborates with various stakeholders to stimulate HPWP and to increase cohesion among various local initiatives. Additionally, the regional government has introduced subsidies for HPWP. Companies in the region can also win a Social Innovation Award as recognition for a promising HPWP initiative. According to a large-scale survey by the research institute Research for Innovation from the Erasmus University Rotterdam (INSCOPE) the region of Noord-Brabant is one of the leading regions in the Netherlands on various types of innovation. Another initiative is the Expedition Social Innovation, funded by the Dutch government, in which a group of entrepreneurs and managers meet and discuss what HPWP can mean for their organisation, and how they can introduce them into the organisation.

The pursuit of workplace innovation in New Zealand has centred on improving productivity performance. The country has singled out the poor utilisation of skills in the workplace as a key policy issue. In this context, the High-Performance Working Initiative (HPWI) provides business coaching for small to medium-sized businesses to help streamline work practices to improve performance, while also increasing employee engagement and satisfaction. Business improvement consultants work with firms to improve their productivity. Funding is provided by the government agency Callaghan Innovation, with the firm also providing half the funding. The HPWI is part of a wider suite of services provided by Callaghan Innovation to help businesses improve their performance through improving their innovation skills.

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 Wiesner, R.J. McDonald and H. Banham (2007), "Australian Small and Medium Sized Enterprises: A Study of High Performance Management Practices", *Journal of Management and Organisation*, Vol. 13, pp. 227-248.

### Labour market institutions matter for the use of skills at work

**Labour market institutions may affect the way skills are used by employers.** Labour market institutions can be used as policy levers to enhance skills use. For example, stringent employment protection legislation (EPL) on permanent workers reduces labour market flexibility and the efficient allocation of workers to jobs, which is likely to increase skills mismatch. However, stringent EPL may also increase labour costs and average tenure, which could encourage employers to better utilise the skills of their workforce – especially, if the use of temporary contracts is restricted by tight rules on their use and renewal. Higher minimum wages and tax wedges could encourage improved skills use, since one possible channel of adjustment for firms coping with higher wage costs is to use the skills of their existing staff more efficiently (Hirsch, Kaufman and Zelenska, 2015; OECD, 2016a). Recent evidence from OECD countries (OECD, 2016a) shows that the effect of more stringent EPL is more likely to increase the likelihood of skills mismatch rather than prompt firms to use skills more effectively. With this in mind, Peru should consider whether its labour market institutions are calibrated to maximise skills use.

#### Box 23. Promoting the better utilisation of skills in Flanders, Belgium

In Flanders, Belgium, collaborations have been built between the unions, academics and government representatives to help managers promote better skills utilisation in a number of different sectors. Such collaboration is particularly evident in the province of Limburg. The fragility of the local economy, which has traditionally been based on low-skilled work and a few large employers, was recently demonstrated by Ford's decision to leave the region. Local policy makers are now faced with the problem of finding new employment for low skilled ex-factory workers whose transferable skills are limited. At the same time, the ambition is to move the region towards more productive, higher skilled employment. The local union has responded by setting up "best practice labs" for innovative work organisation, in co-operation with a coalition between academics, unions, enterprises and consultants (Flanders Synergy), subsidised by the Flemish government.

Best practice labs have been set up in the construction, logistics, healthcare, social economy, social service/care sector and agricultural sectors. Each one functions as a learning network where companies share experiences. Each lab covers seven themes, each representing a domain in which managers can have an influence.

One theme has been exploring new ways that firms can expand their market base while also improving job quality; another has been exploring ways of involving workers more in decision making. The workshops have proved so useful that one sector, construction, is now running its own labs, independent of public funding. The Foundation for Innovation in Work (*Stichting Innovatie en Arbeid*) in Flanders also collects examples of initiatives that combine skills utilisation and work organisation and makes them available through a website.

The health and social care sectors in Flanders have also been the focus of restructuring to produce better quality jobs in a number of regions, spurred by local labour and skills shortages. In Limburg, the Provincial Development Agency (POM Limburg) set up a platform in 2010 called Platform Care Limburg (*Platform Zorglandschap Limburg*) to address work organisation issues within the care sector in 2010; it had support from the provincial government. This scheme has focused on improving work organisation within local hospitals and nursing homes to create more flexible work organisation and increase labour productivity. One workstream has focused on combining part-time jobs across organisations to create full-time jobs. This shows the potential for the public sector to improve skills utilisation and job quality in its own workforce, which can be particularly important in rural areas where the public sector is a significant local employer.

Source: OECD (2015b), *Employment and Skills Strategies in Flanders, Belgium*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264228740-en>.

## Summary and policy implications

**Peru is not making full use of the skills it has invested in developing.** Developing and activating skills are necessary but insufficient for increasing productivity and competitiveness: skills must also be put to effective use at work. The use of skills at work in Peru is inefficient as many workers are over qualified or under qualified for their jobs. These sorts of mismatches are a drag on Peru's productivity.

**Despite high apparent rates of skills underutilisation, firms still report difficulties finding the skills they need.** To some extent, these high rates of over qualification reflect deficiencies in the development of high quality and relevant skills in school and higher education. Firms in Peru report having problems finding employees with the cognitive, socio-emotional and technical skills they need. These are issues discussed in greater detail in Challenge 2. At the same time, the prevalence of over qualification may suggest an inefficient allocation of skilled workers across the economy and/or a lost opportunity on the part of firms to reorganise their workplaces to make better use of the talent they have available to them in a way that could boost their productivity and competitiveness.

**Peru can do more to improve matches and the effective use of skills in workplaces.** Collaboration between firms and educational institutions could reduce mismatches, while effective firm-sponsored training could improve skills gaps and skills use in the workplace. Greater efforts are needed to raise awareness among firms of the importance of making the effective and intensive use of skills in the workplace a central component of their business strategies. Better human resources practices can provide workers with the conditions to make optimal use of their skills and set incentives for continuous learning and skills development. In this respect, increased adoption of high performance workplace practices could be very important for improving skills use.

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## CHALLENGE 6. PUTTING SKILLS TO BETTER USE TO FOSTER A MORE DIVERSIFIED AND PRODUCTIVE ECONOMY

### A selection of challenges identified by Peruvian workshop participants:

*“Promote training programmes for the identified high growth sectors.”*

*“Introduce training programmes for using new machineries and technologies.”*

*“Without adequate professional opportunities the most talented leave the country.”*

*“There are not enough researchers.”*

*“Promote a research and development culture in schools and strengthen it in universities.”*

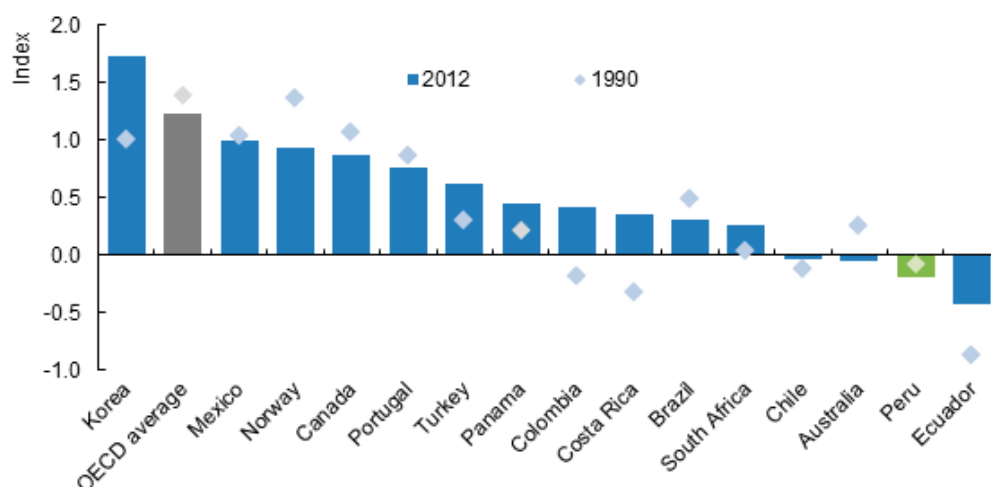
*“Foster soft skills for entrepreneurship.”*



**Peru's economic strength rests primarily on commodities.** Peru has failed to shift production from commodities to more sophisticated products in manufacturing and other knowledge-intensive sectors. Over the past decade, Peru's technology exports have remained very low in comparison with most of the benchmark countries. In particular, in 2013, only 3% of Peru's exports were medium high-technology products. While Peru has achieved considerable growth in production volumes of non-traditional exports (agriculture, fishing, chemical, manufacturing and textile goods), which are 2.6 times greater today than 10 years ago, the majority of this increase is accounted for by products with low levels of sophistication (PRODUCE, 2015). Peru's imports include industrial machinery and equipment, crude and refined oil, and transportation and construction vehicles. This suggests that Peru is dependent on imports for manufactured goods and high-technology products.

**Peru's economy is not well diversified.** The complexity of Peru's production structure is lower than most benchmark countries. The economic complexity indicator (ECI) ranks the diversity and complexity of a country's export basket. It combines measures of a country's diversity (how many products a country produces) and the ubiquity of those products (the number of countries able to produce those products). In 2012, Peru ranked 80th out of 144 countries for economic complexity and, in contrast to most Latin American economies, its ECI has worsened over the past two decades (Figure 20).



**Figure 20. Economic complexity indicator (ECI), 1990-2012**

Note: ECI ranks how diversified and complex a country's export basket is. The most complex products are sophisticated chemicals and machinery, whereas the world's least complex products are raw materials or simple agricultural products.

Sources:

Hausmann et al. (2012), *The Atlas of Economic Complexity*, Puritan Press, Cambridge, MA;

Simoes and Hidalgo (2012), "The Economic Complexity Observatory: An analytical tool for understanding the dynamics of economic development", *Workshop at the Twenty-Fifth AAAI Conference on Artificial Intelligence*, August 2011, Cambridge, MA.

**Innovation and entrepreneurship are essential for economic diversification and productivity growth.** The currently low rates of innovation and entrepreneurial activities constitute a drag on Peru's competitiveness in international markets. The country registers low levels of both public and private research and development (R&D), while entrepreneurial activity is confined to traditional sectors (OECD, 2011). Innovation and entrepreneurship underpin the creation of new products, new businesses and new markets. Sustaining higher rates of innovation and entrepreneurial activity will help Peru to increase the complexity of its economy and the competitiveness of its export basket.

**Using skills more effectively will be critical to promoting a more diversified, innovative, and productive economy.** Efforts to diversify and build a more innovative economy need to be complemented by a strategy of using existing skills more effectively and creating conditions that generate greater demand for higher skills. Such measures would establish the foundation for a productive transformation, enabling Peru to move up the added-value ladder to conquer higher segments of the value chain, and strengthen the foundations for sustained higher rates of innovation and entrepreneurial activity.

### **Peru can boost productivity and growth by stimulating greater economic diversification**

**Peru has witnessed a decade of substantial growth in labour productivity, but the contributions from reallocating labour from low to high productively sectors were only modest.** Between 2001 and 2012, the average output per worker increased from Peruvian Sols 9 238 to 13 850, which corresponds to an average annual increase of 3.8 percentage points. In line with what has been observed in other Latin American countries (McMillan and Rodrik, 2011), both the within and across sector components had a positive impact on labour productivity. Efficiency gains within the same sector have boosted aggregated labour productivity by 34.7 percentage points (2.7% on annual basis), while structural change in the form of the reallocation of workers from less productive to more productive sectors increased aggregate labour productivity by 15.2 percentage points (1.3% on annual basis). The effects of structural reallocation were more remarkable in the case of agriculture, a sector that lost 8.3% of its employed workforce to more productive occupations. At the same time, agriculture was among the economic sectors registering high labour productivity growth (4.6% on annual basis), together with commerce (4.5%) and construction (3.4%). However, the manufacturing sector,

which is highly productive, achieved only a 2.7% growth in productivity, thereby supporting the idea of a mild convergence in productivity across sectors.

**Peru can foster a more productive economy through a strategy of diversification.** A large strand of economic literature (Hausmann and Bailey, 2008; McMillan and Rodrik, 2011) emphasises the importance of sectorial diversification and structural change as drivers for helping developing economies to narrow income and productivity gaps with more developed economies. Productive diversification is needed because factors and advantages that generate high growth during an initial phase of rapid development, such as low-cost labour and imitation of foreign technology, disappear when middle- and upper-middle-income levels are reached, thereby requiring new sources of growth to sustain further increases in per capita income (Agenor and Canuto, 2012). The countries that manage to pull out of poverty and get richer are those that can diversify away from agriculture and other traditional products (McMillan and Rodrik, 2011). Differences in productivity growth trajectories between Latin American and some Asian countries in the last decades may be explained by the ability of the latter to diversify the structure of their economies and to add more value to their export baskets. To support Peru in its efforts towards economic diversification, the OECD has initiated a comprehensive country review that seeks to support Peruvian policy makers in designing policies that reconcile economic, social and environmental objectives (Box 24).

#### **Box 24. OECD advice on sustainable development paths: the Multi-Dimensional Country Review of Peru**

The OECD Multi-Dimensional Country Reviews (MDCRs) tailor broad OECD expertise to the realities of emerging and developing economies. Policy makers need to reconcile economic, social and environmental objectives to ensure that their country's development path is sustainable and that the lives of citizens improve. To support this need, MDCRs aim to design policies and strategies that do not simply promote growth, but rather development in this more comprehensive sense.

The reviews are “multi-dimensional” in several respects. First, MDCRs target multiple policy objectives, not just the rate of growth, but also its sustainability and equity, as well as non-income dimensions of well-being. Second, MDCRs address cross-cutting issues covering a broad spectrum of policy areas, rather than having a strictly sectorial focus. They help to understand the underlying relationships between competing challenges. Third, MDCRs consider the many dimensions of policy options, in particular the compatibilities and complementarities between policies.

In particular, MDCRs are composed of three distinct phases: Volume 1 is the “Initial Assessment”, Volume 2 presents “In-depth Analysis and Recommendations”, and Volume 3 is “From Analysis to Action”.

The MDCR Peru Volume 1 was the first policy review of the OECD Country Programme with Peru to be launched by the Secretary General in October 2015 (OECD, 2015). It identified the main constraints to achieving sustainable and equitable objectives in well-being and economic growth. Volume 2 analyses and provides recommendations in three areas identified as key to boosting sustainable and inclusive development: economic diversification and productivity, connectivity (transport infrastructure and logistics), and tackling informality. Volume 3 of the MDCR will support the implementation of these recommendations. As in other Latin American economies, this final phase is particularly relevant in Peru given the complexity of both the political economy and the policy-making process to make reform happen.

For each phase, a report is published and a series of workshops are organised. The MDCR methodology is based on quantitative economic analysis, as well as qualitative approaches including foresight and participatory workshops. Quantitative methods include standard approaches and a comparative analysis with a selection of countries, referred to as the benchmark countries.

Source: OECD (2015b), Multi-dimensional Review of Peru: Volume I. Initial Assessment, OECD Development Pathways, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264243279-en>.



## Peru should support the expansion of high demand sectors

**Stimulating the expansion of high demand sectors can increase productivity and growth.** In an increasingly interconnected global economy, growth requires extending beyond national borders to find markets where a high demand for a country's products exists, and where there is room to integrate into global value chains (GVCs). A number of Peruvian firms, including SMEs, are already benefitting from the integration into GVCs, although this is mainly by providing standardised products with low added value (Peña-Vinces et al., 2016). Co-ordination with, and support by, the government can be particularly helpful for furthering the competitive advantages of Peruvian firms. For example, co-ordination between the government and the private sector can generate economies of scales by aligning the goals of different firms towards common innovation objectives. Government support can also facilitate the identification and discovery of high demand products and sectors where Peru can leverage on its national strengths to successfully add value in global markets.

**Peru has already taken steps to identify and support high demand sectors.** As part of the National Plan for Productive Diversification, the Ministry of Production and the Ministry of Tourism and Foreign Trade (MINCETUR) has been conducting exercises to identify sectors in the global economy whose goods and services are high in demand. By focusing on these sectors, Peru could expand its export capacity and integrate into GVCs with more complex goods and services (PRODUCE, 2015).

### Box 25. International experiences in productive diversification: A challenging path

Economic history has shown that only a few countries that have achieved middle-income status have gone on to attain the status of a high-income country. Only one country (the Republic of Korea) out of the seven countries that could be classified as middle income in 1975 managed to reach high-income status by 2005. By contrast, Brazil and South Africa, which had double the per capita income of Korea in 1975, have remained at roughly the same level. Many middle-income countries tend to make two common mistakes: either they cling too long to past successful policies, or they exit prematurely from the industries that could have served as the basis for their specialisation process.

#### Moving towards a more diversified economy: Malaysia

In recent decades, Malaysia has leveraged the three channels of globalisation - trade, capital, and economic management - to expand its tradable sector. It has consequently become one of the most sophisticated exporters of manufacturing goods in the world. At the same time, the services sector in Malaysia has yet to modernise and contribute substantively to economic growth.

Malaysia's economic strategy to become a high-income economy by the year 2020 is strongly supported by the Economic Transformation Programme (ETP), Strategic Reform Initiatives (SRIs), and Government Transformation Programme (GTP). Public investments through ETP are expected to accelerate in the future as the implementation of large infrastructure and investment projects gather momentum and are funded by government-linked companies. These investments have also bolstered private manufacturing, services, and mining sectors in targeted growth corridors.

The ETP has made great strides in liberalising crucial manufacturing and services activities to pull in a skilled labour pool and relax restrictions on capital mobility. However, more can be done. Policy makers should promote entrepreneurship and innovation to begin reaping the benefits of information networks and skilled labour before the gains from cheap labour and knowledge spillovers are exhausted. Rapidly expanding the secondary and then tertiary education systems will be critical in producing graduates with the skills that employers require.

Source: Flaen A., E. Ghani and S. Mishra (2013), "How to Avoid Middle-Income Traps? Evidence from Malaysia", in Economic Premise-Poverty reduction and economic management network, The World Bank, Washington DC, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.689.5231&rep=rep1&type=pdf>.

