Job Creation and Local Economic Development 2016



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Job Creation and Local Economic Development 2016





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Please cite this publication as:
OECD (2016), *Job Creation and Local Economic Development 2016*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/9789264261976-en

ISBN 978-92-64-26194-5 (Print)
ISBN 978-92-64-26197-6 (PDF)
ISBN 978-92-64-26196-9 (epub)

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Preface

Policymakers across the OECD are faced with the twin challenges of boosting productivity growth, while ensuring that growth delivers improved living standards and spreads the benefits of increased prosperity fairly. This is a vital but not an easy task. Actions originating at any single governance level or policy area will not be sufficient. A whole-of-government approach is needed. While strategies and plans can be developed at the national and regional levels, it is at the level of local communities that the "rubber hits the road". The local level is where programme delivery actually happens, trade-offs and complementarities become most evident, and actions can be joined-up to deliver effective results.

Even the best designed policies can fail if local implementation is not handled properly. Weak capacities on the ground; spatially blind policies that are not well-adapted to the local context; lack of local ownership; and poor co-ordination between different areas and levels of government can all impede success. Overcoming these challenges requires understanding how actions in one area, such as economic development, can have simultaneous benefits in others, such as social inclusion. It requires breaking down silos and making our policy frameworks agile and flexible enough for local actors to come together to address new challenges as rapidly as they emerge.

This second edition of *Job Creation and Local Economic Development* tackles these issues head on. It provides local level data to help policymakers understand how their communities are faring in the marketplace for skills and jobs, and adjust policies accordingly. It considers how policy frameworks for vocational training, and entrepreneurship and SME policies can allow for local tailoring while preserving national objectives. The report provides recommendations on improving local implementation of apprenticeship systems and supporting entrepreneurship, which are essential tools for social inclusion.

This study has benefitted from a wide range of contributors, bringing together experiences of both national and local actors, from the delegates of the LEED Directing Committee who provided guidance and feedback, to the staff of national statistical offices who provided data, to the network of local practitioners in LEED's Forum on Partnerships and Local Development who shared information on new policy initiatives. When all communities are able to use the tools of local development effectively, this will deliver more inclusive growth, both at the national and at the local level.



Angel Gurría
Secretary-General, OECD

Foreword

This second edition of the Local Economic and Employment Development (LEED) Programme's biennial series, Job Creation and Local Economic Development *draws on projects across LEED's programme of work to offer practical and concrete guidance to policy makers and practitioners. In particular, it draws from the projects on "Engaging employers in skills development"; "Tackling skills mismatch and fostering skills utilisation"; "Local job creation"; "Boosting local entrepreneurship and enterprise creation"; "Nurturing inclusive entrepreneurship"; and "Injecting local flexibility in education and training systems".*

Thanks are due to all of the LEED Directing Committee delegates for their guidance, input and feedback. Particular thanks go to the Directing Committee's steering group for this publication, which was comprised of delegates from the following countries: Australia, Belgium (which led the steering group), Canada, Hungary, Japan, and Poland. Thanks also go to the countries that participated in the projects from which this publication draws, as well as the national statistics offices that helped to collect the data for the country profiles.

This publication was prepared under the leadership of Sylvain Giguère, who co-edited it with Anna Rubin. The lead authors were Jonathan Barr, David Halabisky, Marco Marchese, Michela Meghnagi and Anna Rubin. Substantive contributions to the narrative chapters were also provided by Lou Aisenberg, Stellina Galitopoulou, Pierre Georgin, and Angela Attrey, who also provided editorial support. Antonella Noya and Jonathan Potter provided input and feedback throughout the process. Michela Meghnagi, with the support of Pierre Georgin and Angela Attrey, led the work on statistics and indicators. François Iglesias and Eleanor Davies provided critical production and administrative support. Other OECD colleagues should also be thanked, including Christophe Delprat, Damian Garnys, Audrey Garrigoux, Antoine Houlou-Garcia, Gabriella Scaduto Mendola, Sebastian Tobon, and Janine Treves for their support in the editing, production and translation processes.

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Reader's guide

Following an introductory chapter, this publication consists of two main parts. Part I contains Chapters 2-6, the five thematic chapters of the publication. Part II consists of 36 country profiles as well as an overview of the methodology for the profiles. These profiles present a variety of local indicators, including new data on skills supply and demand at the sub-regional level. Data are presented for each member of the LEED Directing Committee and other OECD countries for which relevant data were available.[1] More detailed information about the methodology for the country profiles is available in the overview of the country profiles.

List of country profiles

Australia	Hungary	Poland
Austria	Ireland	Portugal
Belgium	Israel	Romania**
Canada	Italy	Slovak Republic
Chile	Japan	Slovenia
Czech Republic	Korea	South Africa**
Denmark	Latvia*	Spain
Estonia	Lithuania**	Sweden
Finland	Mexico	Switzerland
France	Netherlands	Turkey
Germany	New Zealand	United Kingdom
Greece	Norway	United States

* At the time of preparing this publication, Latvia was a member of the LEED Directing Committee but not yet a member of the OECD.

** Non-OECD Countries that are members of the LEED Directing Committee.

Abbreviations and acronyms

CEMER	State-level commissions for regulatory improvement (*Comisiónes Estatales de Mejora Regulatoria*)
CJF	Canada Job Fund
COFEMER	Federal commission for regulatory improvement (*Comisión Federal de Mejora Regulatoria*)
EC	European Commission
EU	European Union
GDP	Gross domestic product
GVA	Gross value added
GTO	Group training organisation
LCDC	Local Community Development Committee
LED	Local Employment Development
LEED	Local Economic and Employment Development programme

NEET	Not in education, employment or training
NGO	Non-governmental organisation
NSO	National statistical office
OECD	Organisation for Economic Co-operation and Development
OSKE	Finnish Centre of Expertise programme
PV	Customized Placement of Trainees in Enterprises programme
R&D	Research and development
RDA	Regional development agency
RTO	Registered training organisation
SFC	Self-funded communities
SIB	Social impact bond
SME	Small and medium-sized enterprise
VET	Vocational education and training
YEP	Young Entrepreneurs Project

Note on Latvia

While Latvia has been a member of the LEED Directing Committee for a number of years, it was not an OECD member at the time of preparation of this publication. Accordingly, Latvia does not appear in the list of OECD members and is not included in the zone aggregates.