## Policies to develop, activate and use skills effectively can support diversification into high demand sectors

**Skills policies can help Peru to achieve greater economic diversification.** Achieving structural change requires a whole-of-government approach whereby the strategic goals of the centre of government are incorporated into the policy actions of several ministries, including those with a responsibility for the effective development, activation and use of skills. Effective skills development ensures that firms can hire individuals who can work with increasingly complex products. To facilitate productive diversification, it is essential that actors in the skills system address skills shortages that have been identified in high productive sectors, such as machinery and motor vehicles (Melguizo and Perea, 2016), through the provision of firm-sponsored training programmes and by strengthening the job relevance and quality of vocational education and training. It is also necessary to address the issue of over qualification among workers who have completed upper secondary education (Challenge 5) and are employed in the low productive end of the Peruvian economy. To this end, incentives should be designed and obstacles removed to ensure greater levels of flexibility in the labour market (Challenges 3 and 4), thereby facilitating the transitions of workers across economic sectors.

### Box 26. Productive diversification and skills policies in Korea

Korea's economic development illustrates how the overarching objective of productive diversification was achieved and accompanied by appropriate skills development policies. The Government of Korea initiated an economic development strategy based on a top-down approach that consisted of two main pillars. First, the government selected core industries on which the country's economic development should be based (e.g. the light or heavy chemical industry). Second, the government assessed employers' training capacities, and, depending on whether or not they were deemed sufficient to meet the scaled-up needs for skilled and technical manpower, chose to either support employers to carry out enterprise training or directly trained the workforce needed.

The first two Five-Year Economic Development Plans (FYEDPs) were the foundation for the industrialisation of Korea. Estimates of the supply and demand of the skilled workforce were included in the plans. Based on these estimates, skills development policies were developed and then implemented. The introduction and subsequent revisions of the Vocational Training Act and skills development plans were also a crucial part of the FYEDPs, and the Five-Year Scientific and Technology Promotion Plans (1962-66 and 1966-77) or Five-Year Human Resources Development Plan (1972-76), which were developed in parallel with the FYEDPs. Over the years, the management of the training programmes and their funding schemes has evolved to account for both the economic cycle and the global demands arising from processes of technological change.

At a time when inequalities among the rural and urban populations were high, the resulting differences in employment rates and skill levels among the national workforce were significant, and reflected in individual productivity and wage disparities. To address this inequality challenge, the government designed policies to enhance job opportunities and productivity through training provision.

Source: Korea Development Institute/World Bank Institute (2007), Korea as a Knowledge Economy Evolutionary Process and Lessons Learned, Seoul, Korea, [www.usp.ac.fj/worldbank2009/frame/Documents/Publications\\_regional/409300PAPER0KR101OFFICIAL0USE0ONLY1.pdf](http://www.usp.ac.fj/worldbank2009/frame/Documents/Publications_regional/409300PAPER0KR101OFFICIAL0USE0ONLY1.pdf).

### Strong skills at the local and regional levels are needed to foster greater economic diversification.

The National Plan for Productive Diversification aims to identify potential regional productive clusters through an assessment of their relative economic strengths and weaknesses. As part of this process, regional skills pools and training institutions should be considered in the assessment of regional potential. For example, the Bayovar phosphates mine in the region of Piura could become the engine of a cluster that specialises in chemical and pharmaceutical products, but only if supported by appropriate investments in local skills development and activation (PRODUCE, 2015). Partnerships between technical institutes and private companies (Challenge 9), such as those exploiting the mine, are already launching sector-specific training programmes, which could be complemented by specific higher education programmes in chemistry and pharmacy supplied by the local university. More broadly, information on available skills and skills assessment

and anticipation exercises should support discussions on the identification of sectors with high growth potential (Challenge 7), while the number of higher education graduates should be aligned with forecasted occupational demands from these sectors to minimise skills shortages and mismatches.

**A strong skills base can attract foreign investment, encourage further skills development and facilitate knowledge transfer.** The Bayovar example illustrates the role of Foreign Direct Investments (FDIs) and multinationals in fostering economic development by bringing FDI and knowledge spillovers. International experiences show that links between multinationals and local firms are a major source of technology transfer, as multinationals bring training, technical assistance and information concerning new technologies (see Box 27).

#### **Box 27. Assessing the balance between local and regional skills for productive diversification**

The OECD Local Economic and Employment Development (LEED) programme has developed a statistical tool to help understand the balance between skills supply and demand within local labour markets. According to this methodology, local economies can fall into four different categories: high skills equilibrium, skills deficit, skills surplus, or low skills trap. The results of the skills analysis should be interpreted in relative terms as the categories are computed in relation to the median of the distribution for a given analysis (e.g. within a country, across similar regions, across metropolitan areas).

##### **Measuring skills supply**

In order to approximate the supply of skills, the percentage of the working age population with a post-secondary education is used. Although education is not a perfect proxy for skills, this is the only indicator consistently available at the sub-regional level and comparable across countries.

##### **Measuring skills demand**

In order to approximate the demand for skills the following two variables have been combined into a composite index:

- Occupation: percentage of population holding medium- and high-skilled occupations.
- Productivity: Gross Value Added (GVA) or Gross Domestic Product (GDP) per worker, or wages (according to data availability).

Medium- and high-skilled occupations are identified for the purpose of this study as those professions requiring at least a post-compulsory education, and managerial positions that require a relevant period of work experience.

GVA per worker, GDP per worker and wages can be useful proxies for productivity and vary significantly across regions. They provide an indication of the intensity in which higher levels of skills are used at the workplace, which is normally mirrored by higher output and/or remuneration.

Source: OECD (2014), Job Creation and Local Economic Development, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264215009-en>.

**While beneficial to the country overall, economic diversification makes low-skilled workers vulnerable to displacement.** Within sector productivity gains usually take place with the expansion of more productive firms at the expense of those that are less productive and which typically employ lower-skilled workers. As a consequence, this process of creative destruction often results in the shedding of low-skilled labour. OECD work (OECD, 2016a) shows that 2-7% of workers with a year or more's job tenure are displaced annually in OECD countries. Research shows that such job churn is associated with higher levels of worker income and satisfaction overall (Hijzen and Menyhert, 2016 in OECD, 2016a). However, workers who are less mobile or less able to adapt to new job requirements – typically the low-skilled – can face greater insecurity, earnings volatility and unemployment, which weakens the potential benefits of reallocation (OECD,

2016a). The large number of firms with low productivity in the informal sector in Peru means that there are a large number of low-skilled workers with limited access to training opportunities and at great risk of jobs loss.

**Measures to help displaced workers to reskill or upskill are needed to mitigate the inequalities that economic diversification can entail.** Policies that support the development of foundation and technical skills among displaced, low-skilled workers are critical to minimising unemployment and poverty. However, it is also important to ensure that the means of facilitating labour mobility towards more productive firms does not involve taking the best employees from less productive firms. The integration of Peruvian products and services into global value chains, and corresponding increases in Peruvian output per capita, should ensure that the transition towards a high-skill, high-productivity equilibrium benefits all workers.

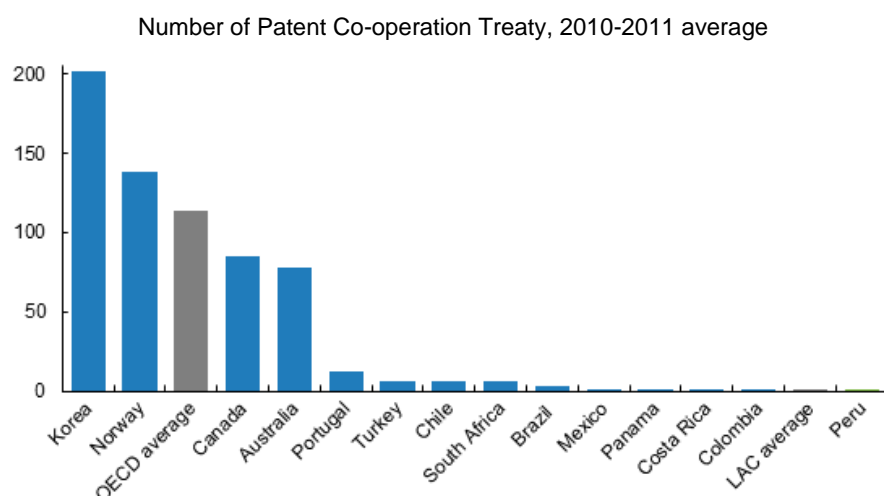
### **Increased innovation can help Peru to diversify and boost productivity**

**Greater innovation can help to fuel Peru's ambitions to achieve sustained economic growth through productive diversification and integration into global value chains.** Innovation, which involves the creation and diffusion of new products, processes and methods, can be a critical element for Peru's economic and social progress. While not a goal in itself, innovation provides the foundation for new businesses, new jobs and productivity growth (OECD, 2015a), and as such deserves special attention in the context of the strategic objectives moving Peru's policies towards 2021. The experiences of successful emerging and developing countries indicate that a more proactive role by government in fostering innovation could help Peru develop new competitive advantages and alleviate constraints that hinder this process (OECD, 2011).

**Investment in research and development, both by the public sector and by firms, is very low and has a direct impact on the capacity for innovation.** Peru remains one of the countries with the lowest budget for science and technology in the Latin American region. In 2014, it ranked 100<sup>th</sup> out of 144 countries in the total capacity for innovation, 117<sup>th</sup> for the quality of its research institutions, 109<sup>th</sup> for the collaboration between university and industry in research and development, and 119<sup>th</sup> for company spending on research and development (World Economic Forum, 2014a). Business expenditure on research and development relative to GDP is one of the lowest in Latin America and remains far below OECD average levels (OECD, 2015).

**A number of constraints hinder Peru's innovation capacity.** Peru's weak innovation performance, as measured by its relative production of patents (Figure 22), may be partially explained by the lack of clear strategic orientation in allocating resources to the R&D activities of universities and public research institutes. Peru lags behind benchmark countries in terms of public investment in research and development. While Peru's total budget for science and technology was USD 17.4 million in 2013, Colombia's was USD 210 million and Chile's was USD 546 million (OECD, 2015b). A number of institutional factors are behind this poor performance in R&D investment. Unlike other Latin American countries, Peru did not develop a strong public science and technology infrastructure in its university system or in public research institutes in the 1960s and 1970s. Furthermore, the orientation of science and technology policies has undergone a number of sudden revisions over political cycles that has created uncertainty and disagreements about the importance of R&D as a source of economic growth and competitiveness, while also reducing the incentives for scientific co-operation among Peruvian actors (OECD, 2011).

**Figure 21. Patent applications per million people, comparing Peru and select benchmark countries and averages**



Note: Data based upon 2010-2011 averages. No values available for Ecuador from given source thus excluded from LAC and benchmark countries.

Source: OECD (2016b), *OECD Indicators on Patent (database)*, [www.oecd.org/sti/inno/oecdpatentdatabases.htm](http://www.oecd.org/sti/inno/oecdpatentdatabases.htm), (accessed October 2016).

### Highly skilled individuals and universities are central to a country's innovation system

**OECD research has highlighted the importance of skills as a key enabler of innovation.** First and foremost, skilled people generate knowledge that can be used to create and implement innovations. Evidence from OECD countries shows that, in American cities, a 10% increase in the share of the workforce with at least a college degree is associated with an increase in (quality adjusted) patenting per capita of about 10% (OECD, 2015a). Moreover, having a highly skilled workforce raises firms' capacity to absorb innovations. By acting as role models, highly skilled workers can also motivate their colleagues to further develop their skills (OECD, 2015a). Skills interact synergistically with other inputs to the innovation process, including capital investment. For instance, studies show that human capital complements investment in and the use of information and communications technologies (ICT). Lastly, skills enable entrepreneurship, which is often a carrier of innovation and structural change (OECD, 2015a).

**To transition to a knowledge-based economy, Peru will need to strengthen the quality of its higher-education institutions.** In the context of sustained economic growth and increasing enrolment rates in secondary education over the last 25 years, there has been strong social demand for higher education. This demand has been met by a significant increase in supply through the creation of a large number of public and, especially, private higher education institutions, only some of which are part of the university system. According to last estimates provided by ANR (the Rectors National Assembly), there were a total of 140 universities in Peru 2012, an impressive number compared to other OECD countries with a similar population (e.g. Canada has approximately 100 universities) (CONCYTEC, 2014). However, this expansion has come at the expense of educational quality, as many of the newly established private higher education institutions lack quality assurance mechanisms and are often disconnected from the needs of the economy and the labour market (OECD, 2011; CONCYTEC, 2014).

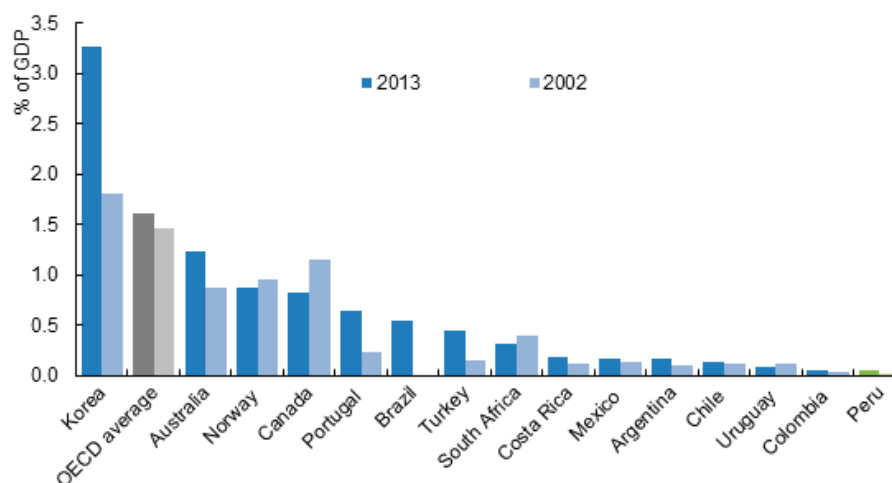
**Peru should increase the number of graduates who can perform R&D activities.** In addition to generating skills shortages and mismatches (Challenge 5) in the Peruvian economy, the lack of quality in tertiary education stifles the country's innovation capacity, as relatively few graduates have the qualifications to enter accredited postgraduate programmes in science, technology and engineering (OECD, 2011). As a result, Peru suffers from a lack of doctorate holders who are crucial for the R&D activities of the public sector (CONCYTEC, 2013). Recent estimates suggest that Peru lacks approximately 22 000 doctorate holders to pursue the amount of R&D activities that its GDP level would predict (CONCYTEC, 2013). According to estimates, 17 000 should be focusing on fields such as engineering and technology, natural sciences, medical sciences, health and agricultural sciences.

**The poor quality of tertiary graduates also stifles firm-level innovation.** Despite rapid expansion in tertiary attainment, Peruvian firms report that a lack of talented individuals is one of the major barriers to greater innovation. According to data from the national survey of innovation activities in the manufacturing sector, conducted in 2012, a lack of qualified personnel is the most significant obstacle to innovation (33.3%) for firms engaged in innovation activities, and the second most important reason (40.8%), after excessive costs, for all firms (CONCYTEC, 2014).

#### Firms in Peru do not invest sufficiently in innovation activities

**Firm-level investment in innovation is particularly low in Peru.** In comparison with other Latin American countries, Peru fares comparatively poorly in terms of business expenditures on research and development (BERD) (Figure 22). Reasons for this include: 1) risk aversion, rooted in part to experiences with abrupt changes in the political situation and framework conditions for innovation; 2) weak competitive pressures and prevalence of rent-seeking strategies among conservative entrepreneurs; 3) weak interaction between enterprises and domestic sources of knowledge in research institutes and universities; and 4) relative scarcity of highly skilled science and technology and managerial personnel who can design and implement innovation projects (OECD, 2011).

**Figure 22. Business expenditure on research and development, 2002 and 2013 (or latest available year)**



*Note:* Date on most Latin American economies (excluding Argentina, Brazil, Chile and Mexico) is from 2012; for Argentina and Chile from 2013; for Australia and Mexico from 2011; and for Brazil from 2010.

*Sources:*

OECD (2016c), Main Science and Technology Indicators Database, [www.oecd.org/sti/msti](http://www.oecd.org/sti/msti), (accessed October 2016); OECD calculations based on Red de Indicadores de Ciencia y Tecnología - Iberoamericana e Interamericana (RICYT). Accessed on 1 August 2015, [www.ricyt.org/](http://www.ricyt.org/).



**As in most countries, investment in R&D increases with firm size.** Among mega enterprises (firms with more than PEN (Peruvian Sol) 50 million turnover), the largest share of R&D activities takes place in the food industry sector, whereas among large enterprises (PEN 2.5-50 million turnover), major R&D investments are registered in the mining sector. Different sectors perform different types of R&D. For example, in the case of mining, food and manufacturing, R&D activities are heavily weighted towards experimental development projects that adapt machinery or improve and optimise processes. In the case of agriculture, R&D is oriented towards field tests for new varieties and improving product quality, sanitary conditions, irrigation and post-harvest technologies. In the leather, shoe, textile and apparel industries, the search for new design or fashion trends, and new inputs and capital equipment, is the most prominent type of R&D (OECD, 2011).

**Better development, activation and use of skills can strengthen firms' innovation performance.** Strengthening Peru's innovation capacity hinges on a number of skill enhancing measures. Increasing the supply of talent available helps firms to design and develop new processes in very specific fields, which can help them improve the complexity and quality of their products. A stronger emphasis on 21<sup>st</sup> century skills, such as critical thinking, problem solving and creativity (OECD, 2016b), in the curriculum across educational levels can help firms to boost their capacities to absorb technologies and adopt best practices from national and international firms. The development of ICT skills can help Peruvian firms to adopt new machinery and technology that can improve their production processes. Adequate levels of ICT skills complement the use of imported machinery and facilitate soft technology transfers, which can increase productivity.