Note

1. As of June 2016.

Executive summary

Many OECD countries are seeing widening gaps in the geographic distribution of skills and jobs. By supporting quality job creation from within and ensuring that all residents can benefit from and contribute to growth, local development is a key tool for addressing this problem. This edition of *Job Creation and Local Economic Development* looks at how skills and quality jobs are distributed at the local level, and what national and local actors can do to improve the local implementation of vocational education and training (VET) and SME and entrepreneurship policies in order to boost job creation and strengthen local economies.

Places are being left behind in the global marketplace for skills and jobs

The marketplace for skills and jobs is becoming increasingly globalised, and some local areas are being left behind as highly productive workers and the employers who seek them become concentrated in fewer places. While there has been an overall increase in education levels between 2000 and 2014 across OECD countries, education levels in the highest performing local areas generally grew more than education levels in the lowest performing local areas, contributing to increasing geographic divides. Some countries, such as Canada, Finland, France, Italy, Latvia, Norway, the Slovak Republic, Slovenia, and the United Kingdom, are also seeing growing gaps in the geographic distribution of medium- and high-skilled jobs.

In international comparisons, some places perform relatively poorly on both the supply of and demand for skills, resulting in a "low skills trap". Such places may find themselves stuck in low value-added activities, unable to expand to economic activities that are more productive and make good use of a highly-skilled workforce. However, even in high performing places, people without the right skills or those facing barriers accessing quality jobs may be left behind.

Improving VET from the bottom up to ensure more people get the right skills for good jobs

Many countries are in the process of reforming their VET systems. Top priorities include increasing the labour market relevance of training and expanding apprenticeships and other types of work-based learning. As the available jobs and skills in demand vary considerably at the local level, a balance is needed between tailoring VET to specific local conditions and maintaining a certain degree of national coherence. Additionally, the leadership role local public agencies and governments can take in improving the implementation of apprenticeship programmes should not be discounted. Better consideration of these factors will not only improve national outcomes, but also ensure that VET contributes to strategic economic development priorities locally.

Better tailoring and co-ordinating policies to help unleash entrepreneurial potential

Supporting entrepreneurship and SMEs is an important part of promoting endogenous growth and strengthening the local economic base. The design and delivery of SME and entrepreneurship policies have become more complex in recent years, and it is not uncommon to see three or four levels of government as well as multiple ministries and government agencies simultaneously involved. Better co-ordination between the various stakeholders involved in policy design and implementation is important to avoid gaps and duplications, and to harness synergies between programmes. Regardless of the level of governance from which policies and programmes originate, they need to be tailored to local conditions at the level of delivery.

Entrepreneurship can also support social inclusion. Youth unemployment remains an urgent issue in many OECD countries, but the role entrepreneurship support can play in strengthening the labour market attachment of disadvantaged youth is often overlooked. It is not a panacea for helping all disadvantaged youth find success, but it can help those with the ambition and wherewithal to become self-employed while also increasing the overall employability of a larger group.

What national actors can do to improve the local implementation of VET programmes

- Design VET frameworks that allow local stakeholders to tailor training to local labour market needs while still maintaining a certain level of national consistency. Policy makers have a number of options for how to do this (e.g. setting aside time within curriculums for local concerns, moving to more modular programmes), but the trade-offs of each need to be carefully managed.
- Build the capacities needed to make VET systems more agile locally. Training and capacity-building for VET teachers, trainers and institutions as well as promoting sharing between VET stakeholders can all help.
- Develop a strong national apprenticeship framework that builds a high quality system, includes strategically-designed incentives for employer participation, and allows for flexible delivery frameworks.

and what local actors can do

- Balance the need to meet pressing local labour market demands with ensuring that VET helps to move local economies to higher skilled and value-added products and services.
- Encourage VET teachers and trainers to maintain contact with local employers and industries to keep their skills and knowledge up-to-date.
- Boost employer engagement in apprenticeships through both “soft” mechanisms such as employer leadership awards, and measures with more “teeth”, such as social clauses in procurement to induce employers to offer apprenticeships.
- Tailor the delivery of apprenticeship programmes so that they work better for a broader range of employers, including SMEs, and disadvantaged populations. Working with actors such as SME networks and social enterprises can be beneficial.

What national actors can do to unleash local entrepreneurial potential

- Maximise the efficiency of SME and entrepreneurship policy delivery by allowing for local tailoring, co-locating services, using intermediary organisations to deliver programmes, and/or developing formal agreements for the division of competences and financing between governance levels.
- Develop national frameworks and strategies to support disadvantaged young people in entrepreneurship, and clearly assign responsibility for this policy portfolio to a single agency or ministry.
- Embed entrepreneurship into national education frameworks to reach a broad swath of young people, while also providing integrated packages of entrepreneurship support in other settings to reach young people outside of the education system.

and what local actors can do

- Forge connections across administrative borders in developing and co-ordinating entrepreneurship and SME policy to leverage potential synergies, improve labour mobility, and expand the potential markets open to entrepreneurs.
- Work with organisations that already have established relationships with disadvantaged youth to maximise the reach of entrepreneurship programmes.
- To better reach disadvantaged youth, provide integrated packages of support, use hands-on learning methods, and involve entrepreneurs in programme delivery.

Chapter 1

Creating the right conditions for job creation and local development

This chapter summarises the key messages from this publication by taking stock of how local areas are performing in the marketplace for skills and jobs; discussing how to improve the local delivery of vocational education and training, including apprenticeships; and examining how to tailor entrepreneurship and SME policies to specific places and populations. In particular, this chapter shows that with the right conditions in place, working locally can be a key component of promoting inclusive growth nationally. Additionally, it provides a snapshot of recent reforms across OECD countries related to empowering regional and local actors; building local resilience; taking innovative approaches to designing, delivering and financing local services; and engaging employers in employment and skills policies.

The marketplace for skills and jobs has become increasingly competitive, and some local areas risk being left behind as highly productive workers and the employers who seek them become concentrated in fewer places. Even in places that are benefiting from these shifts, people without the right skills or who face other challenges may be disconnected from quality jobs. Local development is a key tool for addressing these challenges. It is a means of supporting quality job creation from within and ensuring that all residents can benefit from and contribute to growth. With the right conditions in place, working locally can be a key component of promoting inclusive growth nationally.

This edition of *Job Creation and Local Economic Development* looks more closely at these conditions, and the specific actions local and national actors can take. It includes national and international comparisons of how local areas are performing in the marketplace for skills and jobs, and considers how vocational education and training (VET) and small and medium-sized enterprise (SME) and entrepreneurship policies can better meet the needs of specific places and populations. This introductory chapter reviews the key findings on these issues, and provides examples of recent reforms[1] that policy makers have put in place to boost local economic development and job creation. These examples range from locally driven initiatives, developed, designed and implemented by individual regions and localities, to broader changes in national or regional policy frameworks that enhance the ability of local actors to tailor programmes and policies to specific local conditions.

Following this chapter, Chapter 2 shows how both the supply of skills as well as employer demand for skills can be taken into account to assess the strengths and weaknesses of local labour markets. Chapter 3 then looks at VET, identifying the tools countries are using to adapt training to local conditions. Within the framework of VET, Chapter 4 considers apprenticeships and other types of work-based learning more specifically. As more countries are seeking to strengthen apprenticeship systems, this chapter examines how local actions can be decisive in implementation success or failure. Chapter 5 turns to entrepreneurship and SME policy, specifically considering policy co-ordination and tailoring. Finally, Chapter 6 takes on the issue of consistently high rates of youth unemployment – a key challenge for many communities – examining the role that entrepreneurship programmes can play in bringing young people closer to the labour market. These narrative chapters are followed by 36 country profiles, which include local data on employment growth, skills supply and demand, and employment rates.

Setting the context: Places are being left behind in the global marketplace for skills and jobs

Skills are a key driver of economic growth, but local economies differ considerably in their ability to develop, attract and retain a skilled workforce. Likewise, not all employers take full advantage of the skills the local workforce has to offer, with considerable local variation in the demand for skills. As the marketplace for skills and jobs becomes increasingly globalised, some local areas risk being left behind as highly productive

workers and employers who seek them become concentrated in fewer places. Measuring the supply of and demand for skills, as well as benchmarking local performance against national and international peers, can help local areas better understand the challenges and opportunities they face.

Gaps between local areas in terms of skills and jobs persist, and in some cases are worsening

Chapter 2 of this publication examines the concentration of skilled workers and jobs at the local level,[2] and changes over the period of 2000-14.[3] Across OECD countries, there has been an overall increase in the education level of workers, but the share of the population with post-secondary education increased faster in some local areas than in others. Namely, education levels in the highest performing local areas grew more than education levels in the lowest performing local areas. For this reason, in most OECD countries, the gaps between the skills of the workforce in the leading and trailing local areas have increased, potentially contributing to growing inequality.

Looking at the concentration of medium- and high-skilled jobs at the local level, the picture is more mixed. For one, there is no overarching trend in terms of loss or gains in the share of medium- and high-skilled jobs. Some countries enjoyed an overall gain in the share of medium- and high-skilled jobs (e.g. Canada, Finland, France, Italy, Japan, Norway, Slovenia, and the United Kingdom) and an increase in the gap between leading and trailing local areas. In six countries, the gap between the leading and trailing local areas has decreased, with Greece and Korea showing the most marked changes. In four other countries (e.g. Czech Republic, the Netherlands, Sweden and the United States) the gap between local areas at the top and at the bottom of the distribution was relatively stable over time.

Local areas characterised by a low supply of and demand for skills risk falling into a low skills trap. In such places, a preponderance of employers rely on low-skilled, low-wage labour, focusing their competitive advantage on cost rather than quality of goods and services. Breaking out of this "trap" can be difficult for local communities. Workers have few incentives to invest in developing a higher level of skills knowing that few commensurate job opportunities are available in the local labour market. At the same time, employers are unlikely to upgrade to production processes or service models that use a higher level of skills, knowing they will be unable to find the workers they need in the local labour market. Thus, in developing local skills strategies, local actors should consider how to take a comprehensive approach that is based on the "high road" to economic development built around skilled workers, high performance workplaces, innovation, and quality jobs, rather than just seeking to fill short-term employer demands.

Box 1.1. **How governments are empowering regional and local actors to deliver for their communities**

In recognition that local actors are often best positioned to develop holistic strategies for boosting economic development and building social inclusion, a number of countries are empowering regional and local actors to set out and deliver on their visions for their communities' future. In the **United Kingdom**, the national government is in the process of devolving a number of administrative and institutional powers to eight core areas, including Greater Manchester, the West Midlands, the North East, Sheffield, Cornwall, Tees Valley, Liverpool and Aberdeen. This will give local government the ability to exert greater control

Box 1.1. **How governments are empowering regional and local actors to deliver for their communities** *(cont.)*

over transport, health, skills, planning and job support functions. For example, the "Greater Manchester City Deal" was established in 2013 and allows the city region to establish an investment framework, a city apprenticeship and skills hub, a business growth hub, a low carbon hub and a new housing and investment fund.

The Government of **Canada** understands the importance of helping Canadians get the training they need to find and keep good jobs. Under the current Canada Job Fund (CJF) Agreements, the Government of Canada provides CAD 500 million each year (2014-15 to 2019-20) to provinces and territories to support programmes and services for all Canadians, regardless of employment status, to access the training and supports they need to fully participate in the labour market. Budget 2016 has committed to invest an additional CAD 50 million in 2016–17 for the CJF Agreements. The Government of Canada has also committed to conducting broad-based consultations with provinces, territories and stakeholders in 2016-17 to identify ways to improve these agreements and guide future investments to strengthen labour market programming.

Since 2012, **Ireland** has been undertaking a process of rationalising the system of public sector bodies. The goal of the reforms is to reduce the number of local authorities from 244 in 2007 to 102 bodies by the end of the reform process. This involves merging and centralising a number of local functions. The Irish government's steering group on administrative reform noted that "the existing arrangements for local development are administratively burdensome and do not lend themselves to joined-up, integrated service delivery" (Department of Environment, Community and Local Government, 2011). In order to deliver more "joined-up" local planning bodies for local economic development, including County Development Boards, Social Inclusion Measures groups, County Enterprise Boards, Enterprise Ireland and the Rural Development Programme, are being merged or co-ordinated to ensure greater alignment along local authority boundaries. Local governments have also assumed responsibility for the co-ordination of funding for the community and voluntary sector. The Irish government has also instated mandatory local community development committees (LCDC). Under the "Local Government Reform Act 2014", each local authority must establish an LCDC consisting of representative of local authorities, public bodies that provide services in the area and local community interests that must prepare and implement a six year local economic and community plan (OECD, 2016a).