**Peru has taken action to increase the productivity and innovation capacity of SMEs.** To narrow the gap between the innovation activities of small and large firms, the Peruvian government has provided SMEs with technical services through technological innovation centres (CITEs). CITEs were created in 2000 to enhance the innovation capabilities of SMEs, foster their productivity, and improve their ability to comply with international standards. They are engaged in technology diffusion and the provision of technical, certification, testing and training services for producers' associations in the sectors of activity in which they operate. In addition, CITEs facilitate knowledge flows between firms and other sources of expertise and technologies (universities, research institutes, consultants, international technical co-operation). The Plan for Productive Diversification has acknowledged the importance of CITEs and foresees expanding their capacity with a particular emphasis on skills development (PRODUCE, 2015).

**Sectorial collaboration among firms can strengthen Peru's innovation capacity.** The Ministry of Production envisions the creation of co-ordination mechanisms among enterprises within the same sector to foster innovation and increase competitiveness. The aim of this collaboration, the *Agenda de innovación sectorial*, is to assess each sector's productivity gaps in relation to international good practice and elaborate sectorial innovation strategies. The Ministry foresees the establishment of 16 sectorial agenda by 2016. (PRODUCE, 2015). This sectorial approach to innovation should be complemented with existing sectorial initiatives on skills, such as the sectorial skills committee (Challenges 8 and 9), which would help to align skills supply with innovation policies and avoid a wasteful duplication of efforts.

**Increased entrepreneurship is also key to fostering greater innovation and productivity in Peru**

**Entrepreneurship and entrepreneurs are important sources of innovation and economic growth.** The National Plan for Productive Diversification of the Ministry of Production has incorporated the promotion of entrepreneurship as one of its strategic pillars (PRODUCE, 2015). But one of the major challenges in this respect is that many small firms normally fail to become more innovative and technology-intensive entities (OECD, 2011). Among the main constraints hindering entrepreneurship and the consolidation of new technology-based firms in Peru is excessive regulation of firm entry and exit, a lack of education/training in entrepreneurial skills, and the limited availability of capital for new and growing firms (OECD, 2011).

**The Government has undertaken a number of measures to increase entrepreneurship.** The Ministry of Production has launched a number of initiatives to overcome the obstacles that hinder healthy entrepreneurial activity, including the reform of regulatory frameworks and access to capital. For example, the Start-up Peru initiative seeks to support the establishment and consolidation of start-ups focusing on technology-based innovative services by granting funds through start-up competitions. The Ministry is seeking to strengthen start-up incubators that provide advisory and training services, as well as alliances with research centres of established enterprises. The Ministry is also looking into the possibility of establishing a network of angel investors based on successful experiences in Chile, Colombia and Mexico (PRODUCE, 2015).

**Skills systems can help foster entrepreneurship in Peru.** The education system has a key role to play in building an entrepreneurial culture. The entrepreneurial culture of a country reflects the attitude that individuals have towards entrepreneurship, including: the likelihood of choosing entrepreneurship as a career; the ambition to succeed; the readiness to start again after a failure; or the provision of support to family and relatives planning to set up a business. OECD research and analyses suggest that skills and the education system help to drive entrepreneurship in a society in two important ways. First, the entrepreneurial mind-set can be built through education, including through teaching strategies, course content, learning environments and learning outcome assessments to promote entrepreneurship in a broad sense (see Box 28). Second, education can provide individuals with the practical competences and skills needed to start and grow new ventures. A number of institutions and market mechanism can contribute to the acquisition and further development of entrepreneurship skills (Box 28).

#### Box 28. Enhancing the prominence of entrepreneurship in the education system

In **Finland** entrepreneurship education is included as an obligatory subject in all primary (ISCED 1) and secondary schools (ISCED 2 and 3 – lower and upper general secondary education), and has been given a strong emphasis in the latest five year development plan for education and research (2011-2016) elaborated by the Ministry of Education and Culture. The national core curriculum for basic education includes a cross-curriculum theme called “participatory citizenship and entrepreneurship” (for ISCED 1 and 2) and “active citizenship and entrepreneurship” (for ISCED 3). While school autonomy implies that methods of implementation may vary, guidelines are included as part of the core curriculum, and these specify that the main focus should be on practical exercises and the creation of personal participation experiences.



In primary and secondary schools, learning outcomes include attitudes (self-awareness, self-confidence, taking initiative and responsibility, risk-taking, critical thinking, creativity and problem solving) and knowledge about entrepreneurship, career opportunities and the world of work and business. For some students (upper secondary education), learning outcomes may concern practical exploration of entrepreneurial opportunities.

A key component of entrepreneurship education is a learning environment where the focus is on the learner's own activity, and where learning takes place in a real-world setting in which instruction is based on problem-solving and interaction.

An initiative in the province of Guipuzcoa in the Basque Country, **Spain**, has built non-cognitive skill development into educational modules for school children, as well as the workplace and other civil society actors such as sports teams. The province has also promoted entrepreneurship initiatives in schools to raise awareness at an early age.

#### Sources:

For more information please see: [www.minedu.fi/export/sites/default/OPM/Julkaisut/2009/liitteet/opm09.pdf](http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2009/liitteet/opm09.pdf);

OECD (2010a), *Higher Education in Regional and City Development: Amsterdam, The Netherlands 2010*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264088955-en>;

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OECD (2011b), *OECD Reviews of Regional Innovation: Basque Country, Spain 2011*, OECD Reviews of Regional Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264097377-en>.



### Box 29. Engaging actors across the skills system in fostering entrepreneurship

In **Korea**, universities have been established as a core actor of the regional innovation system. The NURI (New Universities for Regional innovation) was planned to strengthen the innovation capacities of provincial universities in Korea. Major strategies of NURI include: 1) attracting good students and retaining talent in the regions; 2) improving educational conditions and developing workforce education; 3) building productive partnerships with local authorities and business and providing skilled workers and advanced technologies to the industrial clusters in the regions; and 4) playing a leadership role in developing and maintaining effective regional innovation systems.

The Plato initiative, started in the Flemish region of **Belgium**, has now been replicated in many European countries, including Denmark, France, Germany, the Netherlands, Sweden and the United Kingdom. Under the Plato initiative, expertise pooling is based on learning by interaction among participating SMEs on the one hand, and between SMEs and large, well-established companies, who play the role of tutors, on the other. Plato is typically a two-year programme that addresses the managerial needs of a regional network of small firms. Small business owners and managers form groups of 8-12 members, with each group containing two leaders who represent large local parent companies.

#### Sources:

OECD (2010a), *Higher Education in Regional and City Development: Amsterdam, The Netherlands 2010*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264088955-en>;

OECD (2010b), *Higher Education in Regional and City Development: Andalusia, Spain 2010*, OECD Publishing, Paris <http://dx.doi.org/10.1787/9789264088993-en>;

OECD (2011b), *OECD Reviews of Regional Innovation: Basque Country, Spain 2011*, OECD Reviews of Regional Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264097377-en>.

### Summary and policy implications

**Peru should diversify its economy to boost economic growth.** Past economic growth in Peru has been driven by high commodity prices. To maintain current levels of economic growth, the Peruvian economy must undergo a process of structural change that will see the expansion of high demand sectors and the shifting of workers into more productive areas of the economy.

**Skills policies are central for the process of productive diversification.** Improving the development and use of skills is essential for ensuring that workers are able to fully participate in, and take advantage of, the process of productive diversification. Higher levels of skills enable the introduction of new products, market and business ideas, while, at the same time, ensure that workers can adapt more quickly to the organisational and productive transformation generated by the transition towards a more diversified economy.

**Productive diversification should not exacerbate existing inequalities.** Productive diversification may come at the expense of workers employed in less productive firms, which may no longer be profitable and may be forced to close down. Low-skilled, low-productivity workers may, therefore, face higher economic and employment insecurity. Upward labour mobility towards higher productive occupations should rely on mechanisms of broader skills upgrading, rather than of taking the best existing workers from low productive occupations. This will help to ensure that economic transformation benefits the majority of workers.

**Skills are also needed to boost innovation.** Skills can help Peru to address its weak innovation performance in terms of R&D and patenting activities (both in the private and public sector), as well as the low propensity of bringing new products to the markets. This would involve strengthening policies that improve the available stock of highly skilled individuals who can perform innovation activities and design innovative products, both in the public and private sector. Improving workers' ICT skills can strengthen firms' absorptive capacities so that imported technologies can bring about the expected productivity increases.

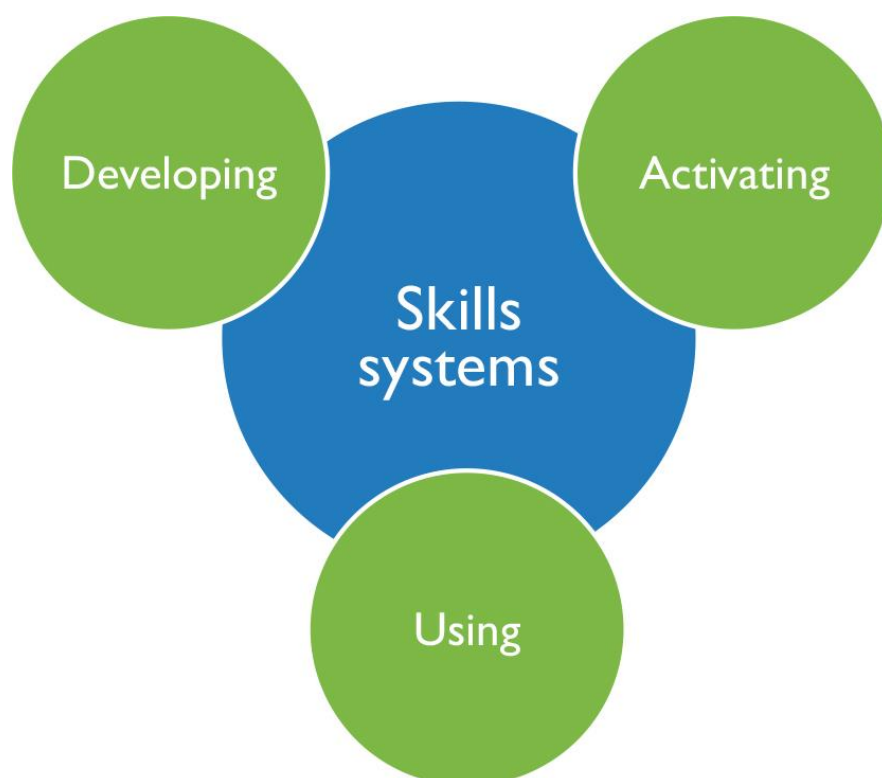
**Increased entrepreneurship would also help to boost innovation and productivity.** As in other countries in Latin America, the rate of entrepreneurial activity is low. Policies to promote entrepreneurship may help Peru develop new products for high demand sectors, and increase its relevance in global value chains. Education and skills can play an important role in building an entrepreneurial culture and developing the skills needed to support its success.

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# STRENGTHENING PERU'S SKILLS SYSTEM





## INTRODUCTION TO STRENGTHENING PERU'S SKILLS SYSTEM

Improving performance in the development, activation, and use of skills in Peru requires all actors and mechanisms with an impact on skills to work together as a coherent and mutually reinforcing skills system. Three challenges have been identified for strengthening Peru's skills system: 1) improving learning and labour market information to support better education and career choices and evidence-based policy making; 2) improving co-ordination across different actors and levels of government to achieve better skills outcomes; and 3) building partnerships to ensure that policies are responsive to changing skills needs.

First, there is a need to strengthen access to learning and labour market information to support individuals, firms and governments in making better decisions. High quality, timely and accessible learning and labour market information can help a variety of users make informed choices that bring skills supply and demand into better alignment. While Peru already compiles and disseminates a considerable range of information on learning and labour market outcomes and trends, this information is often only available in the form of technical documents, or is scattered across multiple websites. There are also a number of information gaps, such as a lack of projections of future skill needs.

Second, it is important to improve co-ordination across different ministries and levels of government to achieve better skills outcomes. Given the vast array of factors that impact on skills development, activation and use, and the wide distribution of responsibilities in these areas across many ministries and all levels of government, effective governance structures are critical for policy coherence and continuity. These are particularly important in the context of the long-term horizon needed for certain skills policies, education policy in particular, to bear fruit. While Peru has a number of governance structures in place to facilitate dialogue and collaboration, these typically focus on specific segments of the skills system, such as education or employment. More needs to be done to facilitate dialogue and co-ordination across the entire skills system.

Third, it is necessary to build better partnerships to ensure that policies are responsive to changing skills needs. While governments play a central role in the skills system, there are limits to what they can achieve alone. Improving skills outcomes requires collaboration and co-operation among the various actors with a stake in the outcomes of the skills system, including individuals, firms, employer associations, unions, educational institutions, and many others. Peru would benefit from more regular and formalised partnership arrangements for involving all actors in the skills system further upstream in the planning and decision-making processes.

## CHALLENGE 7. IMPROVING LEARNING AND LABOUR MARKET INFORMATION TO SUPPORT BETTER EDUCATION AND CAREER CHOICES AND EVIDENCE-BASED POLICY MAKING

### A selection of challenges identified by Peruvian workshop participants:

*“There are too many study careers and information about future labour market prospects is poor.”*

*“Information from different sources such as schools, universities, business registers and health should become interconnected.”*

*“Information on firms’ occupational demands is already available but not properly used.”*

*“Many public institutions work alone and do not share information.”*

*“Information is not used to monitor and evaluate programmes.”*

*“Lack of indicators for management evaluation.”*



**Learning and labour market information is crucial for better policy making and for informing the choices of different actors.** Information about learning opportunities, as well as about current and future skill requirements, is essential for informing the choices of a wide range of actors. Concerns about current skills mismatches, as well as uncertainty about future skill needs in the context of technological advances, globalisation, demographic changes and other pressures, highlight the importance of having good data and information on skills pressures.

**Peru has a developed institutional capacity for collecting rigorous statistics and producing evidence-based policy analysis.** For example, the National Institute of Statistics and Informatics (INEI) collects and produces a large variety of statistical information, while the National Centre for Strategic Planning (CEPLAN) produces many policy documents in a variety of areas, including education, health, and productive diversification.

**However, Peru needs to ensure that data and evidence are used more effectively for policy making and evaluation.** All countries face the challenge of ensuring that data and evidence on skills outcomes are used when designing and implementing better policies and programmes. Peru will need to focus on ensuring that data collection and policy analysis produced by independent bodies are fully utilised by line ministries when they conduct skills policy design and evaluation. Better public information on skills outcomes is needed for policy makers in regions and municipalities, leaders of institutions (including schools, higher education and adult education institutes), the public employment service and the general public.

**Evidence-based policy making increases the legitimacy of public policy.** The availability of relevant data and rigorous evaluation systems is a prerequisite for improving both the effectiveness and efficiency of policy design, and for enhancing their public legitimacy. However, the availability of data and evaluations can only be effective if policy processes are designed with a view to incorporating this evidence into decision making. Policy implementation and evaluation can be improved when the various actors in a skills system are able to use data to understand skills challenges and inform their own strategic, as well as operational, decisions.



## Peru has developed a strong system to collect data to inform skills-related policy decisions

### Peru has developed a number of instruments for data collection at national and sectorial levels.

The country has been collecting population relevant statistics since 1848 with the establishment of the first National Statistical Council, which collected data with the help of seven ministries. Since 1990, the National Institute of Statistics (see Box 30) has acted as an independent body and directly reports to the Office of the Prime Minister. In addition, ministries such as the Ministry of Labour and Employment Promotion (MTPE) and Ministry of Education (MINEDU) conduct their own, sector-specific surveys on education and labour markets, which complement available information.

### Peru has started using data to inform strategic planning, as well as monitoring and evaluation.

The Strategic Plan for National Development, elaborated by CEPLAN (see Box 31), incorporates a strong empirical component whereby policy objectives are designed on the basis of several variables of interest, and results are measured against specific indicator thresholds for each strategic theme for policy action. In its current version, the plan includes 46 indicators from national and international sources that have been chosen following a series of consultations with experts to ensure their robustness, comparability and measurability over time (CEPLAN, 2015). Similarly, MINEDU has recently developed a new budget allocation procedure for its institutions and subnational structures (local and regional offices) called *Compromisos de Desempeño*. The procedure conditionally funds transfers on the realisation of specific quantified and quantifiable goals, such as a specific percentage of students with satisfactory levels of reading, or the percentage of teachers who are actually present during teaching hours (MINEDU, 2016).

#### Box 30. Peru's national statistical system

The national statistical system (NSSP) of Peru aims to ensure that the statistical activities conducted by the state agencies at all three levels of government are developed in an integrated, co-ordinated, streamlined way, and under a common technical standard.

The objectives of the NSSP are:

1. To regulate the official statistical activities.
2. To co-ordinate, integrate and rationalise the official statistical activity.
3. To promote training, research and development of statistical activities.

The field of practice of the NSSP are censuses, current statistics, sample surveys, population statistics, environmental statistics, indicators and indices in general, nationwide, and regional accounts, macro statistical schemes, analysis, and research.

The bodies that constitute the NSSP are: 1) The National Institute of Statistics and Informatics; 2) The National Advisory Council on Statistics; 3) The Interagency Co-ordinating Committee on Statistics; 4) The Sectoral Statistical Offices and other statistical offices of the Ministries of the Central Agency, decentralised public bodies and state enterprises; 5) statistics bodies of regional governments; 6) The organs of statistics of municipalities; and 6) statistical bodies of public authorities and autonomous bodies.

#### Vision

The overall goal of Peru's national statistical system is for the lean and efficient national co-ordination, production and dissemination of statistical information. This information should be reliable, timely and of high quality, and it should be disaggregated at all political and administrative levels.

Statistical information from INEI effectively contributes to the design, implementation and evaluation of public policies, programmes and projects that impact on economic growth, poverty reduction and environmental conservation.

Source: INEI (2016), INEI Website, National Institute of Statistics and Informatics of Peru, <https://www.inei.gob.pe>, (accessed October 2016).