In **Belgium, Flemish** sub-regional policy will shift towards a more bottom-up and results-oriented approach in 2016. As Flanders aims to create a new impetus for its regional policy, it is opening up a call for local (or sub-regional) partnerships. This call is directed to broad partnerships between municipalities, sub-regional and local stakeholders in order to strengthen a shared vision and initiate common policies and actions. The partnership allows stakeholders to define the geographic remit of their work. Moreover, the call provides a three year trial period during which the partnership can consolidate their policies. Finally, stakeholders are encouraged to define their priorities in regional and local employment policies, in co-operation with the regional (Flemish) level. The co-financing principle aims to stimulate greater local involvement and engagement. At least 50% of the running costs of their programmes are borne by the local partnerships. The Flemish government (Department of Work and Social Economy) provides a maximum of EUR 2.5 million each year for co-financing these local partnerships. The sub-regional partnerships that are approved will start as from 1st July 2016, for at least three years.

Box 1.1. **How governments are empowering regional and local actors to deliver for their communities** *(cont.)*

In 2014, **France** has reformed its vocational education and life-long learning system with a view of securing employees' career paths, increasing firms' investment in training and making governance simpler and more efficient. The reform gives regional councils a central role by extending their responsibilities in life-long learning to all specific groups, such as the disabled, low-skilled and ex-prisoners, as well as establishing a regional public service for lifelong learning and career guidance. The new law recognises the right for all individuals seeking employment to have access to some form of training in order to acquire an initial level of qualification and facilitate labour market integration, professional mobility or career change. Regions are responsible for implementing this right by ensuring that training leading to a formal qualification is made freely available to the unemployed, including youth. Regional councils have to offer individual support to such individuals and co-ordinate interventions that contribute to funding their training. They also elaborate regional plans for lifelong learning and career guidance and co-ordinate public procurement in training through formal agreements with lower tiers of government and public employment services (Ministère du travail, de l'emploi, de la formation professionnelle et du dialogue social, 2014).

International comparisons can help benchmark local performance in a globalised labour market

To help local areas better understand their strengths and weaknesses, the OECD LEED Programme has developed an analytic tool to allow local areas to benchmark how the supply of and demand for skills in their area compares to their peers nationally (see country profiles). For the first time, this publication looks at how international benchmarks can complement this tool for national benchmarking. For example, larger cities or major metropolitan areas are typically characterised by both a relatively high supply of and a high demand for skills (a high skills equilibrium in national comparisons) (OECD 2014a). However, they may perform less well compared to international peers. Comparing cities to international peers can provide added analytic value, and help these areas to understand their comparative strengths and weaknesses in the global marketplace for talent.

Chapter 2 compares European cities against each other, showing that cities from northern and western Europe, including Stockholm, Paris, London and Brussels fall in a high skills equilibrium (with a relatively high supply of and demand for skills compared to other cities) while cities from southern Europe, such as Porto, Rome, Naples and Lisbon as well as Prague and Warsaw are classified as low skills traps (where both the supply of and demand for skills are relatively low compared to other cities). Comparing North American cities against each other shows that several major Canadian cities, such as Ottawa, Toronto, and Vancouver fall into a skill surplus. These cities show high levels of skills supply, but fall short when looking at the demand for skills and the extent to which jobs are making productive use of the available stock of skills.

It should be noted that the importance of benchmarking local performance may be obvious in theory, but is often difficult to do in practice. Often, data are unavailable at functional economic areas or travel-to-work areas, out of date or only available for a limited set of indicators. Even when a rich set of local level data are available at the national level, it may not be internationally comparable. In addition, traditional labour market indicators such as unemployment rates can hide longer-term challenges, such as

chronically low productivity. Strong performance on the easier to measure indicators of local economic health does not necessarily lead to economic resilience in the long-term. The skills analysis tool developed by the OECD can help to provide a more complete picture of local economic potential and challenges.

Box 1.2. **Moving from a focus on growth to a consideration of resilience**

As local areas are increasingly competing in a global marketplace for skills and jobs, they become more vulnerable to not only local and national economic shocks, but also global shocks. As outlined in OECD Ministerial Statement of 2014, resilience is the "ability not only to resist and recover from adverse shocks, but also to 'bounce back' stronger than before, and to learn from the experience". At the local level, resilience is particularly relevant, Communities across the OECD are increasingly using this lens to develop local communities and economies that are less vulnerable to economic shocks and that are more adaptable to long-term economic changes (e.g. the transition to a green economy or demographic change).

Some local areas have focused on the challenges of transitioning to a green economy. In the **South African province of Western Cape**, the local government has developed a "Green is Smart" strategy to support the local green sector in boosting employment. The province aims to create 2 million new jobs by 2020 with a particular focus on boosting employment for young, female and disabled jobseekers (Western Cape, 2013). Employment creation efforts are channelled into environmental challenges faced by the Western Cape, including alien vegetation clearing projects, wetland rehabilitation programmes, waste management and community tourism projects. By attempting to build skills and support local job creation, the Western Cape is adapting to the unique challenges and opportunities posed by the transition to a green economy. The Western Cape also highlights the role of local areas as a pilot for trialling experimental and innovative approaches to long-term challenges.

Demographic change also provides an impetus to use the lens of local resilience. In 2012, the national **Japanese** government developed a "Local Employment Development" (LED) programme to support employment growth in municipalities in economic and population decline. LED councils are developed by the municipality and act as a forum for local chambers of commerce, agriculture and fisheries co-operatives, prefectural governments and non-governmental organisations to develop employment measures for the local area. The LED Councils propose their projects which consider the local situation and resources to the national government. If their proposals are approved through the contest system, they become "National government commissioned projects" for a maximum 3 years. Since the project's inception, 92 projects have been undertaken and over 15 000 jobs have been created in local areas.

One such project was undertaken in the Fukaura-machi Province in Aomori Prefecture with the aim of combatting a shrinking and ageing population and a stagnant primary sector. In order to revitalise the local economy, the LED council developed a programme to develop sustainable, locally produced agricultural goods made from the local wild Japanese pepper. By engaging the local community and utilising local knowledge, such as recipes and agricultural knowledge, the LED project developed a range of specialist Japanese pepper products. The project is now commercially successful and employs workers from the Fukaura-machi Province.

Another indicator of a shift towards "resilience" thinking can be seen in the **"slow city"** movement. The slow city movement, which promotes alternative approaches to development, began in Greve, Italy in 1999 and now encompasses 213 towns in 30 countries. Principles of Slow Cities include the preservation and maintenance of historic and cultural

Box 1.2. **Moving from a focus on growth to a consideration of resilience** *(cont.)*

character; use of technology that maintains the integrity of the environment and traditional use of land; encouragement of locally owned businesses and production of local and organic foods, crafts, arts and other products, especially those that are historically significant; encouragement of use and enjoyment of public spaces; hospitality towards visitors; direct contact between producers and consumers; and community events that celebrate seasons and local traditions. For example, in Korea, 11 cities are part of the slow city movement: Shinan County, Wando County, Damyang County, Hadong County, Yesan County, Jeonju City, Namyangju City, Cheongsong County, Sangju City, Yeongwol County, and Jecheon City.[4]

Improve the delivery of VET from the bottom up to ensure more people get the right skills for good jobs

VET systems can play an important role in helping local areas address skills mismatches and deficits, while also supporting the development of new and emerging sectors locally. Moreover, countries with well-developed VET systems tended to fare better in terms of youth unemployment during the crisis (OECD, 2015a). For these reasons, countries across the OECD are looking to strengthen VET to ensure young people and others facing labour market barriers are equipped with the right skills to get good jobs in the future. Apprenticeships and other types of work-based learning have received particular attention as a means for developing work relevant skills.

While many of the efforts to strengthen VET systems are driven by national actors, attention needs to be paid to making sure VET systems "work" locally and are co-ordinated with other local economic development efforts. Alignment with local, as well as national, labour market demands is critical to smoothing school-to-work transitions and ensuring training leads to concrete job opportunities. In addition, local actors are best positioned to link up with employers in the concrete delivery of training as well as to co-ordinate efforts across employment, skills, and economic development. In terms of the latter, strong local VET institutions can play a key role in supporting the growth of local priority sectors, by ensuring that employers can find the skilled workers they need. Chapters 3 and 4 of this publication take up these issues, with the key messages summarised below.

Vocational education and training should be aligned with local, not just national, labour market needs

Governments are using a number of tools to improve the labour market relevance of VET, from skills forecasting exercises, to increasing the role of employers in VET systems, to modernising VET equipment and teacher/trainer skills. While efforts to improve the labour market relevance of national systems as a whole are important, they are only one piece of the puzzle. Within countries, local areas show considerable diversity in the jobs available and skills in demand, as highlighted by the analysis in Chapters 2 and 3. Accordingly, empowering local officials and educators to tailor VET to local labour markets is an important complement to these broader efforts.

Countries are using a number of approaches to allow for local decision-making without compromising the benefits of having a nationally coherent VET system. Chapter 3 specifically considers the mechanism to allow for local tailoring related to the selection of courses delivered as well as the content of courses. Given the diversity in VET systems

within and across countries, no single mechanism can be universally applied. Rather, choosing the right tools for local decision-making, facilitating access to local labour market intelligence, and putting in place strong horizontal and vertical accountability mechanisms need to go hand-in-hand. Attention should also be paid to balancing meeting short-term employer demands, with making sure VET delivery contributes to meeting longer-term economic development priorities.

However, simply allowing for local decision making in VET is not sufficient to ensure alignment to local needs. The details of implementation – such as bureaucratic procedures and the capacities of local policy makers and educators – matter. For example, in programmes where local stakeholders can initiate the development of a new vocational course, long wait times for approval can impede their ability to respond dynamically to changing labour market conditions. In customising course content, providers and teachers also need the training, skills and time to be able to flesh out national framework curricula into actual classroom and training practices. This can be challenging in countries where teachers are not accustomed to these types of tasks. Ongoing pedagogical support (e.g. how to design curriculum) as well as opportunities to stay abreast of labour market changes (e.g. through the organisation of internships for teachers in modern workplaces) can both be helpful.

Local actions can be decisive in determining the success of apprenticeship systems

Within VET systems, policy makers are increasingly interested in apprenticeships and other types of work-based learning. Apprenticeship and other dual VET programmes have been credited with helping to restrict youth unemployment in countries such as Australia, Austria, and Germany (OECD, 2010a; 2010b; 2015b). However, implementing effective apprenticeship systems requires addressing the various barriers that may limit individual and employer participation. On the employer side, there are perceived costs associated with accepting an apprentice, including concerns about losing employees after they have been trained, as well as perceived financial and administrative burdens. Employers may not view apprenticeships as providing value to their businesses, and thus may not be willing to make direct or indirect investments in training. Programme design and eligibility criteria can also be off-putting for employers. Although less discussed in the literature, there may also be a general unawareness on the part of employers about the value of apprenticeship training and the public support that is available for those enterprises that do participate.

Overcoming these barriers takes concerted efforts. While national actors have an important role to play in getting framework conditions right, Chapter 4 shows that the actions of local actors are crucial to facilitating business-education partnerships and building employer buy-in for apprenticeship systems on-the-ground. This includes both "soft" mechanisms such as employer leadership awards, and measures with more "teeth", such as using social clauses in procurement to induce employers to offer apprenticeships.

Flexible and customised delivery can improve uptake of apprenticeships

Just as one-size-fits-all nationally designed skills systems will not benefit all local communities, one-size-fits-all delivery mechanisms will not work for all employers and trainees. In one survey, 36% of British SMEs stated that having the flexibility to design bespoke apprenticeship frameworks would encourage them to offer more apprenticeships (CBI and Pearson, 2012). Training frameworks need to be compatible with the demands of the modern workplace; therefore, it is necessary to look at how such systems can be designed to allow for flexible delivery. This may include offering part-time training in a modular manner,

adapting the school portion of training to current workplace demands, setting up sector advisory committees, and/or developing bridge training.

Generally, SMEs have lower capacity to be involved in the design and delivery of apprenticeship programmes. They may not even be aware of what training is available, which reflects the sheer complexity of VET systems within some OECD countries. Additionally, SMEs have different needs from larger employers, and their actual and perceived costs of participating in apprenticeship training programmes are higher. Unlike many large employers, SMEs often do not have a dedicated human resources function, which limits their ability to spend time working with training providers, negotiate available public funding supports, and assist in the design of course content. Making delivery more flexible and customised to employer needs can help to overcome some of these barriers.

Table 1.1. **Improving the delivery of VET from the bottom up: Key recommendations**

Recommendations for national actors	Recommendations for local actors
• Design VET frameworks that allow local stakeholders to tailor training to local labour market needs while still maintaining a certain level of national consistency. Policy makers have a number of options for how to do this (e.g. setting aside time within curriculums for local concerns, moving to more modular programmes), but the trade-offs of each need to be carefully managed. • Build the capacities needed to make VET systems more agile locally. Training and capacity-building for VET teachers, trainers and institutions as well as promoting sharing between VET stakeholders can all help. • Develop a strong national apprenticeship framework that builds a high quality system, includes strategically-designed incentives for employer participation, and allows for flexible delivery frameworks.	• Balance meeting pressing local labour market demands with ensuring that VET helps to move local economies to higher skilled and value-added products and services. • Encourage VET teachers and trainers to keep contact with local employers and industries to keep their skills and knowledge up-to-date. • Boost employer engagement in apprenticeships through both "soft" mechanisms such as employer leadership awards, and measures with more "teeth", such as social clauses in procurement to induce employers to offer apprenticeships. • Tailor the delivery of apprenticeship programmes so that they work better for a broader range of employers, including SMEs, and disadvantaged populations. Working with actors such as SME networks and social enterprises can be beneficial.