### Box 31. Peru's National Centre of Strategic Planning

The National Centre of Strategic Planning (CEPLAN) is a specialised technical body that aims to exercise effective leadership of the National System of Strategic Planning and to contribute to improving the quality of life of the population and the sustainable development of the country.

CEPLAN is responsible for the Strategic Plan of National Development (PEDN), a technical instrument containing the policy priorities, objectives, goals and strategic actions that will ensure inclusive development for Peru. The plan fosters collaboration among public institutions, the private sector and civil society with the goal of strengthening the country's democratic governance.

Source: CEPLAN (2015), *Plan Estratégico de Desarrollo Nacional Actualizado: Perú hacia el 2021*, Documento preliminar, CEPLAN, Lima, Peru, [www.ceplan.gob.pe/](http://www.ceplan.gob.pe/).

### Better availability of information can support Peruvian students in their field of study and career choices

**Young people use learning and labour market information to make field of study choices that balance personal interests and labour market rewards.** Due to the long time lag between the point at which an individual chooses a field of study and the point at which he or she graduates, prospective students typically need future oriented information, such as projections of future skill needs. However, for this information to be relevant to young people, they must be made aware of how occupations relate to fields of study (i.e. which fields of study are sources of supply for specific occupations). Forecasts of future skill needs can only provide general guidance, as future skill needs are, by definition, uncertain. Students should be able to cross-reference skills forecasts with information about the historical labour market outcomes of graduates from different levels and fields of study. This provides young people with a sense of the value placed on these studies in the labour market, regardless of what job they eventually end up holding. Young people also need to be made aware of the courses that must be completed and the grades that must be obtained in secondary school in order to gain entry to their chosen field of study. This information needs to be provided in manner that is easily accessible and interpretable by young people and their parents (OECD, 2014; OECD, 2016).

**Peruvian students could be better informed about study and career opportunities.** According to a national survey administered by the World Bank (*Encuesta Nacional de Habilidades*) in 2010, almost two thirds of higher education graduates between 22 and 30 years old regretted, to some extent, their educational career choice (Peru Económico, 2013; Castro and Yamada, 2013). In addition to evolving personal preferences and issues of insufficient instructional quality, poorly informed choices are likely to be among the reasons for such regrets. Poor study choices are usually the result of inaccurate perceptions about instructional characteristics and future employment perspectives of the chosen field of study or career.

**The rise of private tertiary education offerings in Peru has increased the system's opacity.** Private universities, created between 1996 and 2010, currently accommodate 134 370 students, which represents 17% of the total university student population (Castro and Yamada, 2013). Most of the new private institutions operate for-profit and, therefore, have a powerful incentive to maximise enrolment. Enrolment tends to follow “popular” programmes without full regard for labour market demand. As a result, students often choose programmes with limited knowledge of future employment avenues, thus increasing the risk of finding themselves in situations of unemployment or over qualification after graduation.

**Peru has taken important steps to improve access to relevant career information for its student population.** Until recently, Peruvian students could not find the relevant information to make fully informed decisions about their future. To address the lack of systemic information on available fields of study and associated labour market prospects, MTPE and MINEDU have recently launched a joint initiative that centralises such information in a one stop portal: the *Ponte en Carrera* observatory (see Box 32). Although still in its infancy, *Ponte en Carrera* gathers detailed information about the entire population of technical institutes and universities in the country (both private and public), their programme offerings, and expected wages after graduation. Information is also provided at the regional level through a recently added section that maps fields of study with occupational demands, thereby providing important information about potential career opportunities after graduation. The portal is an example of the importance and effectiveness of horizontal collaboration and data sharing (see Challenge 8), as different actors in the skills system have collaborated in supplying relevant information.

### Box 32. The Ponte en Carrera observatory

The *Ponte en Carrera* observatory on Education and Employment has been developed under the responsibility of MTPE as part of its career orientation and labour market information initiatives.

The web portal collects relevant and quality information on educational offerings and labour market demands with the aim of providing young people entering tertiary education with the tools to make more informed decisions regarding their education and careers.

The programme was initiated by the concerted action of MINEDU and a Peruvian association of entrepreneurs, as part of an inter-institutional co-operation agreement. The resulting web portal was launched in July 2015.

Between July 2015 and March 2016 the portal reached 192 540 unique visits from a number of different Peruvian regions. Visits from young people amounted to 40% of the total.

The portal contains detailed information about the educational offerings of public and private technical institutions and universities coming from the *Sistema de Recojo de Informacion* of MINEDU, while information on occupational demands originates from MTPE's business register.

The observatory has also launched a mobile app version of the website that seeks to better reach out to young people through their mobile devices.

The observatory has identified a number of challenges that need to be overcome to ensure effective uptake by a critical mass of stakeholders:

- Increase and update available information on a regular basis, with particular emphasis on information about labour market demand.
- Increase the scope of the data collected by the business register to provide more accurate and updated information regarding employment opportunities and geographical disparities.
- Increase the number of users through dissemination activities such as roadshows and panel discussions, and conduct countrywide information campaigns on the benefits of the portal to engage students, parents and the general public.
- Involve opinion leaders and stakeholder in the skills system to increase awareness about the benefits of Ponte en Carrera.

Source: MTPE (2016) <http://www2.trabajo.gob.pe/>.

**Information should be made user friendly.** While the information needed by users is already available to them, it is often in the form of ad hoc and/or technical reports produced by the different ministries or statistical agencies. In many cases, these reports are not easy to find unless a user already knows that they are available. Information often takes the form of compendia of facts and figures and uses technical language or jargon, which make them difficult to interpret by laypersons. Information resources need to be made more user friendly by, for example, providing online, interactive information platforms that bring together all of the relevant facts in one place, and that are tailored to the needs of different users, as illustrated by the example in Box 33.

### Box 33. Texas Workforce Commission

The Texas Workforce Commission website is a one-stop, interactive information portal which is segmented by the needs of different users, specifically jobs seekers and employees, businesses and employees, and community and workforce partners. It is available in English, Spanish and Vietnamese. Job seekers can apply for unemployment benefits, post their CV, search for job vacancies, explore careers, link to online courses, and find out about employment support resources and training opportunities. Users can explore specific occupations of interest and learn about their educational requirements, the knowledge, skills and abilities needed for work in that occupation, typical tasks performed, and work values. They can also access a wide range of labour market indicators, including state and national employment levels, annual average job openings, projected job opportunities to 2022, percentage and absolute changes in projected job opportunities between 2012 and 2022, hourly wages, gender distribution, turnover rate, average time in occupation and current job, as well as the sorts of enterprises where these occupations are typically found. The website also has an interactive tool, “Reality Check”, that permits individuals to estimate their costs relating to housing, transportation, clothing, health care, and entertainment, and then explore which careers would pay for these needs and their education requirements.

Prospective students can search fields of study at different levels of education and investigate where these programmes can be found and which occupations they lead to. They can also search and compare specific educational institutions on the basis of their application deadlines, admissions requirements, degree offerings, competitiveness, extracurricular activities available, resources, tuition fees, percentage of graduates with full time job offers six months after graduation, and a host of other variables. Users can also access a variety of online courses and videos relating to job searches and education.

Employers can access information and resources relating to recruiting and hiring, training, social security contributions, labour laws, as well as avoiding and managing layoffs. They can also access labour market information targeted to their specific needs.

For community and workforce partners, information and resources are available relating to training provision, education, childcare, workforce development, civil rights and discrimination, among others.

*Source:* Texas Workforce Commission (2016), *Main Texas Workforce Commission website*, [www.twc.state.tx.us](http://www.twc.state.tx.us), (accessed October 2016).

### Improving the use of labour market information can help to address skills shortages and mismatches in Peru

**Learning and labour market information can help actors make choices that improve the alignment between skills supply and demand.** Adult job seekers who are making decisions in the immediate to short-term require information on current labour or skill shortages and short-term projections of skill needs. Since adults are typically less mobile than youth (due to family needs and responsibilities, mortgages, etc.), they generally require information at the local and regional level. Since some will not have the skills needed for their chosen occupation, or for occupations where job opportunities currently exist, they also require information about what training might be required and where it may be found. As with young people, adult job seekers need information that is packaged in an easily accessible and interpretable manner (OECD, 2014a; OECD, 2015b).

**Information on labour demands and skills shortages should be made more visible in Peru.** The Ministry of Labour regularly conducts a series of surveys on occupational demands through the *Encuesta de Demandas Ocupacional* (EDO). The main purpose of this survey is to understand: 1) future labour demands from formal firms with more than 20 employees; and 2) qualification requirements to fulfil this unmet demand so that the government, companies and families can undertake informed decisions concerning career patterns and geographical mobility (MTPE, 2016). The survey clearly identifies the sectors and regions where occupations and skills are in high demand, and where there are high vacancy rates. Salary information is also available at regional and occupational levels, leaving room for more sophisticated analyses of wage pressures and systemic skills and labour shortages in specific occupations (OECD, 2016). A 2013 study conducted by Peru Económico attempted to measure skills shortages by exploiting data contained in the national households survey (ENAHO) administered by the INEI on the supply side, together with the EDO survey administered by the MTPE on the demand side. By jointly analysing skills supply and demand, the exercise identified regional and sectorial misalignments. Such exercises could be replicated on a regular basis to inform individuals and policy makers' decisions.

**Policy makers can use information about current and future skill needs for a wide range of purposes.** Ministries responsible for education can use this information to inform curriculum development and set the number of student places in upper-secondary, post-secondary and tertiary education programmes. In many countries, information about current and future skill needs is used to inform the development and design of Vocational Education and Training (VET) programmes. Ministries responsible for employment can use this information 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 and active labour market policies (ALMPs), such as training, employment subsidies, direct job creation and support for entrepreneurship and geographic mobility (OECD, 2016).

**Peru could use information on skills needs to support its strategic planning.** Insufficient co-ordination among the centre of government, those who bear an interest in skills, and CEPLAN impairs the efficient use of available information on skills. The overarching objective of increasing Peru's productivity and productive diversification could be supported by skills assessment and anticipation exercises. These exercises could leverage existing surveys from INEI, MINEDU and MTPE to develop a forecast model of skills needs over the medium to long-term, thus informing education and employment policies. Moreover, the information gathered while analysing future trends in occupational demands at the sectorial level could provide useful insights into the extent to which the Peruvian economy is converging towards higher degrees of productive diversification (see Challenge 6). With sufficient levels of inter-ministerial and inter-agency co-ordination (see Challenges 8 and 9), skills development policies could be adjusted to advance industrial policy objectives that focus on identified high growth, export oriented economic sectors in Peru (CEPLAN, 2015).

### Box 34. Skills assessment and anticipation exercises in OECD countries

Today, skills assessment and anticipation exercises exist in all OECD and European countries, although differences exist in the approaches taken across countries, with exercises varying in terms of the definitions used for skills, the time span and frequency, the methods used and the national/regional/sectoral scope. For example, the **Denmark** Rational Economic Agent Model (DREAM) is a long-term dynamic computable general equilibrium model that can be used to simulate and forecast national education levels 50 or more years into the future (Rasmussen and Stephensen, 2014). **Germany's** BIBB-IAB-Qualification and Occupational Fields Projections develops 30-year forecasts of occupations and qualifications, drawing on both quantitative and qualitative data. Other exercises, such as the Environmental Scans required by Industry Skills Councils in **Australia**, assess current skill needs in a particular sector of the economy, drawing from interviews or focus groups with experts and actors involved in developing and using skills in that sector.

#### Skills or qualifications

Exercises in most countries measure skill needs in terms of qualification levels, qualification types, or fields of study. One advantage of this approach is that these variables are more easily understood by a variety of stakeholders. They are also often readily available in existing datasets, which facilitates the use of diverse and comparable information sources in skills assessments and forecast exercises. Examples of skills assessment and anticipation exercises include: **Australia's** Graduate Survey, **Italy's** Almalaurea's Survey on Graduates' Employment Conditions, and **Norway's** Candidate Survey (NIFU).

#### Time span

Exercises can either assess current skill levels and needs or anticipate future skill needs. Current skill needs assessments evaluate the current supply and demand for skills, with a particular focus on identifying mismatches or shortages. Anticipatory exercises look into the future, and can be either forecasts or foresight exercises. Forecast exercises use available information or gather new information with the specific aim of anticipating future skills needs, mismatches and/or shortages.

Statistics **Sweden** has conducted short and medium-term forecasts since 1959, and currently also conducts long-term forecasts covering a time span of 20 to 25 years. In addition, the Swedish Public Employment Service (*Arbetsförmedlingen*) carries out its own short-term forecasts to inform the development and targeting of their programmes. **Australia** has a well-developed system for assessing current skill needs and identifying shortages, but also conducts independent occupational and sector-specific forecasts.

In **Australia** and **New Zealand**, current occupation and region specific shortages are identified through vacancy surveys and other quantitative and qualitative methods (e.g. wage pressure analysis and feedback from employers). These shortages then inform migration and training policies. **Japan's** public employment agency (Hello Work) also relies on current skill needs assessments by analysing job offers, job searches, outcomes of training and surveys of public employment service (PES) officials and employers to identify skills in need and to develop re-training programmes. Current skill needs are also assessed by employer organisations, such as the TEC (*Observatoire Tendances Emploi Compétence*) in **France**, which collects information from firms on vacancies and recruitments to identify skills that are hard to find in the current labour market.

Source: OECD (2016), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264252073-en>.

### Collaboration across ministries and social partners can increase the effectiveness of skills information systems

The engagement of social partners, such as employers and trade unions, can help to improve estimates of current and future skill needs, and facilitate co-ordinated action to address these pressures. Peru's Ponte en Carrera observatory is a first step towards engaging social partners in the assessment of current and future skills needs. OECD experiences have demonstrated that social partners can be important sources of qualitative and quantitative information on skills demand and supply that can help to: 1) make and validate assessments of current and future skills needs; and 2) interpret quantitative labour market



data (e.g. job postings, wages, employment). For example, employers can provide information about changes in future hiring intentions that are not captured in existing data (OECD, 2016). Examples of the value of engaging partners in the development, design and delivery of learning and labour market information are provided in Box 35 and Box 36.

**Several governments have recognised the role employer organisations and trade unions can play in the development of skills assessment and anticipation exercises.** Some countries have encouraged the creation of dedicated councils and committees to discuss skills needs identification exercises and skills policies. These countries include: Australia, Canada, Denmark, Estonia, Finland, France, Germany, Portugal, the Slovak Republic and the United Kingdom. Employers have an active role in the skills assessment and anticipation exercises in Australia and New Zealand, as well as in Hungary (trade unions have a more modest role in Hungary). In Canada, human resources and skills-focused industry partnership organisations, including more than 20 Sector Councils that link stakeholders from the business, labour and education communities, among others, examine current and projected skills needs (OECD, 2016).

#### **Box 35. Michigan's Workforce Intelligence Network**

In Michigan, United States, the Workforce Information Network (WIN) provides opportunities for co-ordination, efficiencies, and innovation across partners by delivering real-time, actionable marketplace intelligence to support more efficient solutions for employers. This information helps consortium members, particularly community colleges, make better “real time” decisions regarding skill gaps. One of the tools used by WIN is a methodology to search the internet for job openings and resumes (CV). This information, combined with data from the state's labour market information and special surveys, are incorporated into strategic plans and operational decisions. For example, SEMCA (a Local Workforce Investment Board) has been able to act upon this focused information and is currently working to create a talent pool for Computerised Numerical Control (CNC) and Welding. SEMCA also relies on WIN for detailed analysis of specific industries and occupations. Each year it completes a “Region Top Jobs” report that includes the availability of current and projected opportunities by occupation, with the number of openings and the rates of pay.

Within the advanced manufacturing sector, WIN connects with various organisations and associations, and is leading important initiatives to better align the talent system with talent needs. WIN serves as project lead and fiscal agent for InnoState, a new coalition among WIN, the Detroit Regional Chamber's Connection Point, the Michigan Manufacturing Technology Center (MMTC), the National Center for Manufacturing Sciences (NCMS), the Business Accelerators of Southeast Michigan (BANSEM), and the Society of Manufacturing Engineers.

Backed by funding from the Michigan Economic Development Corporation and various federal government agencies, InnoState is focused on expanding the New Product Contract Manufacturing Cluster of firms so that they can increase their business and compete globally. WIN also convenes the skilled trades taskforce, which addresses employer talent needs through ongoing dialogue between the talent system and employers looking for talent in skilled trades.

In the area of information technology, which is one of the fastest growing in the region, WIN's cluster strategy includes the convening of an employer-led, multi-industry council, known as the Tech Council of Southeast Michigan. The Council is convened to raise awareness of, and shape community responses to, regional talent needs. This group meets routinely and has two primary focuses:

- talent attraction and development
- marketing and branding Southeast Michigan as a technology hub.

The Council is comprised of more than 30 employers who have a significant need for information technology talent, and is open to any additional company who may be interested in participating. WIN is directly involved with company-led training initiatives, such as “IT in the D”, and serves as a communication conduit for the region's various talent partners. WIN is also working closely with the Michigan Economic Development Corporation, the state of Michigan, business accelerators, and many others to collaborate and help drive their efforts and programmes aimed at closing the IT talent gap in Southeast Michigan.

Source: OECD (2014c), *Employment and Skills Strategies in the United States*, OECD Reviews on Local Job Creation, <http://dx.doi.org/10.1787/9789264209398-en>.



**Occupation-based skills assessments may facilitate the recognition of competencies acquired in non-formal settings.** Ongoing Peruvian efforts to certify competences acquired in the workplace could be complemented by a more systematic alignment between a coherent national qualification framework (see Challenge 5) and comprehensive occupational standards. This in turn could contribute to strengthening a system that maps required skills for each existing occupation into occupational profiles (see Challenge 8), as recently attempted by the MTPE. These occupational profiles could facilitate the alignment between current and future skills supplies and demands.

**Some OECD countries link occupation-based assessments and skills anticipation information to specific skills through comprehensive occupational standards or descriptions of what skills are required in each occupation** (OECD, 2015b). Examples include Canada's National Occupational Classification (Box 36) and the United States' O\*NET database, which provide detailed information about the knowledge and skill requirements for 500 and 800 occupations, respectively.

### Box 36. Canadian Occupational Projection System

Employment and Social Development Canada (ESDC) uses the models of the Canadian Occupational Projection System (COPS) and the National Occupational Classification to develop projections of future trends in the numbers of job openings and job seekers by occupation at the national level. The projections allow for identifying those occupations that may face labour shortage or labour surplus conditions over the medium term. The latest projections cover the 2015 to 2024 period.

Projections were developed for 292 occupational groupings that cover the entire labour force. Users can search for: summaries of projection results by occupation or industry; detailed projection results by occupation or industry, including information on the factors that are expected to influence occupational labour markets, such as demographics, labour force participation rates by age group and level of education; and synthesis documents covering the major components of the projections, i.e. the economic scenario, the industrial breakdown of economic activity, job openings by occupation, job seekers by occupation and projected labour market conditions by occupation.

This information is available from both the COPS website or from the Job Bank, a one-stop portal for job search and learning and labour market information.

*Source:* Employment and Social Development Canada (2016), *Canadian occupational projection system webpage*, <http://occupations.esdc.gc.ca/sppc-cops/w.2lc.4m.2@-eng.jsp>, (accessed October 2016).

## Building capacity to use data effectively and implement evidence-based policies

**Adequate governance structures and institutional capacity are essential for effective data use.** Appropriate use of data for decision making requires that administrators, educators, companies and individuals become familiar with interpreting data and transforming it into knowledge. Stronger familiarity with data enables these stakeholders to take decisions based on factual grounds, and can protect them from unduly external pressures. Effective data use also requires a governance structure that allows for proper circulation and collection of data, and that provides the correct incentives for its use (OECD, 2016). Effective data collection must be strategic and maintain high standards of reliability over time and across multiple data collectors and geographical regions (OECD, 2012a, p. 289). For example, statistical offices need to co-operate to link different data sources, such as education data with workforce data, and to enable longitudinal data collection, which is often a very powerful tool for understanding why certain target groups encounter barriers.

**Peru should build on the data it collects to ensure evidence-based policy-making processes.** Data collection and monitoring can help establish facts and collect evidence about the skills system, improve the quality of policies implemented, and contribute to more efficient resource allocation. Evaluating policy through ex-post impact analysis is necessary for ensuring that regulations meet their policy objectives, remain up to date, and do not impose unnecessary costs on business and citizens, or on the government's fiscal framework

(OECD, 2013). Peru has recently adopted a new management by objective framework, the *Compromisos de Desempeño*, to allocate the financing of its education system (MINEDU, 2016). While the system is still in its infancy, it can become the seed for a more systemic approach to empirically-based evaluation procedures and the design of evidence-based skills policies.

**Peru should ensure that regional and local government have the institutional capacity to make use of data.** Tackling local and institutional challenges requires the disaggregation of data at the regional and institutional level, but also the capacity of all authorities to make use of the information. Limited capacity at regional and local levels in Peru, due to an incomplete process of decentralisation and intrinsic local institutional weaknesses (see Challenge 8), should be overcome for the country to fully benefit from the vast amount of data it collects.

**Evaluation procedures should be reinforced at local and regional levels.** In particular, the success and potential expansion of pilot projects that are often run in provinces or at local levels depend upon effective evaluation. All policy programmes, in particular pilot programmes, should be designed with an eye to evaluation. Observers and policy makers are often unable to state the grounds on which they decide whether an ongoing project is a success or a failure, or whether it is reasonable to expect that the project could also work in other regions or institutions. Therefore, criteria for evaluation and the objectives of the programme or project need to be determined beforehand (Werquin, 2010).

**Partnerships are important for effective evaluation.** OECD experiences suggest that a way of bridging capability gaps is to form evaluation partnerships with, and draw on expertise available from, academic institutions. Local authorities may also create evaluation partnerships through, or with, national associations of local governments. Such intergovernmental partnerships can help to disseminate evaluation findings among subnational bodies and secure competent technical advice (OECD, 2004). Some countries focus not only on better data availability, but also on awareness raising and on promoting professional development to ensure all relevant actors know how to access and use data (see for example the US Data Quality Campaign, Box 37).

**Box 37. Improving the evidence base on skills**

**Australia: Collecting survey data to inform government, employers and the community.** The Household, Income and Labour Dynamics in Australia Survey, which began in 2001, captures the employment experiences of working-age individuals as they relate to labour-market forces, household consumption and social interactions. The Longitudinal Survey of Australian Youth (LSAY), which began in 1995, follows a cohort completing post-compulsory schooling at age 15 through their transitions to tertiary education and training and into the labour market up to age 25, providing insights into how and where these young people acquire skills. The government has also set up a Skills Info Portal ([www.skillsinfo.gov.au/](http://www.skillsinfo.gov.au/)) and a Labour-Market Information Portal ([www.deewr.gov.au/lmip/](http://www.deewr.gov.au/lmip/)) that allows policy makers, industry (employers) and the community (workers, students, etc.) to make informed decisions on policy, workforce planning, and current and future training and job prospects.

**Denmark: Gathering longitudinal data on the integration of immigrants.** Available data in Denmark (as in other Nordic countries) permit a wide range of studies with respect to integration and intergenerational transmission, but also regarding programme evaluation. In 1968, social security numbers were introduced in Denmark, and a Central Population Register (CPR) was established on the basis of these numbers. The CPR numbers are used as personal identification numbers, and a wide range of individual-level information is submitted to Statistics Denmark in different registers. These registers contain information on the entire Danish population, as all residents in Denmark are assigned a number. Through this number, different register datasets can be linked, including data on immigration, education, employment, and programme participation (e.g. with respect to language courses or activation measures).

This makes it possible, for example, to follow the integration process of immigrants over time. Since knowledge of the register number of a person's parents is also available, the integration of the second generation can also be studied (Liebig, 2007).

**The Netherlands: Using data for school and student improvement.** An important source for research and monitoring in the Netherlands is the Personal Identification Number (PGN), which has been issued to every child in the country over the age of 3½. Commonly referred to as the education number, it is the same as the tax and social insurance number. Schools pass on the PGN, together with certain other data on pupils, to other schools as the child progresses through education. These data are increasingly used for purposes such as monitoring pupils' school careers, school attendance or dropout. The PGN is very useful in the action plan against dropout, because it offers complete and reliable figures on rates nationally, regionally and at municipal and district levels. All schools in secondary education are expected to register absenteeism, disengagement and dropout, and a monthly report is available to municipalities and schools to allow them to give priority to those at risk. These data are also linked to socio-economic data (including demographics, native Dutch citizens, ethnic minorities, unemployment, people entitled to benefits) by region, city and district, which provides a wealth of information for implementing and adjusting policy. This monitoring of results enables the authorities to assess what works and what does not, and therefore to disseminate good practice (Akkerman, 2011; OECD, 2012b, p. 124).

**United States: the Data Quality Campaign. This campaign** encourages and supports state policy makers to improve the availability and use of high-quality education data. The campaign provides tools and resources that help states implement and use longitudinal data systems (OECD, 2011, p. 287). It aims to achieve better data collection for the “effective use in the statehouse, in the district office, in the classroom, and at the kitchen table” (DQC, 2013). The initiative comprises 10 State Actions to Ensure Effective Data Use: 1) link data systems; 2) create stable, sustained support; 3) develop governance structures; 4) build state data repositories; 5) implement systems to provide timely access to information; 6) create progress reports using individual student data to improve student performance; 7) create reports using longitudinal statistics to guide system-wide improvement efforts; 8) develop a P–20/workforce research agenda; 9) promote educator professional development and credentialing; and 10) promote strategies to raise awareness of available data (DQC, 2013).

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## Summary and policy implications

**Peru makes significant efforts to collect rigorous statistics, but these should be used more effectively.** The country has the institutional capacity to produce the various indicators necessary to implement evidence-based skills policies. However, as in many OECD countries, challenges persist for ministries to make full use of these to inform policy making. For example, in the case of skills policies, both the Ministry of Education and the Ministry Labour conduct their own surveys on skills development, activation and use, but these are not sufficiently integrated to inform skills policy decisions.

**Information about educational programmes and labour market needs should be made more visible.** Students in Peru, on average, do not have the information they need to make informed field of study and career choices, especially as the upper-secondary education system has become increasingly complex and somewhat opaque. Web portals and other instruments, such as the Ponte en Carrera observatory, should be strengthened to provide students with information about available study options and professional career paths after graduation.

**Better use of information about current and future skills needs can help to reduce skills shortages and mismatches.** Peru is already collecting information on firms' current labour demands in a systematic way through its enterprise survey. Workers and job seekers could make better use of this information if it were provided in a more accessible format. Furthermore, skills assessment and anticipation exercises, such as those already conducted in a number of OECD countries, could be developed in Peru to provide guidance on future skills demands that would inform education policy making and student choices, thereby mitigating skills shortages and mismatches.

**Peru should build its institutional capacity at national and local levels to make full use of the data it collects.** Appropriate use of data for decision making requires that administrators, educators and individuals become familiar with interpreting data and transforming it into knowledge. Peru should strengthen its capacity at national, regional and local levels for policy makers to make effective use of data and establish evidence-based evaluation procedures.

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## CHALLENGE 8. IMPROVING CO-ORDINATION ACROSS DIFFERENT ACTORS AND LEVELS OF GOVERNMENT TO ACHIEVE BETTER SKILLS OUTCOMES

### A selection of challenges identified by Peruvian workshop participants:

*“MTPE, MINEDU work in isolation. An inter-ministerial entity that involves MTPE, MINEDU, educational institutions and firms should be created.”*

*“Develop dialogue forums for effective horizontal collaboration.”*

*“There is a misalignment between SINEACE and the MTPE.”*

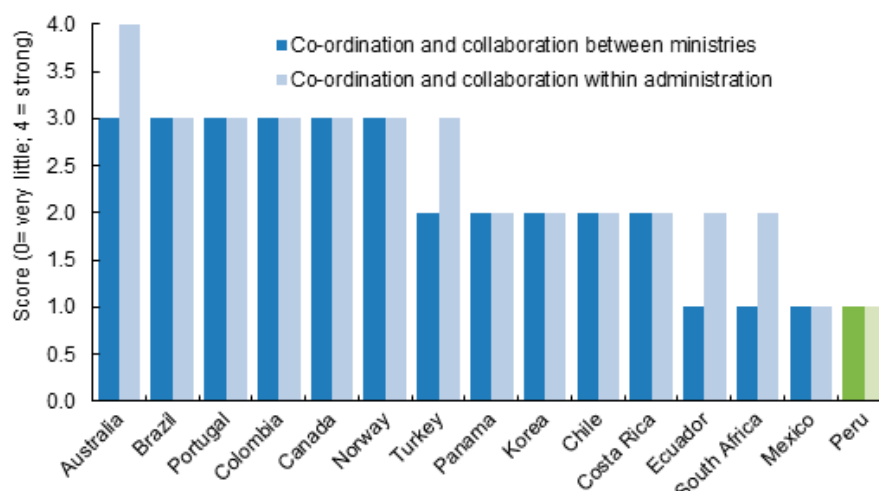
*“The participation of all actors in the skills system is crucial.”*



**Strong co-ordination supports the achievement of positive outcomes regarding the development, activation and use of skills.** In many countries, the two ministries with the greatest responsibility for skills policies, education and employment, often have little tradition of working together. This is also true for interactions between different levels of government. At the same time, partnerships with employers and the private sector across OECD countries have relied on a certain degree of flexibility within policy management, especially at the local level. Such flexibility allows for more responsive active labour market programmes, which direct training resources to those who need it the most and, by extension, have a positive impact on employment (Giguère and Froy, 2009).

**Co-ordination of public policies could be improved in Peru.** Perceptions relative to the degree of co-ordination among public institutions is relatively low in comparison with OECD countries and other countries in the Latin American region (Figure 25). Peru’s poor performance can be explained by a number of factors, such as weakness in the prioritisation and implementation phases for policies involving several ministries, and the lack of leadership from the centre of government (OECD, 2015a; NTR, 2016). Peru could improve its skills outcomes by strengthening horizontal collaboration among different ministries, and vertical collaboration across different levels of government.



**Figure 23. Perceptions of co-ordination among public institutions, 2012**

Note: 0 represents very little co-ordination and 4 strong co-ordination. The Institutional Profiles Database provides an original measure of countries' institutional characteristics through composite indicators built from perception data. The perception data was gathered through a survey completed by country/regional Economic Services (*Services Économiques*) of the French Ministry for the Economy and Finance and the *Agence Française de Développement's* offices.

Source: IPD (2012), "2012 governance data", Institutional Profiles Database, [www.cepii.fr/institutions/EN/ipd.asp](http://www.cepii.fr/institutions/EN/ipd.asp).

**Lack of effective co-ordination contributes to disparities in skills performance that may exacerbate regional economic inequalities.** Peru, like many other countries, is made up of regions that strongly differ in their performance and growth rates. Across the OECD, these differences persist over time, suggesting that regional level factors, including differences in the distribution of skills across regions, yield significant differences in productivity. To illustrate, economic growth was, on average, close to 6% annually between 2004 and 2014, but it has not been evenly distributed across the country. Between 2001 and 2011, some regions grew by almost 9% (Cusco and Ica), while others grew by only 3% annually (Huancavelica and Pasco). These economic differences appear to reinforce other inequalities (CEPLAN, 2015). More urbanised areas (which have experienced higher growth) have better access to education, lower rates of illiteracy, and higher rates of tertiary attainment than rural regions. However, some inter-regional variation persists, with certain more prosperous rural regions outperforming less prosperous urban regions in terms of their educational performance. In particular, regional and urban-rural economic inequalities reinforce inequalities in skills outcomes, as socio-economic background matters more for skills outcomes in Peru than in many other countries participating in the Programme for International Student Assessment (PISA) (see Challenge 1). To address this regional inequality, Peru envisions an approach that focuses on infrastructure development and poverty alleviation at national, regional and local levels through the improvement of basic services such as health, education and electricity (CEPLAN, 2015).

**Place-based policies and effective horizontal collaboration could strengthen skills outcomes and reduce regional disparities in Peru**

**Placed-based policies may help to address regional disparities and unlock growth potential.** Tackling spatial asymmetries among regions with different endowments and rates of economic growth requires an approach that combines countrywide measures with placed-based policies. While countrywide measures ensure the provision of basic public services, placed-based policies seek to address the endogenous factors preventing regions from approaching their full economic potential (Garcilazo et al., 2009). Placed-based policies are justified on the ground that local governments tend to be closer to people's needs and therefore in a better position to tailor programmes and services to meet those specific local needs. Evidence from Latin

American countries shows examples of regions that have been particularly successful in improving their local economic fabric and citizen well-being by developing locally tailored policies to address endogenous factors such as skills (CAF, 2010). Place-based policies have proved their effectiveness in a context of appropriate decentralised structures and procedures, and sufficient capacity at local level. Since 2002, Peru has sought, through its decentralisation law, to bring democracy closer to the people and enhance accountability, while at the same time improving the provision of public goods and reducing regional disparities (OECD, 2016).

### Box 38. Regional disparities and economic growth in Peru

Peru's regions are diverse, and each region has different sources of and potential for growth. Realising this regional growth potential will require integrated policies that are tailored to the unique circumstances of each place and that can simultaneously improve skills, innovation, infrastructure and the business environment. Better prioritisation of public investment, and the integration of these priorities within fiscal frameworks at a regional level, should be a key reform priority. Within this context, the OECD has identified four main challenges:

1. Since 2002, Peru has made strong advances in terms of political decentralisation, with the election of regional governments and the transfer of significant responsibilities to the subnational level. However, this has not been accompanied by changes to tax and transfer arrangements, or a coherent strategy to increase skills and capabilities at the subnational level. This situation, coupled with overlapping responsibilities and competencies between levels of government and limited levels of horizontal and vertical co-ordination, has prevented the country from achieving the objectives of decentralisation. The regional level is the weakest link in Peru's system of government, and will need to be strengthened to address the economic challenges the country now faces.
2. Peru's sectoral and innovation policies focus on diversifying the economy and increasing the complexity of the country's export basket. They are primarily designed and executed at the national level. The rise of global value chains, the increasing importance of networks and technological platforms for innovation, and the dynamic nature of business start-ups all point toward the need for a more "bottom-up" innovation strategy. The strategic planning and co-ordinating role of subnational governments needs to be strengthened, along with better-targeted incentives and more effective partnerships with the national level, to help realise this place-based approach.
3. There is a lack of a strategic approach to urban and rural policies. The institutional framework for urban and rural development policies is fragmented and lacks effective mechanisms to co-ordinate and align planning and resource allocation. Strategic spatial plans are not connected to resource allocation decisions in a co-ordinated way, and their implementation is not consistently monitored and evaluated. Rural programmes are mainly orientated toward alleviating poverty and are not adequately connected to economic development opportunities. There is significant variation in how urban and rural development policies are implemented at a subnational level, and a lack of alignment between different levels of government. The current arrangements for decentralisation favour national or municipal decision making, largely bypassing regions; this contributes to a lack of collaboration between provincial and district municipalities.
4. Peru is a territorially diverse country and the delivery of better policies will need to be supported by good spatial statistics. Currently, there is a lack of consistency and quality in the system of statistics at the subnational level. As a result, there is diversity of standards, concepts, definitions and, in several cases, inconsistent statistics. Consolidating and streamlining territorial statistics and information systems will be crucial for improving the quality of policy-making processes and the delivery of sectoral policies. This includes harmonising rural definitions and developing statistical definitions that better capture functional urban areas.

Source: OECD (2016a), *OECD Territorial Reviews: Peru 2016*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264262904-en>.