Box 1.3. **Making employers participants in, not just customers of, employment and skills policies**

The increased attention being paid to apprenticeship systems is emblematic of a larger set of reforms to increase employer engagement. While working directly with employers has long been a core of local economic development efforts focused on attracting and retaining businesses, investments in the supply side of labour markets (e.g. skills and training, public employment services) are also increasingly building in channels for enhanced employer engagement.

Many OECD countries are also seeking to reform or revitalise their apprenticeship programmes, recognising the key role that employers can play in delivering quality work-based training opportunities that are responsive to local labour market demands. For example, as a result of a review into apprenticeship training in 2013, the **Irish** government is promoting better collaboration between enterprises, education and training providers and ensuring enterprises play a lead role in the design and assessment of apprenticeship programs. The government released a "National Skills Strategy 2025" in January 2016 with a commitment to provide 50 000 modern apprenticeship and traineeship places.

While the **United States** has one of the lowest apprenticeship participation rates in the OECD (with only approximately 50 000 apprenticeship graduates per year), apprenticeships are increasingly a high level priority. In September 2015, the Department of Labour awarded USD 175 million in grants to launch and expand apprenticeships to 34 000 new apprentices in high-growth and high-tech industries, including health care, IT and advanced manufacturing.

Box 1.3. **Making employers participants in, not just customers of, employment and skills policies** *(cont.)*

Finland is reforming its public employment services by reinforcing dialogue and co-operation between public employment services and employers. In 2015, the employment services made almost 20 000 visits to companies, and as many as 70% of the visits led to the provision or referral of employment services. Almost 30% of the visits revealed "hidden jobs" that could be offered to job seekers (Palm, 2016), enhancing the ability of public employment services to fight unemployment and reduce labour market mismatches.

At the local level, the **Flemish region in Belgium** has improved co-operation between VDAB (the Flemish public employment service), the provincial and local governments in Antwerp and selected employer groups, including those in the construction, chemical and metal, logistics and port related industries. A number of industry-specific portals have been developed with the aim of promoting technical professions amongst the youth, job seekers and the public at large through targeted actions and work with partners on the imbalance between supply and demand in the labour market in Antwerp. For example, the "Talentenfabriek" portal aims to facilitate cross-network projects between companies in mechanical, electrical and chemical industries. It also advises on education and training opportunities within these industries and runs projects for youth in secondary education interested in working in the chemical sector (talentenfabriek, 2016).

In 2012, **Turkey's** public employment service (ISKUR) introduced Job and Vocational Counsellors who are focused on job matching and building strong relationships with local employers to understand their company needs and ensure job seekers receive adequate training and coaching to meet those requirements. **Poland** also created an employer advisor position as part of its recent reforms of its public employment service.

In **New Zealand**, the Ministry of Business, Innovation and Employment, the Ministry of Social Development, the Ministry of Education, and the Tertiary Education Commission (TEC) are working with employers to co-develop sector owned initiatives to address skills and employment issues via the Sector Workforce Engagement Programme (SWEP). SWEP aims to improve firms' access to reliable, appropriately skilled staff at the right time and place, while ensuring priority is given to domestic job-seekers. Engagements in a number of sectors and regions are underway including Auckland International Airport, Tourism, Dairy Sector, Horticulture and Viticulture, Road Freight Transport and Construction.

Better tailor and co-ordinate policies to help unleash the entrepreneurial potential of a wider range of places and people

Countries across the OECD are seeking to improve the implementation and effectiveness of entrepreneurship and SME policy in order to boost productivity and job creation. As these policies become more vertically and horizontally complex in their design and delivery, supranational, national and regional initiatives need to be carefully tailored to ensure that they actually meet needs in the local areas where they are delivered. Entrepreneurship support can also be a tool for social inclusion, but this likewise requires careful tailoring of policies and programmes to meet the needs of disadvantaged populations. As Chapters 5 and 6 discuss, better tailoring these policies to people and places will allow a wider range of the population, including disadvantaged young people, to make best use of public services that facilitate self-employment, business creation, and growth.

SME and entrepreneurship policy should build on local knowledge

SME and entrepreneurship initiatives originate at all levels of government, including the supranational (European Union), national, regional and local. Given the cross-cutting nature of SME and entrepreneurship policy, a range of ministries are implicated. But it is not only horizontal co-ordination that matters – policy makers also need to ensure that programmes are tailored to the specificities of local areas in which they are delivered. The environment for SMEs and entrepreneurs show significant variations across areas, from different framework conditions (such as labour market conditions and access to finance) to local priorities for cluster development. Lessons learned at the level of local delivery should also feed into policy design discussions undertaken at higher levels of governance.

Supranational, national or regional initiatives can make best use of local "knowhow" through engaging local intermediary organisations, local partners and governments in designing and delivering programmes and policies. Statutory bodies at the regional or local level, such as regional development agencies, can also play an important role in capturing economic intelligence to improve the strategic direction and implementation of national or supranational projects.

The right co-ordination mechanisms can improve the effectiveness of SME and entrepreneurship policies

Effective policy co-ordination across governance levels is important to improving the implementation of entrepreneurship and SME programmes at the local level while minimising overlaps and simplifying programme delivery. Where there is potential overlap in policy delivery, clarifying how competences, accountability and funding are shared is critical. Statutory policy co-ordination bodies as well as written agreements between levels of government can both play this role. Well-designed co-funding arrangements can also serve to build buy-in and engagement across levels of government, while ensuring alignment with both national and local priorities. Co-locating services managed across all tiers of government under a single roof can minimise inefficiencies and facilitate access to services.

Similarly, improving co-ordination *between* regions and local areas can make it easier for entrepreneurs and SMEs to conduct their activities across administrative boundaries. National bodies may also have a role to play in co-ordinating across regional strategies, such as cluster development strategies, to maximise the potential for inter-regional supply chains and avoid a "race to the bottom" for regions competing in the same cluster specialisation.