**Making decentralisation work requires a mix of effective horizontal co-ordination mechanisms and the capacity to implement placed-based policies.** Effective skills policies must be responsive to the diverse conditions and needs of regions and municipalities. Understanding the relationship between skills supply and demand within regional and local labour markets in Peru could help policy makers develop strategies at the regional and local levels that better connect the education and training system to the world of work. In addition, co-ordination among the different ministries responsible for the effective development, activation and use of skills could make decentralisation more effective. To ensure the effective functioning of decentralisation processes, the OECD has identified a number of gaps that need to be filled regarding capacity, funding, accountability and information (see Box 39).

### **Better horizontal collaboration can strengthen the development, activation and use of skills in Peru**

**Many ministries and authorities in Peru have an impact on the development, activation and use of skills.** The Ministry of Education (MINEDU) is responsible for primary, secondary and upper secondary non-tertiary education, while the Ministry of Labour and Employment Promotion (MTPE) shares responsibility for a number of professional education and activation programmes, and is in charge of work-based learning and continuous professional development, thereby contributing to effective skills use. MTPE also oversees a number of programmes to facilitate school-to-work transitions and youth employment. The National System of Evaluation and Accreditation of Educational Quality (SINEACE) supervises the quality of primary, secondary, vocational and higher education (ECLAC, 2015). The Ministry of Economy and Finance (MEF) co-designs the budgeting decisions on resources allocation, together with MINEDU. The vocational education and training (VET) system is co-managed between MINEDU and MTPE, with MTPE administering an array of job training and employment services. As a result, effective collaboration between these ministries is necessary on issues such as skills certification and recognition of prior learning.

**However, systems of inter-ministerial collaboration are relatively underdeveloped in Peru.** The centre of government is characterised by a lack of systemic co-ordination between national development planning and budget decisions. In addition, the lack of co-ordination between and within ministries is affecting effective policy design and implementation. As an illustration, the National Centre for Strategic Planning (CEPLAN), which produces the National Development Plan and centralises the strategic vision for the country's future economic and social prosperity, has very limited leverage to enforce the application of the long-term strategies of the government. Aside from the National Development Plan, several line ministries (such as the Ministry of Production [PRODUCE] or the Ministry of Trade) have their own national plans, which sometimes overlap and sometimes contradict each other (OECD, 2016).

**The design of strategic documents and the implementation of strategic plans require alignment at all levels.** CEPLAN's national development plan towards 2021 contains a number of strategic pillars that sometimes relate to the shared responsibilities of different ministries. For example, Pillar 4 on economic diversification, competitiveness and employment draws on the insights of the National Plan of Productive Diversification elaborated by PRODUCE. Implementing a plan with such a high degree of complexity requires the collaboration of ministries with exclusive and shared responsibilities in a number of overlapping policy domains, such as employment, industrial policy and education. Skills policies are incorporated into the overarching objective of increasing the productivity and diversity of the Peruvian economy, but are also an important element regarding the goal of alleviating poverty and fostering social inclusion, which is the second strategic pillar (CEPLAN, 2015).

**Peru should strengthen horizontal collaboration among the ministries involved in skills policies.** As with productive diversification, many ministries share responsibility for the development, activation and use of skills. To ensure policy coherence and strengthen efficiency across governmental actions, Peru should establish a clear strategic leadership and effective co-ordination mechanisms across ministries with common strategic objectives. Collaboration should be strengthened in particular between MINEDU, MTPE and the Ministry of Finance, as well as national evaluation and statistical agencies, such as the National Institute of Statistics and Informatics of Peru (INEI) and SINEACE.

### Box 39. The OECD approach to multi-level governance challenges

The relationship among levels of government resulting from decentralisation is characterised by mutual dependence, as it is impossible to have a complete separation of policy responsibilities and outcomes among levels of government. It is a complex relationship that is simultaneously vertical across different levels of government, horizontal among the same levels of government, and networked. Governments must therefore bridge a series of challenges or “gaps” between levels, both vertically and horizontally.

These gaps notably include the fiscal capacity of governments to meet obligations; information asymmetries between levels of government; gaps in administrative responsibility, with administrative borders not corresponding to functional economic and social areas at the subnational level; and gaps in policy design, when line ministries take purely vertical approaches to cross-sectoral regulation which leads to a need for the co-design of implementation at the local level, and often a lack of human or infrastructure resources to deliver services and design strategies.

Countries may experience these gaps to a greater or lesser degree, but given the mutual dependence that arises from decentralisation, and the network-like dynamics of multi-level governance, countries are likely to face them simultaneously.

#### Mutual dependence across levels of government: Multi-level governance challenges/gaps in OECD member countries

Types of challenges/gaps	Co-ordination challenges/gaps
Funding	Unstable or insufficient revenues undermining effective implementation of responsibilities at the subnational level or for shared competences => <b>Need for shared financing mechanisms.</b>
Administrative	Occurs when the administrative scale for investment does not correspond with functional relevance, as in the case of municipal fragmentation => <b>Need for instruments for reaching “effective size” (co-ordination tools among subnational units; mergers).</b>
Policy	Results when line ministries take purely vertical approaches to cross-sectoral policies to be territorially implemented => <b>Need for mechanisms to create multi-dimensional/systemic approaches and to exercise political leadership and commitment.</b>
Information	Asymmetries of information (quantity, quality, type) between different stakeholders, either voluntary or not => <b>Need for instruments for revealing and sharing information.</b>
Capacity	Arises when there is a lack of human, knowledge or infrastructural resources available to carry out tasks and to design relevant strategies for local development => <b>Need for instruments to build local capacity.</b>
Objective	Exists when different rationales among national and subnational policy makers create obstacles for adopting convergent targets. Can lead to policy coherence problems and contradictory objectives across investment strategies => <b>Need for instruments to align objectives.</b>
Accountability	Reflects difficulties in ensuring the transparency of practices across different constituencies and levels of government. Also concerns possible integrity challenges for policy makers involved in the management of investment => <b>Need for institutional quality instruments =&gt; Need for instruments to strengthen the integrity framework at the local level (focus on public procurement) =&gt; Need for instruments to enhance citizens’ involvement.</b>

OECD member and non-member countries are increasingly developing and using a wide variety of mechanisms to help bridge these gaps and improve the coherence of multi-level policy making. These mechanisms may be “binding”, such as legal mechanisms, or “soft”, such as platforms for discussion, and they must be sufficiently flexible to allow for territorially specific policies. Involvement of subnational governments in policy making takes time, but medium- to long-term benefits should outweigh the costs of co-ordination.

#### Sources:

Charbit, C. and M. Michalun (2009), “Mind the Gaps: Managing Mutual Dependence in Relations among Levels of Government”, *OECD Working Papers on Public Governance*, No. 14, OECD Publishing, Paris, <http://dx.doi.org/10.1787/221253707200>; Charbit, C. (2011), “Governance of Public Policies in Decentralised Contexts: The Multi-level Approach”, *OECD Regional Development Working Papers*, No. 2011/04, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kg883pkxkhc-en>.

**Collaboration between MINEDU and MTPE could be further strengthened.** While informal collaboration clearly exists in some regions, policies and mechanisms that promote more formal co-ordination of services could help to expand their reach and impact. In particular, the labour market information collected by regional MTPE offices, along with their professional career advising staff, could be more intentionally integrated into school-based career guidance activities (McCarthy and Musset, 2016).

**Collaboration between SINEACE and MINEDU could also be strengthened.** SINEACE independently evaluates the characteristics of educational institutions and assesses compliance with established quality standards regarding principals and teachers, engagement with families and communities, and school infrastructure (SINEACE, 2014). In a context of high labour market informality, SINEACE certifies the acquisition of skills in the workplace in a number of sectors. Information collected through school accreditation processes, together with national competencies standard tests, could inform more targeted policy interventions by making skills supplies certified and transparent (see Challenge 7). The certification of competencies acquired in the workplace could facilitate the return of individuals to education and a better utilisation of skills at work.

**Many OECD countries create bodies that co-ordinate the work of ministries to improve skills outcomes.** The interdependent nature of skills policies has prompted a number of OECD countries to create national steering committees for skills that leverage the collective knowledge of different national ministries. Such mechanisms may help to reduce tensions between ministries (political power games or budgetary competition), government and stakeholders (centralised to localised), and individuals and institutions (formal education and qualification versus individual learning outcomes), thereby enabling a more focused approach to the challenges faced by the skills system globally. Box 40 provides examples of these co-ordinating bodies.

#### **Box 40. National strategic bodies to steer skills policy making**

**Denmark:** Council of Academy Profession Programmes and Professional Bachelor Programmes (i.e. short and medium-cycle post-secondary VET). This council was set up in 2008 to advise the Minister about the development of new programmes, the mix of provision, quality assurance and improvement. It also provides a yearly report, which reviews existing programmes and describes new initiatives. The Council meets six times a year and has a board of 21 members, including those appointed by the Minister of Science, Innovation and Higher Education after nomination by various employer organisations (8 members), trade unions (2), the organisation of Danish regions (1), organisation of local governments (2), student organisations (2), University Colleges (1) and Academies of Professional Higher Education (1).

**United Kingdom:** The Commission for Employment and Skills (UKCES) was launched in April 2008 with the aim of increasing the employer voice in the UK's VET system, and promoting investment in skills to drive enterprise, jobs and growth. It is led by commissioners from large and small employers, trade unions and the voluntary sector. It also includes representatives of further and higher education institutions and from the devolved administrations. Its strategic objectives are: 1) to provide world-class labour market intelligence which helps businesses and people make the best choices for them; 2) to work with sectors and business leaders to develop and deliver the best solutions to generate greater employer investment in skills; and 3) to maximise the impact of changed employment and skills policies and employer behaviour to help drive jobs, growth and an internationally competitive skills base. The UKCES works with government departments and agencies, as well as researchers across the United Kingdom, to develop an evidence base and pool expertise. The UKCES also funds and manages the Sector Skills Councils and oversees their relicensing process. As a UK-wide body, it helps ensure a strategic approach to skills development that covers all four nations (with devolved administrations for education and training policy) of the United Kingdom. A recent shift in the approach to employer engagement encourages employers to own their skills agenda and develop their own initiatives, rather than relying on a policy agenda set by government with incentives for employers to join. In 2011, the Prime Minister announced a fund of up to GBP 250 million to test out approaches that empower employers to take control of skills development. The UKCES is working closely with government to develop this approach.

Source: Musset, P., et al. (2013), *A Skills Beyond School Review of Austria*. OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, p. 37, <http://dx.doi.org/10.1787/9789264200418-en>.



**Peru should promote stronger collaboration among actors who have a stake in skills outcomes.**

To foster collaboration across ministries that have a stake in skills, the MTPE has recently launched three sector skills committees in the areas of health, construction and tourism (Gestión, 2016). These committees aim to foster people's employability and firms' competitiveness and productivity in each sector. The committees serve as forums for dialogue and collaboration across ministries such as Health, Housing, Education, Commerce and Tourism, and with employers. The committees' mandate is to identify and prioritise sectorial needs concerning skills development, activation and use. These may include the design of job performance standards to develop qualification frameworks, and instruments to assess workers' professional development needs within the sector. Sustaining this dialogue, and transforming it into co-ordinated action, will be critical for the long-term success of such initiatives in Peru.

**Vertical collaboration is essential for ensuring the effectiveness of decentralisation and place-based policies**

Peru is a unitary State with a two-tier subnational system composed of regions and district/provincial municipalities. Subnational governments have their own competencies and budgets. The regional level currently consists of 24 departments and of the Constitutional Province of Callao, which has the status of a department. The local level has two independent sub-levels: provincial municipalities and district municipalities. A two-way collaboration between national, regional and local government is paramount to making the system work effectively.

**Peru is facing a number of challenges in making vertical collaboration and decentralisation work**

**The decentralisation process in Peru is ongoing, and co-ordination challenges between national, regional and local levels persist.** Despite the overarching commitment towards decentralisation, central government has exclusive competencies in the design of national and sectorial policies, while line ministries formulate, plan, direct and evaluate these policies. While the decentralisation law of 2002 establishes a clear division of responsibilities based on the principle of subsidiarity, in practice, the alignment between national, local and regional governments suffers from a lack of clarity and overlaps in the assignment of responsibilities. This prevents effective policy design in crucial areas such as skills and labour market policies (OECD, 2016). Despite the existence of formal co-ordination mechanisms, in practice, co-ordination between national and subnational governments appears to be inconsistent and ad hoc (OECD, 2016). Direct informal dialogue between mayors and regional presidents on the one hand, and central government authorities on the other, is the main mechanism for dialogue and co-ordination among central and regional governments. The association of mayors and the association of regions do not have institutionalised channels of communication with central government (OECD, 2016).

**Fiscal systems are not adequately designed to make decentralisation work in Peru.** Across the OECD, subnational governments are responsible for a large share of many aspects of public finance. Beyond public expenditure, subnational governments are increasingly responsible for public procurement, investment, and collect over one third of tax revenues (OECD, 2016). While subnational governments in Peru are increasingly responsible for public expenditures and investments, they have very little capacity to collect their own taxes. With a heavy reliance on transfers from central government (78.2% of the total budget in 2014 in the case of regions), subnational governments in Peru act more as de-concentrated agencies that execute national budget allocation decisions.

**The governance of education systems is generally centralised, but implementation is decentralised.** MINEDU is in charge of curriculum design, student learning outcomes, teacher quality and school infrastructure. Subnational governments (regional and local) are responsible for the implementation of the Ministry's strategic directions through a novel "management by objectives" approach called *Compromisos de Desempeño*, whereby resources are allocated conditionally on the attainment of specified policy objectives (MINEDU, 2016). These objectives are adjusted for local differences in relative starting points of each region

regarding the specific indicators. According to the Organic law of 2002, regional and local governments retain their responsibilities for the management of pre-school, primary, secondary and non-university tertiary educational services by taking into account regional and local cultural diversity. However, some aspects of the system's functioning remain opaque (OECD, 2016).

**Local and regional governments in Peru enjoy little autonomy in allocating resources for skills policies.** The decentralisation process of the education system in Peru has been progressing, together with that of other sectors, as regions have become increasingly responsible for managing their own educational systems. However, the legislative devolution of powers has not been followed by a corresponding devolution of authority in the allocation of resources. Moreover, the presence of policy gaps, with significant overlapping of responsibilities between national, regional and local levels, prevents effective co-ordination. The lack of specific capacity at the local level hinders the implementation of tailored, place-based approaches that have been proven to be effective in reducing regional disparities.

### **Peru is implementing measures to overcome its vertical co-ordination challenges**

**Some regional governments have attempted to respond to the challenges of the decentralisation process by implementing legislative tools that are more appropriate to their regional needs.** In the case of the Junín region, the regional government is focused on making the best use of available resources. It has developed its own regional curriculum, the Regional Education Plan (PER), a student performance evaluation plan, and a plan to strengthen local capacity at the administrative level (World Bank, 2013). The plan has generated initial improvements in students' learning outcomes (World Bank, 2013). However, changes in the political cycle led to a discontinuation of the institutional reform process, with negative consequences for administrative and student learning outcomes.

**Mechanisms for vertical co-ordination should be strengthened in Peru.** The Intergovernmental Commission of the education sector has an explicit objective to strengthen the system's decentralised governance. Active since 2012, it gathers four times per year. It is composed of representatives from the Ministries of Education and Finance, the executive board of the National Assembly of Regional Government, and two major municipal bodies: *Asociación de Municipalidades del Perú* (AMPE) and the *Red de Municipalidades Urbanas y Rurales del Perú* (REMURPE) (MINEDU, 2016).

**Flexibility in skills policy design and implementation can improve outcomes.** The OECD defines flexibility as “the possibility to adjust policy at its various design, implementation and delivery stages to make it better adapted to local contexts, actions carried out by other organisations, strategies being pursued, and challenges and opportunities faced” (Giguère and Froy, 2009). National governments increasingly recognise the need to provide sufficient flexibility for regional and local employment and training agencies to take a lead role in designing and delivering employment and skills policies (OECD, 2014a). Flexibility at the regional and local level can also help to stimulate stronger partnerships and joined up actions, where stakeholders make programme and policy decisions based on shared objectives and activities.



#### Box 41. Locally-based collaborative governance structures

**Workforce Investment Boards in the United States:** Local Workforce Investment Boards (LWIBs) are responsible for providing employment and training services within a specific geographic area. They have played a strong role in creating more integrated strategies to address employment and skills within broader local economic development strategies. There are over 600 LWIBs across the United States at the state and local level, and they are strongly business-led. Each Local Workforce Investment Area is governed by an LWIB. The LWIBs administer Workforce Investment Act services as designated by the Governor, and within the regulations of the federal statute and US Department of Labour guidelines. There are also designated seats for representatives from labour unions and local educational institutions, with economic development officials sitting on the boards in many states. LWIBs are typically an extension of a local government unit and can include more than one government entity. They are not agencies of the federal or state governments, and the staff are not comprised of federal or state employees.

**Local Workforce Planning Boards in Ontario, Canada:** There are 25 workforce planning areas in communities across Ontario. These boards conduct localised research and engage organisations and community partners in local labour market projects. Each board is as individual as the community it serves, and each addresses labour market issues in its own way. All have a mission to identify workforce issues that are characteristic of the local community, and to provide collaborative solutions by engaging stakeholders and working with partners. The Ministry of Training Colleges and Universities sets a broad direction for the boards through annual operating and reporting requirements, but leaves the way in which that direction is addressed specifically to the boards. Funding for each board is small, around CDN 250 000 annually, which allows for an executive director, researcher and administrative help. Other resources are volunteered within the community or are part of individual project funding from either the federal or provincial governments.

Each board publishes detailed reports about its labour market projects, activities and partnerships. The boards champion local workforce development solutions for their communities and help to strategically align the actions of all local stakeholders in the community. In a recent report on reforming Ontario public services, a recommendation was made that the role of the boards should be expanded to provide a greater emphasis on engaging employers and promoting workplace training.