Entrepreneurship programmes can help reduce youth unemployment, but disadvantaged youth may need tailored support

High rates of youth unemployment are a major and persistent policy concern across the OECD. The youth unemployment rate reached 15.1% in OECD countries in 2014. This is double the overall unemployment rate and represents 10.7 million youth between 15 and 24 years old (OECD, 2016b). As Chapter 6 discusses, spells of unemployment have significant short- and long-term costs for individuals, having knock-on impacts for employment, earnings, and social outcomes later in life. Youth unemployment also has a high cost to the economy. Within the 28 European Union Member States, the current economic cost of not integrating young people not in education, employment or training (NEETs) (i.e. excluding lifetime costs) was estimated to be EUR 153 billion in 2011, or 1.2% of GDP in Europe (Eurofound, 2015).

Countries are increasingly exploring how supporting young people in entrepreneurship can be an important part of the suite of policy responses to this issue. Youth (15-24 years old)

are more likely than adults to view self-employment as preferable to working as an employee (45% vs. 37%) and as feasible in the next 5 years (41% vs. 30%) (EC, 2012). However, despite this high level of interest in self-employment and the belief that it is feasible, youth are only one-third as likely as adults to be self-employed. One might think that youth who belong to disadvantaged groups are less interested and less active in self-employment, but this is not necessarily the case. For example, while NEETs are often less likely to be involved in starting a business than those in school or employment, well-educated NEETs are more likely to be involved in starting a business (OECD/EC, 2012).

While not a panacea for addressing youth unemployment, entrepreneurship support programmes can help to bridge this gap between interest and activities, and help to get more young people on the path to labour market attachment. Entrepreneurial skills, including business development knowledge and workplace skills, are a key factor of successful business creation. To give more young people a chance at entrepreneurship, policy makers should ensure that all students have the opportunity to build entrepreneurial mindsets and skillsets through compulsory education. Embedding these skills throughout education and training systems can also help young people to recognise self-employment as a viable and feasible career path from early on, and can also be beneficial for young people seeking more standard employment opportunities.

However, many disadvantaged youth are outside of the education system and may miss out on these opportunities, or may need more comprehensive supports. Many of the barriers to becoming an entrepreneur that all young people face (e.g. limited access to finance, networks, experience, skills and role models) are even greater for disadvantaged young people. Thus, custom measures that address the specific needs and challenges of more disadvantaged young people are needed. For example, they may need more coaching and support to develop entrepreneurial networks and business plans than their older or less disadvantaged counterparts. Similarly, support tools and financing mechanisms should be flexible enough to support young people that wish to pursue social entrepreneurship or combine entrepreneurial activities with other activities. The mode of support should also be considered: for example, locally driven coaching and hands-on learning opportunities can better target NEETs that have disengaged from education or employment institutions than other types of training. Attention also needs to be paid to participant selection for entrepreneurship programmes, to minimise the potential negative experiences that permanently damage self-confidence and push youth out of the labour market for good.

Table 1.2. **Better tailoring and co-ordinating SME and entrepreneurship policies: Key recommendations**

Recommendations for national actors	Recommendations for local actors
• Maximise the efficiency of SME and entrepreneurship policy delivery by allowing for local tailoring, co-locating services, using intermediary organisations to deliver programmes, and/or developing formal agreements for the division of competences and financing between governance levels. • Develop national frameworks and strategies to support disadvantaged young people in entrepreneurship, and clearly assign responsibility for this policy portfolio to a single agency or ministry. • Embed entrepreneurship into national education frameworks to reach a broad swath of young people, while also providing integrated packages of entrepreneurship support in other settings to reach young people outside of the education system.	• Forge connections across administrative borders in developing and co-ordinating entrepreneurship and SME policy to leverage potential synergies, improve labour mobility, and expand the potential markets open to entrepreneurs. • Work with organisations that already have established relationships with disadvantaged youth to maximise the reach of entrepreneurship programmes. • To better reach disadvantaged youth, provide integrated packages of support, use hands-on learning methods, and involve entrepreneurs in programme delivery.

Box 1.4. **Snapshot of reforms: Taking new approaches to design, delivery and financing**

Using new approaches to fight youth unemployment, such as entrepreneurship, is only one example of a broader number of ways that countries are seeking to innovate in how they address their most pressing economic and social challenges.

This trend can clearly be seen in the growth of **social impact bonds** (SIBs) a new source of funding to deliver social services. SIBs are an innovative financing mechanism in which governments or commissioners enter into agreements with social service providers, such as social enterprises or non-profit organisations, and investors to pay for the delivery of pre-defined social outcomes (Social Finance, 2011; OECD, 2015c). More precisely, a bond-issuing organisation raises funds from private-sector investors, charities or foundations. These funds are distributed to service providers to cover their operating costs. If the measurable outcomes agreed upfront are achieved, the government or the commissioner proceeds with payments to the bond-issuing organisation or the investors. They are also known as payment-for-success bonds (United States) or social benefits bonds (Australia) (OECD, 2015c; Gustafsson et al., 2015). The first SIB implemented in the United Kingdom in 2010 aimed to decrease recidivism. Since 2012, a sharp increase of interest in this mechanism has been observed. However, it is hard to estimate the exact number of SIBs at the implementation or design stage as it is changing continuously. The majority of SIBs have been developed in the United Kingdom, followed by the United States, Australia, Canada and South Korea. In continental Europe, SIBs have been launched in Belgium, Germany, the Netherlands, Portugal, and Switzerland.

Policy focus and technical features vary across SIBs. For instance, the Junior Code Academy SIB has been implemented in **Portugal** and has aimed to tackle primary school grade repetition and drop-out through a 30-week computer programming intervention integrated in the school curriculum over a three-year period. Another example is the Duo for a Job SIB in **Belgium**. It targets 18 to 30 year old migrants – who are neither European Union, United States, nor Canada nationals – that are legally residing in the Brussels region and registered at Actiris (the Brussels-Capital Region Employment Agency). The intervention is based on matching participants with local retirees who previously worked in the field of the participants' employment interest. The mentors can then provide participants with tailored support in their job searching activities and match them with suitable employers.

There is also a growing trend of multi-disciplinary **innovation units or "policy labs"** within governments to promote new approaches to public sector innovation and engage citizen voices in policy design. At the national level, this includes the Policy Lab in the United Kingdom Cabinet Office; Experio Lab in Sweden; and MindLab in Denmark. At the regional and local level, examples include the Helsinki Design Lab, Design Silesia in Poland, the Northern Ireland Innovation Lab, the Creativity Team in Scotland, the design manager position in St. Etienne, France, and the Offices of New Urban Mechanics in Boston and Philadelphia, United States (Whicher et al., 2015; OECD, 2014b) Such efforts are intended to better integrate a wider variety of perspectives into the policy-making process.