**Local employment co-ordinators in vulnerable areas in Australia:** Australia's Keep Australia Working strategy has made the co-ordination of employment policies at the local level a priority. One of the measures includes the identification of Priority Employment Areas - areas most vulnerable to expected downturn and future unemployment - to ensure that these areas receive their appropriate share of additional funding and support. In each Priority Employment Area, Local Employment Co-ordinators (LECs) were appointed, and advisory committees were established comprised of local stakeholders from employment, vocational education and training, and economic development backgrounds. LECs assist in driving local responses to local labour market problem areas. The LEC is an agent of the federal government, and their main role is to identify skills/labour needs or shortages and structural barriers in the area, and match skills needs with employment, education and training opportunities. The LEC also identifies projects that may be funded through allocated federal funding - the Flexible Funding Pool - and organises a Jobs and Skills Expo that brings together employers, employment service providers, labour and recruitment agencies, and registered training providers.

*Sources:*

OECD (2014a), *Employment and Skills Strategies in Australia*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264207899-en>;

OECD (2013), "Local Job Creation: How Employment and Training Agencies Can Help, United States", *OECD Local Economic and Employment Development (LEED) Working Papers*, No. 2013/10, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k44zcpz25vg-en>;

OECD (2014b), *Employment and Skills Strategies in the United States*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264209398-en>;

OECD (2014c), *Employment and Skills Strategies in Canada*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264209374-en>.

**Providing flexibility at the local level does not necessarily require extensive institutional reform.** While some countries have increased the autonomy of key local and regional actors, others have brought more structural changes in governance. OECD countries, such as the United Kingdom and Korea, have tried to preserve a sense of proximity with the subnational level as municipalities increased in population size. For example, England has recently introduced City Deals, which are agreements between central government and cities that aim to give new powers, freedom and funding mechanisms to local decision makers in exchange for greater responsibility for stimulating and supporting economic growth in their area (OECD, 2014d). Skills development is one element of these agreements.

### Summary and policy implications

**Effective horizontal and vertical co-ordination is critical to the development and implementation of skills policies.** Collaboration among different ministries is needed to ensure that skills policies are implemented coherently across distinct, but interdependent, policy areas. Effective skills policies must be responsive to the diverse conditions and needs of regions and municipalities. Understanding the relationship between skills supply and demand within regional and local labour markets in Peru could help policy makers develop strategies at the regional and local level that better connect the education and training system to the world of work.

**Peru could improve the existing mechanisms of inter-ministerial collaboration and strengthen skills outcomes.** Many ministries and authorities in Peru have an impact on the development, activation and use of skills, but systems of inter-ministerial collaboration are relatively underdeveloped. To foster collaboration across ministries that have a stake in skills, the MTPE has recently launched three sector skills committees in the areas of health, construction and tourism. Sustaining this dialogue and transforming it into co-ordinated action will be critical for the long-term success of such initiatives in Peru.

**Effective vertical governance structures are necessary to strengthen Peru's skills system.** Co-ordination among different levels of government is crucial given Peru's ambition to become a highly decentralised form of government. In many cases, more than one level of government has responsibility for the same policy area, with unclear division between national, regional and local levels. This issue is particularly remarkable in the case of education. Some regional governments have attempted to respond to the challenges of the decentralisation process by implementing regional instruments. However, there is still room to improve vertical co-ordination mechanisms. The capacity of regions and local authorities should be strengthened to allow for a more thorough implementation of place-based policies, with the goal of reducing regional and urban-rural disparities in skills outcomes.

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## CHALLENGE 9. BUILDING PARTNERSHIPS TO ENSURE THAT POLICIES ARE RESPONSIVE TO CHANGING SKILLS NEEDS

### A selection of challenges identified by Peruvian workshop participants:

*“Better dissemination of the work and the benefits of public policies to the private sector.”*

*“Replicate the SENATI example in further collaborations between schools and firms.”*

*“Introduce workshops between SMEs, academia, trade unions and Ministry of Production.”*

*“Start working from the sectorial committees at regional level.”*

*“Donate obsolete machineries to training facilities.”*

*“Strengthen civil servants’ communications skills to interact with firms.”*



**Partnerships are crucial for improving the responsiveness of policies for skills development, activation and use.** To improve countries’ performance in the development, activation and effective use of skills, governments must foster collaboration and co-ordination among the various actors with a stake in, and an influence on, skills outcomes. In addition, partnerships are crucial for raising commitment and securing ownership for improving skills outcomes. Effective partnerships between the government and the private sector ensure that the development of skills in formal education is aligned with labour market demands and expectations. Moreover, stronger partnerships can smooth labour market frictions by making active labour market policies more responsive to firms’ immediate recruitment needs. Finally, partnerships can facilitate the allocation of workers’ skills to their most productive use in the economy.

**Partnerships between government, the private sector and social partners are essential to help Peru reach its strategic objectives for 2021.** The attainment of the ambitious goals set in the National Strategic Plan for Peru towards 2021 requires a whole-of-government and whole-of-society approach whereby government, the private sector and civic society contribute to the shared objectives of economic prosperity and social cohesion.

**By raising the efficiency of the skills system, improved partnerships can help Peru reach its strategic goals.** Synergies have to be created and sustained across the six pillars of the National Strategic Plan, as they touch cross-cutting themes that fall under the responsibility of a wide range of public and private stakeholders. By fostering stakeholders’ alignment, effective partnerships for skills development, activation and use contribute, for example, to the overarching goal of productive diversification. As an illustration, levels of human capital generated by the skills system feed into firms’ capacity to produce more complex products, which means that companies can move up the value chains and ensure increasing quality and sustained competitiveness of the country’s export basket.

## Partnerships are critical for improving the effectiveness and efficiency of the skills system

**Partnerships between educational institutions and employers can help to ensure that the skills being developed meet the needs of the economy.** Many OECD countries are taking steps to increase employer engagement in the design and delivery of education and training. For their part, many employers are seeking a more active role in designing and delivering education and training programmes to ensure that they have access to the highly-skilled workers that they currently need, or will need in the future. For schools, a close relationship with employers could facilitate students' transition to work, and the updating of teachers' skills within a framework of professional development.

**Effective partnerships are critical for improving the effectiveness and efficiency of Peru's skills systems.** While the Peruvian government can play a key role in the skills system, what it can achieve alone has limits. Improving skills outcomes requires collaboration and co-operation with the many actors who have a stake in the skills outcomes of Peru, including individuals, firms, employer associations, unions and educational institutions. Peru could benefit from more regular and formalised partnership arrangements that involve all actors in the skills system in both planning and decision making. Government officials are likely to need guidance and training to effectively involve social partners in such processes.

## A number of partnerships are already in place to help Peruvians develop relevant skills

**In Peru, there are a number of ways in which partnerships are helping to develop relevant skills.** The country has a strong tradition of sectorial schools that were developed to help specific sectors of the economy find graduates with sector specific skills. In addition, employers have recently been involved in consultative bodies (sectorial committees) to discuss future skills needs in a number of economic sectors, including construction, tourism and health.

**The housing, tourism, manufacturing and defence sectors have developed training institutions to meet their workforce development needs.** These vocational education and training (VET) schools (SENATI, SENCICO and CENFOTUR's) operate with considerable independence from the Ministry of Education, with separate governance structures and financing schemes. They provide a variety of degree programmes, as well as incumbent worker training and other education and training services deemed valuable by key stakeholders. Despite accounting for a small share of the overall total enrolment in VET (around 10-15%), these schools are well regarded by students and employers alike. The strong involvement of the employer community, both in terms of financing and programme design, demonstrate how valuable these relationships are to the provision of relevant skills for specific industries. The formal ties to employers help ensure that the schools' offerings remain relevant and tied to the labour market, even as they compete for students (McCarthy and Musset, 2016).

**Strong employer leadership in the design of sectorial school programmes helps to promote strong labour market outcomes.** *The Servicio Nacional de Adiestramiento en Trabajo Industrial (SENATI)* serves Peru's industrial and manufacturing sectors. SENATI operates independently of the Ministry of Education (MINEDU), and has the legal authority to operate its own schools and to award technical and professional degrees. The schools are private and charge tuition, but also receive funding through the *Asociación de Empresas Industriales*, which is made up of employers. With over 80 schools, operating in 25 regions of the country, the system has a wide reach. In 2014, SENATI enrolled 72 443 students and produced 13 000 graduates (SENATI, 2014).

**The involvement of employers in the provision of training and technology ensures skills development quality and relevance.** Modelled on European apprenticeship programmes, SENATI uses a dual system approach that alternates theoretical study at the training institute with work-based experience in a firm. It delivers technical education with a variety of two and three-year programmes in machining, mechanical production, and repair technologies, among others. Students spend the first year of their three-year programme



in the classroom (provided by SENATI) and the second two years learning on the worksite under the supervision of a firm-based mentor. SENATI has signed a number of partnerships with prominent private companies, such as Bosch, Fiat Chrysler Automobiles and Mitsui, for the creation of training centres focusing on electro-technology, metalworking and automotive mechanics (SENATI, 2016). The presence of industry-led technological centres can help students become acquainted with the latest technologies and production processes, while also offering workers the opportunity to continuously update their skills.

**Partnerships should reinforce local sectorial strengths and address local skill needs.** The *Servicio Nacional de Capacitación para la Industria de la Construcción* (SENCICO) provides similar education and training services to the construction sector. With schools in four of the country's largest cities, SENCICO provides training to incumbent workers, as well as degree programmes tailored to the needs of the country's construction industry, from civil engineering and topography to construction management. SENCICO operates under the jurisdiction of the Ministry of Housing and develops its own curricula and degree programme. It collaborates with prominent local construction companies, and its mandate indicates regional governments as its main institutional stakeholder (SENCICO, 2012). Similarly, the *Centro de Formación en Turismo* (CENFOTUR) provides specialised education and training programmes to support the nation's tourist industry. It operates four schools in major tourist cities around the country, and offers two and three-year degree programmes in fields such as hotel management and administration, as well as shorter programmes in the culinary arts and customer service. Approximately 1 500 students enrol in CENFOTUR schools each year (OECD, 2016).

**Communication and exchange among stakeholders need to be accompanied by local flexibility.** In a highly centralised system such as Peru's, the effective engagement of employers at the local level requires a certain level of flexibility in adapting educational programmes to local circumstances. Policies that are responsive to local needs can also provide an opportunity to strengthen the role of regional offices of the Ministry of Education and Ministry of Labour (MTPE), and provide opportunities for stronger co-ordination and collaboration (see Challenge 8). Specifically, regional offices of the Ministry of Labour can share regional labour market information with their education counterparts to inform decisions around curricular adaptation (see Challenge 7).

**Strong partnerships between government and stakeholders are essential for helping identify current and future skill needs.** As part of Peruvian efforts to improve competency recognition and certification (see Challenge 7), the corresponding law in 2012, *Ley del Sistema de Normalización y Certificación de Competencias Laborales* (SCL), seeks to establish a number of sectorial committees to foster discussion of the skills needed in Peru's strategic economic sectors. In 2015, the relevant ministries, mainly MINEDU and MTPE, established sectorial skills committees in the tourism, construction and health sectors. While still limited in their capacity, and subject to a number of institutional and architectural constraints (IDB, 2015), these committees could help to guide discussions about skills needs at the sectorial level. For example, they could be used to gather intelligence from firms on occupational and skills demands. This, in turn, could help foster more informed policy decisions and facilitate the adoption of more systemic approaches to skills assessment and anticipation exercises (see Challenge 8).

**More could be done to leverage partnerships to ensure that more Peruvians develop the skills needed in the labour market**

**Good partnership practices, such as sectorial schools, could be expanded to the entire VET system, and beyond.** The unequal distribution of work-based learning opportunities (see Challenge 3) among students enrolled in *Centros de Educación Técnico Productivo* (CETPRO) and *Institutos de Educación Superior Tecnológico* (IEST), which cover around 70% of VET students (McCarthy and Musset, 2016), further exacerbates misalignments between education and the world of work, as the beneficial spillovers of work-based learning experiences in terms of curricular enrichment and teacher and student training do not spread equally across schools and regions. A more widespread diffusion of industry partnerships becomes increasingly important for



building a policy infrastructure for the VET system that is responsive to the right set of demand signals, and that facilitates better communication and exchange among stakeholders.

**Curricular development should be more aligned with local and regional skills needs.** Some OECD countries have incorporated mechanisms for taking into account local employers' needs during the process of local curriculum development. In Denmark, for example, about 80% of the curriculum in short-cycle post-secondary vocational programmes is defined at the national level to ensure a common core skill set, while 20% is defined locally to respond to local employer needs. Employers and trade unions are actively involved at both levels. Regular dialogue with local industry representatives is important to ensure that provision is relevant to local labour market needs (Kis and Park, 2012). The OECD has developed a categorisation of the key elements that make local partnerships successful (see Box 42).

#### Box 42. How to build successful locally-based partnerships

A locally based partnership is usually designed to bring together all relevant actors within a region to address a specific issue within a community and/or improve its overall economic well-being. However, bringing together all relevant actors is not an easy task. It implies having around one table different government institutions (usually of different levels), as well as social partners, employers, non-governmental organisations (NGOs), training institutions, and representatives of civil society. Whatever the reason for setting up a partnership, there are certain factors to bear in mind:

- **Organisational structure:** To be efficient, a partnership should have a recognisable and autonomous structure to help establish its identity. The structure should have stability and permanence, as well as flexibility, and the credibility that derives from a certain independence from political influence. It is also important to review lines of communication to ensure that all partners are kept informed and involved. Equity should be a guiding principle in building a partnership, as should (for many partnerships) a "bottom-up" structure. Sufficient human and financial resources are also needed.
- **Preparation:** Preparatory work is crucial for developing a steady and effective partnership. Careful research into the context in which the partnership will be operating must be part of this phase. The strengths and weaknesses of the area should be assessed and effective measures designed. One of the most important aspects of this phase is to identify the right partners and establish clear roles for each.
- **Work plan:** Partnerships need to develop a long-term strategy if they are to work effectively and have a lasting effect. For area based partnerships, this strategy should include: a vision for the region that focuses on the outcome to be achieved, an action plan identifying shorter-term priorities, and a co-ordinated working programme that includes activities and measures that will contribute to the achievement of long-term outcomes. The work programme should indicate the interests and targets of all partners and include activities and measures that will contribute to the improvement of the territory.
- **Implementation:** In this phase, partners are in regular contact to co-ordinate implementation, to extend and supplement the working programme with new measures, and, in some cases, to test new approaches. Public relations activities should inform the wider public of the targets, activities and measures of the partnership.
- **Monitoring:** A comprehensive monitoring system should be used to assess a partnership's achievements, determine improvements to be made, and adapt further planning. A partnership should be evaluated periodically and should publish reports to demonstrate the added value of its work.

Source: Adapted from OECD (2006), *Successful partnerships: A guide*, OECD, Paris, [www.oecd.org/cfe/leed/36279186.pdf](http://www.oecd.org/cfe/leed/36279186.pdf).

**Higher education in Peru could improve its linkages with the private sector to ensure a better alignment between skills supply and demand.** OECD countries provide a variety of examples of how local partnerships can be strengthened to support better outcomes in higher education. In Ontario, Canada, employers advise community colleges (which offer tertiary non-university programmes, typically between one and three years) on the skills needs of their firms, sectors and the regional economy through participation in Programme Advisory Committees (OECD, 2014a). In the United States, community colleges are able to rapidly develop courses to meet changing skills needs because they use industry representatives as trainers. The use of trainers from industry also helps to build good relationships between the education and private sectors. In some cases, community colleges have created a separate branch of their institution that offers more traditional academic courses in order to more quickly respond to local needs (OECD, 2014b). Community colleges are also represented through workforce investment boards (WIBs) in the United States, which helps to strengthen connections with employment services, economic development agencies, and local employers, who make up the majority of membership (Box 43).

#### **Box 43. Integrating employment and economic development at the local level**

In the United States, local workforce investment boards (WIBs) have played an important role since 1998 in creating more integrated strategies to address employment and skills within broader economic development strategies. There are over 600 WIBs across the United States at the state and local level. They are strongly business-led as they are chaired by business and having a majority of business members (at least 51% of board membership must be employers). Each local workforce investment area is governed by a WIB, which is responsible for providing employment and training services within a specific geographic area.

The WIBs administer the Workforce Investment Act (now re-authorised under the 2013 Workforce Innovation and Opportunity Act) services as designated by the governor and within the regulations of the federal statute and US Department of Labour guidelines. There are also designated seats for representatives from labour unions and local educational institutions, with economic development officials sitting on the boards in many states. While performance of the boards varies, in some areas they have developed strong integrated strategies that bridge employment, skills and economic development. Local WIBs are typically an extension of a local government unit, which, in most cases, is the county government and can include more than one government entity. They are not agencies of the federal or state governments, and the staff are not comprised of federal or state employees. Local WIBs hire staff to administer the programmes. The actual delivery of services is contracted out to intermediaries, which include other public agencies (government agencies and educational institutions), and to non-government (non-profit and for-profit) organisations.

Source: OECD (2014c), *Employment and Skills Strategies in the United States*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264209398-en>.

**Higher education programme offerings could be better aligned with local labour market needs.** Partnerships between higher education institutions and the private sector can ensure that local demand for highly skilled workers is met by a tertiary education offering that is deeply entrenched and focused on sectors and industries where competitive advantages are strong at the local level (see Challenge 8). In Peru, local partnerships between universities and employers in the extractive regions (e.g. Ancash, Arequipa, Cajamarca, and Cusco) may result in better alignment between skills supply and demands, with additional productivity gains for the mining sector. OECD experiences demonstrate how a country rich in natural resources, such as Norway, has developed a local university to cater to the demands of the oil industry and its system of customers and suppliers (Box 44).

#### Box 44. Co-operation between academia and the work place: Campus Helgeland, Norway

The region of Helgeland in Nordland County has a population of approximately 78 000 and is characterised by small industrial towns, rural areas and a coastline with a wide-reaching archipelago. Due to its industrial history, the region has long traditions of co-operation and joint problem solving between public, private and well-organised civil society institutions and actors. While there are three higher education institutions in Nordland county, none of these are in the region of Helgeland. Due to the large distances in Nordland county (500 km from south to north), this has been a cause of concern among industrial actors and local politicians.

While Helgeland has several productive processing industries and a well-developed cluster of suppliers, which is growing due to the rapidly expanding offshore petroleum industry, the level of formal education in the region is low, and outward migration of highly educated young people is high. In response to this dilemma, a co-ordinating institution, “Campus Helgeland”, has been developed through joint initiatives of public, private and civil society actors, with the aim of becoming a networking institution focused on enhancing skills and innovation in the region.

Campus Helgeland opened in August 2013 and houses higher education institutions, libraries, industrial networking institutions and some private firms, all within grounds of 130 000 square metres. Education delivered at Campus Helgeland is directed both towards public and private sector needs. Engineering education, which was expected to start in 2014, will increasingly cater to the needs of private industrial actors. The municipality has financed the space with support from the local bank and a financial guarantee for the first years of operation from the Norwegian government. The decision of the municipality to finance Campus Helgeland was made after a long process of negotiation during which different projects and project ideas were combined to reach a consensus.

Source: OECD (2014d), *Skills Strategy Diagnostic Report: Norway*, OECD, Paris, [www.oecd.org/skills/nationalskillsstrategies/Diagnostic-report-Norway.pdf](http://www.oecd.org/skills/nationalskillsstrategies/Diagnostic-report-Norway.pdf).

#### Stronger partnerships between Public Employment Services and employers could improve skills activation in Peru

**Employers should strengthen their collaboration and involvement in the activities of the local employment centres.** The Centre for Employment is a mechanism that centralises services for employment promotion. It brings together labour market information, job placement services, training and professional orientation services, and free employment and entrepreneurship promotion services (MTPE, 2016). Employers engage with the centres through mechanisms of “*acercamiento empresarial*”, where they can select profiles from available pools of candidates. However, their participation and collaboration with employment centres seems to be limited to these activities, thereby missing an opportunity to co-design training programmes for the job seekers, which could be beneficial in matching their recruitment needs.

**Greater employer participation in skills assessment and anticipation exercises is important for improving the alignment between skills supply and demand.** A number of OECD countries have developed mechanisms to facilitate stakeholder input in skills assessment and anticipation exercises. These include involving stakeholders in the advisory boards of key agencies (e.g. Denmark, Finland, Norway, Wallonia/Belgium), or actively involving them through thematic workshops (e.g. Canada, Norway). Some countries have used the development of national skills strategies as a way of facilitating dialogue on skills needs across the country (e.g. Austria, Germany, Korea, Ireland, Switzerland and the United States). Other countries (e.g. Italy) directly involve employers by asking them about perceived skills deficiencies and skills gaps they have encountered while interviewing candidates (McCarthy and Musset, 2016).

#### Box 45. Partnerships and outsourcing in active labour market policies

Ministries, the Public Employment Service (PES), or other public agencies may contract out employment services to external providers to complement public services.

Involving the private sector in the provision of employment services can bring a number of benefits, notably specialist skills that are unavailable in the public sector. Competition and open tendering for contracts can potentially reduce delivery costs and stimulate innovation in service delivery. These developments also may spur improved performance in the PES through competitive pressure and best-practice transfer. Involving the private sector also allows for the expansion of service delivery capacity without the long-term commitments involved in public sector employment – although some stability of the contracting framework is desirable to build up private-sector capacity.

Most PES outsource some specific functions. In **Finland**, local employment offices have outsourced most job-search training activities and other group activities for jobseekers. In **Norway**, most Job Clubs are run by external providers, and at least some Job Clubs are outsourced in **Ireland** and **Japan**. **Japan** also outsources a number of call centres. The Norwegian and Swiss PES are believed to outsource placement services, this being the standard in the Canton of Geneva.

Source: OECD (2013), “Activating jobseekers: Lessons from seven OECD countries”, in *OECD Employment Outlook 2013*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/empl\\_outlook-2013-7-en](http://dx.doi.org/10.1787/empl_outlook-2013-7-en).

#### Partnerships are critical for ensuring that skills are used most effectively at work

##### **In Peru, there are a number of instances where partnerships could facilitate a better use of skills.**

As illustrated in Challenge 5, the country suffers from a large number of workers who, despite having completed higher education, are, on average, over-qualified for their jobs. Such misallocation of talent can be addressed by two complementary measures. First, incentives to increase the labour mobility of highly educated workers across regions could reduce potential shortages of highly qualified workers and reported mismatches. In this case, collaboration with firms is essential, as employment services need to make sure that information on actual vacancies is transparent and up to date (Challenge 7). Second, strengthening the linkages between local higher education offerings and local firms would allow education programmes to be well matched with local labour market needs.

Moreover, partnerships among firms in similar sectors could reduce the burden of providing training to employees through mechanisms of cost sharing, in collaboration with local employment centres (Challenge 5). Stronger partnerships between academia and firms could foster better use of researchers’ skills and lead to greater levels of innovation in the public and private sector (Challenge 6).

**Collaboration and co-operation among firms can foster better use of skills at work.** Inter-firm collaboration on training may be an effective way to share the cost of training to ensure that is responsive to their specific needs (see Challenge 5). Formal arrangements for dialogue across firms and sectors can be an important step towards developing training arrangements that increase both the quantity and quality of training by firms, especially small and medium-sized enterprises (SMEs). Box 46 provides an example from Ireland, and Box 47 an example from Barcelona.

**Box 46. Ireland: Building partnerships among employers to better align skills development opportunities with the world of work**

Skillnets was established in 1999 to promote and facilitate workplace training and upskilling by SMEs. It is the largest organisation supporting workplace training in Ireland. In 2011, it had 70 operational networks through which it trained over 40 000 people for a total expenditure of EUR 25 million. It is a state-funded, enterprise-led body that co-invests with enterprises, particularly SMEs, when they co-operate in networks to identify and deliver training suited to their workforces. A network of SMEs, which are mostly sectoral or regional, is guided by a steering group of the local enterprise representatives. The steering group gives strategic direction and guidance to a network manager who co-ordinates all operational activity leading to the delivery of an agreed training plan with learning interventions suited for the member company workforces. The national programme is co-ordinated by Skillnets Ltd, who contract with all networks and provide programme support and monitoring to ensure the delivery of agreed quantitative and qualitative target outputs.

In 2011, Dublin had 30 networks, but these were predominantly sectorial networks with a national remit and company membership. Among Skillnets member companies, 25% are Dublin-based, as are 33% of trainees. While Skillnets has a national impact, its influence is largely confined to SMEs, which account for 94% of its 10 000 member companies. Although it was originally established to cater exclusively for the employed, since 2010, Skillnets has had a mandate to include the provision of training for jobseekers. This happens both in an integrated manner (with jobseekers attending programmes with employees), and also through the provision of dedicated longer-term programmes exclusively for the unemployed (e.g. the Jobseeker Support Programme), which include work placements. Skillnets has also launched a pilot training initiative, Management Works, which provides management training to the SME community with a key focus on owner-managers.

Source: OECD (2014e), *Employment and Skills Strategies in Ireland*, OECD Reviews on Local Job Creation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264207912-en>.

#### Box 47. Public and private sector collaboration agreements in Barcelona

In 1986, Barcelona City Council created Barcelona Activa in response to a high unemployment rate of over 20%, economic restructuring, the closure of a number of factories, and a lack of entrepreneurial initiative. Barcelona Activa acts as the Economic Promotion Counsellor of the city and works closely with public sector bodies and private institutions through more than 370 collaboration agreements. The four service activities are: 1) business creation and entrepreneurship culture; 2) innovative business consolidation and growth; 3) human capital development and new employment opportunities; and 4) access and improvement of employment. Some initiatives that emerged out of the partnerships are:

- **Activa's "Porta 22"**: This is a reference centre that focuses on new occupations and emerging and transforming sectors. The amenity is designed as an open, free-access space, aimed at people looking for new jobs, opportunities, employment orientation, and orientation about the future of professional evolution. It provides 730 new professional profiles analysed in depth through 12 multimedia interactive applications and 150 visuals. There are 50 000 pages of digital content, personal advice and a twice monthly activities programme.
- **Ca n'Andalet**: This is the centre where all the activities linked to training and skills development are designed and partially developed by Barcelona Activa. It is the reference point for the improvement of knowledge and professional skills in the city. The centre offers various services, including: vocational training aimed at upgrading the skills of the low qualified and the unemployed; training in new technologies and business management; and professional certification. This training centre now specialises in training in the personal services sector, one of the emerging sectors in the city.
- **Cibernarium**: The Cibernarium trains the population in the use and utility of information and communication technologies. Hosted by the technology park, the Cibernarium was born in co-operation with Cité de Sciences of Paris. It is the centre for digital diffusion and literacy, and aims to disseminate the new opportunities that the knowledge society, particularly new technologies, offer to the personal and professional development of students, jobseekers and enterprises.

Source: OECD (2009), *Promoting Entrepreneurship, Employment and Business Competitiveness: The Experience of Barcelona*, OECD, Paris, [www.oecd.org/cfe/leed/43505170.pdf](http://www.oecd.org/cfe/leed/43505170.pdf)

#### Partnerships between universities and firms can prompt a more productive use of researchers' skills

**Partnerships between universities and firms should be strengthened to ensure research collaboration, knowledge and technology transfer.** The commercialisation of public research is a key function of universities and public research institutions (PRIs), alongside teaching, education and the dissemination of knowledge. Public research has been the source of many of today's innovations, while its proper exploitation can contribute to a country's innovation and productivity performance. While a number of reasons are behind Peru's poor innovation performance (see Challenge 6), increased collaboration between universities, public research institutes and firms could prompt a better use of researchers' skills, and contribute to Peru's productive diversification and innovation ambitions. Research carried out in academic institutions could, in part, be oriented towards the innovation goals of the private sector.

In addition, firms could temporarily hire researchers for specific research and development (R&D) projects for which they lack human resources.

**Collaboration between universities, firms and public research institutions is weak in Peru.** Peruvian firms have shown a clear preference to solving their technological problems by hiring consultants from overseas. Obstacles regarding the institutional mobility of academic researchers and the Public Administration Career Law, which prohibits public university professors from receiving payments from more than one source, are significant barriers to co-operation between universities and firms (OECD, 2011). Peru lags behind comparable countries in the Latin American region regarding existing collaboration mechanisms between businesses and PRIs for the commercialisation of public research (OECD, 2011). Peruvian companies have not faced the intense competitive pressures that would lead them to demand technological services, or



force them to innovate constantly, and a significant portion of the business sector consists of companies with low levels of technological sophistication. Industry and research institutions tend to have different research interests, meaning that PRI governance structures, and an adequate system of incentives, are needed to encourage their co-operation.

**Exposure to, and competition from, international markets may prompt firms to leverage the skills of research partners.** The signing of free trade agreements has generated commercial opportunities that can only be seized with high-quality products, efficient logistics that ensure on-time arrival of products, and marketing systems that are appropriate for the markets to which the companies seek access. Trade agreements have generated increased awareness among exporting companies of the importance of innovation, and how this involves establishing relationships with other agents. Partnerships among firms are essential for ensuring that innovation capacity reaches sufficient scale to compete in international markets. Innovation funds, such as the Peruvian Fund for financing Innovation, Science and Technology (FINCYT), and technological assistance programmes are explicitly designed to foster partnerships between firms and actors in the innovation system. In projects financed by FINCYT, the incentive is greater when projects involve several agents, such as groups of companies, or when they are partnerships in which a company, or set of companies, is associated with a university or research institute.

**OECD countries have developed a number of instruments for fostering knowledge dissemination and collaboration between academia and firms.** While knowledge and research generated by the public research system diffuses through a variety of channels, such as mobility of academic staff, scientific publications, conferences, contract research with industry, and licensing of university inventions; a great deal of policy attention in OECD countries has centred on promoting knowledge transfers through publications, the patenting and licensing of academic inventions, and the promotion of academic start-ups. More recently, these channels have been complemented by public-private partnerships (OECD, 2014b). Governments have also tried new ways of facilitating co-operation between industry and research staff, such as new models of technology transfer offices (TTOs) and technology licensing offices (TLOs), the use of collaborative intellectual property tools, such as patent pools and patent funds, and initiatives to facilitate access to the results of public research, as illustrated in Box 48.

#### **Box 48. Examples of partnerships between research, universities and companies across OECD countries**

The **Czech Republic** recently implemented a series of measures to support TTOs by: establishing technology transfer points and offices in research institutions; creating instruments to fund the proof-of-concept stage of technologically based projects; and supporting the popularisation of science and technology through the creation of science learning centres, and improving access to research information and information about research results.

**France** has recently created a number of technology transfer companies (SATTs) to reduce the fragmentation of technology transfer services at the regional level.

**Israel** is encouraging the development of private or for-profit models for TTO offices, which are often institutionalised in the form of limited liability companies. Internet platforms that provide a market for academic inventions have also been the target of policy support.

**Mexico** is creating and strengthening TTOs through the Sectoral Innovation Fund (FINNOVA), which aims to increase opportunities for linkages between institutions that generate knowledge and the private sector through consulting, licensing and start-ups. Support will focus on the certification of TTOs and additional support for them to engage in later validation of the commercial potential of research results. Support will also be given to SMEs to cover consultancy costs when they require a certified TTO to solve a problem.

Source: Innovation Policy Platform (IPP), module on commercialisation of public research, available at: [www.innovationpolicyplatform.org/content/commercialisation-public-research-oecd-sti-outlook](http://www.innovationpolicyplatform.org/content/commercialisation-public-research-oecd-sti-outlook).



### Summary and policy implications

**Effective partnerships are critical for strengthening the effectiveness and efficiency of skills policies.** Collaboration between government and stakeholders is needed to ensure that skills policies are aligned with the needs of the economy. This requires mechanisms to support communication between government and relevant stakeholders, and among various stakeholders.

**Stronger partnerships can increase the relevance of skills developed in VET and higher education.** Peru's VET system is characterised by the existence of strong sectorial schools that are designed and respond to the skills demand of specific economic sectors on the one hand, and a weaker public and private system for the rest of the economy on the other. Engaging firms in the co-design and running of training programmes in IEST and CETPROs would ensure a better alignment between skills developed and labour market demands. Moreover, partnerships between higher education institutions and the private sector could ensure that local demand for highly skilled workers is met by an adequate supply of tertiary graduates with the skills needed to meet the needs of sectors and industries where local competitive advantages are strongest.

**Employers can and should play a more active role in the design and implementation of active labour market policies (ALMPs).** Firms passively participate in ALMPs by simply choosing candidates from the available pool provided by the local employment centre. Their involvement in training and activation programmes would enhance the skills quality and relevance of those searching for jobs, and build up a ready-to-use talent pipeline. A more active participation of employers in skills assessment and anticipation exercises would ensure better alignment between skills supply and demand.

**Stronger partnerships can facilitate better use of skills.** Partnerships between higher education institutions and the private sector can ensure that local demand for highly skilled workers is met by a relevant tertiary education offering. Partnerships between academia and the private sector can help knowledge dissemination and foster a more productive use of academic researchers' skills for innovation and the overarching goal of productive diversification.

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## NEXT STEPS

### **Moving from diagnosis to action**

This diagnostic report encapsulates the key findings of the diagnostic phase completed in 2016, and is a key deliverable of the OECD-Peru collaborative project on “Building an effective skills strategy for Peru”.

The OECD Skills Strategy Diagnostic Toolkit has proved useful as a framework for engaging a wide range of stakeholders in far-reaching discussions about the skills challenges facing Peru today and in the future. This report highlights the breadth of the skills challenges ahead, and how effective and integrated policy responses will be needed to weave together measures from diverse fields, such as education and training, employment, innovation, research, tax, local economic development, and economy.

Policy makers can build upon these shared insights to generate options for concrete actions to meet Peru’s future skill needs. Maximising Peru’s skills potential, and improving the match between supply and demand for skills, is an endeavour that goes well beyond the capacity of government alone. Designing and implementing effective skills policies will require collaboration among many public actors at the national level, as well as co-operation with local authorities. Building a strong skills system for Peru will also depend on the ongoing involvement of key stakeholders, including employers, trade unions, training institutions, students, teachers and others.

Above all, building a strong skills system will require a shared commitment across government ministries and social partners to build a responsive and resilient system that fosters Peru’s competitiveness, social cohesion and high standards of living for all.

# OECD Skills Strategy Diagnostic Report

## Peru

Better skills policies help build economic resilience, boost employment and reinforce social cohesion. The OECD Skills Strategy provides countries with a framework to analyse their skills strengths and challenges. Each OECD Skills Strategy diagnostic report reflects a set of skills challenges identified by broad stakeholder engagement and OECD comparative evidence while offering concrete examples of how other countries have tackled similar skills challenges.

These reports tackle questions such as: How can countries maximise their skills potential? How can they improve their performance in developing relevant skills, activating skills supply and using skills effectively? What is the benefit of a whole-of-government approach to skills? How can governments build stronger partnerships with employers, trade unions, teachers and students to deliver better skills outcomes? OECD Skills Strategy diagnostic reports provide new insights into these questions and help identify the core components of successful skills strategies.

This report is part of the OECD's ongoing work on building effective national skills strategies.

### Write to us

Directorate for Education and Skills - OECD  
2, rue André Pascal - 75775 Paris Cedex 16 - FRANCE  
[edu.contact@oecd.org](mailto:edu.contact@oecd.org)

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- [www.pisa.oecd.org](http://www.pisa.oecd.org) for the Programme for International Student Assessment (PISA) data
- [www.oecd.org/skills](http://www.oecd.org/skills) for OECD work on skills

### Further reading

OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing.

OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing.

OECD (2015), *OECD Skills Outlook 2015: Youth, Skills and Employability*, OECD Publishing