Another example of this type of iterative policy design process can be seen in **Spain**. Key to its recent reform of active labour market policies, Spain focused on co-designing and developing consensus for reforms amongst the 17 autonomous regions that are responsible for implementation of active labour market policies. This included moving to performance-based budgeting, developing a wide range of indicators to measure results and using an online forum for gathering regional feedback. Key to the process was building regional ownership of and trust in the reform process, and in balancing the need for urgent reform with going at a pace that allows for building buy-in and trust.

Conclusion

As inclusive growth increasingly becomes a priority across the OECD, the role of local development should not be overlooked. For some local areas, local development can be a means of "catching up" with their national counterparts, boosting national growth and reducing inequalities between places. For other local areas that are already national leaders, the focus may be more on remaining competitive with international peers and making sure all residents can contribute to and benefit from progress. The chapters in this publication examine a range of policy issues relevant for making this happen – from identifying key bottlenecks in terms of skills and jobs to improving local implementation of VET, and SME and entrepreneurship policies.

While the specificities vary, a number of overarching lessons cut across all these issues. For one, national policy frameworks need to be flexible enough for local actors to tailor delivery to local conditions. This does not necessarily imply political decentralisation, but rather finding the right management tools to add local flexibility while maintaining national coherence. But flexibility is not sufficient on its own – local actors also need to have adequate capacities to be able to make the best use of this flexibility and access to up-to-date and relevant data and evidence to ensure that decision-making is informed. Ensuring the right conditions are in place can maximise the potential gains from working locally.

Notes

1. In early 2016, the OECD LEED Programme asked members of its Forum on Partnerships and Local Development to identify key reforms that have affected the context for job creation and local economic development in their communities. The examples presented in this chapter are drawn from the responses received.
2. While "local" can have different connotations in different national contexts, this publication generally equates the local level with functional economic areas or travel-to-work areas. For data collection purposes, the TL3 level is used where available.
3. Not all countries had data available for this time period. For details on the years used for each country, see the note on Figure 2.1 in Chapter 2.
4. See *www.cittaslow.org/* for more information.

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PART I

Thematic chapters

PART I

Chapter 2

Skills and jobs: Some places are being left behind

The right mix of policies and programmes can help to reduce potential skills mismatches and promote growth. However, determining what this mix should be at the local level requires complementing traditional labour market indicators with information on the local alignment between the skills of the workforce and the jobs available. This chapter looks at sub-regional data on skills and jobs to help local economies better understand how they fare on national and international benchmarks. It also measures the geographic dispersion of skills and jobs within countries to examine whether gaps between places are growing or shrinking.

Skills are a key driver of economic growth, but local economies differ in their ability to develop, attract and retain a skilled workforce. It is not only the supply of skills that matters – local employers also differ significantly in the level of skills that they demand and how they use these skills. Most measures of skills mismatch assess whether an individual is performing a job commensurate with their skills and qualifications. However, it is also important to better understand whether the local economy as a whole is making good use of the skills of the local workforce.

Some local areas have a significant mismatch between the skills of the workforce and the jobs available. In those areas, jobs may remain unfilled or the skills of the workforce may be underutilised. In other communities, a low level of unemployment may be hiding challenges related to low-skilled and poorly productive jobs. Such a situation can undermine future prospects for growth and job creation. Getting local areas over such hurdles requires ambitious and comprehensive strategies for economic and skills development, including altering the use of skills and stimulating innovation (Froy, Giguère and Meghnagi, 2012).

Better understanding the relationship between skills supply and demand in their communities can help local leaders identify the right policy mix to increase competitiveness, reduce unemployment, and tackle social exclusion. To aid in these efforts, this chapter uses local level data across OECD countries to benchmark local performance against national and international peers on measures of both skills supply and demand.

Highlights

- The marketplace for skills and jobs has become increasingly globalised, and some local areas risk being left behind as highly productive workers and the employers who seek them become concentrated in fewer places.
- While there has been an overall increase in the education level of workers across the OECD, education levels in the highest performing local areas generally grew more than education levels in the lowest performing local areas, contributing to increasing geographic divides within countries. However the picture is more mixed and characterised by less pronounced changes over time when looking at the changing geographic dispersion of medium- and high-skilled occupations.
- Using the OECD's skills diagnostic tool to assess the match between skills and jobs in conjunction with other local labour market indicators can help to provide a richer picture of local labour market health, and identify where policy makers can make targeted investments that have the potential to reap the most benefits.
- In international comparisons, some places perform relatively poorly on both the supply of and demand for skills, resulting in a "low skills trap". Such places may find themselves stuck in low value-added activities, unable to expand to economic activities that are more productive and use a highly-skilled workforce.

Gaps between local areas in terms of skills and jobs persist, and in some cases are increasing

Over the past decade, much attention has been paid to job polarisation: most employment growth has been concentrated in high and low paid work, with the hollowing out of jobs in the middle of the wage distribution. However, job polarisation trends vary across the OECD (see Autor et al., 2006; Goos and Manning, 2007; Goos et al., 2009; Goos et al., 2014; Autor and Dorn, 2013; Ceda, 2015). While polarisation has been occurring in countries such as the United States, Canada and Australia, trends have been mixed within Europe.

All countries in Europe have seen an increase in the number of highly skilled jobs between 2000 and 2010, but growth in middle- to low-skilled occupations is characterised by different patterns (IPPR, 2014). During this time period, 14[1] countries have shown increased job polarisation, as measured by the increasing shares of both low- and high-skilled jobs and a fall in the share of medium-skilled jobs. Among them, six (Austria, France, Greece, Italy, Slovenia and Spain) experienced faster growth in low-skilled rather than in higher skilled jobs, while eight (Belgium, Finland, Germany, the Netherlands, Poland, Sweden, Switzerland and the United Kingdom) saw opposite trends, with faster growth in more skilled jobs. Ten other countries did not see increased polarisation but registered either a fall in medium- and low-skilled occupations or an increase in medium-skilled occupations.

While the trends above relate to the concentration of employment growth in certain types of jobs, polarisation may also be occurring geographically. In other words, the geographic distribution of higher-skilled workers and jobs may be changing, with these workers and jobs becoming increasingly concentrated in certain local areas. Previous OECD work has highlighted large variations between regions within OECD countries (i.e. TL2, or the level of geographic aggregation between the local and national level) when looking at the tertiary educational attainment of the labour force. Between 2000 and 2013, such differences have decreased in most countries due to faster improvement in regions with relatively lower shares of tertiary-educated workers (OECD, 2016a).

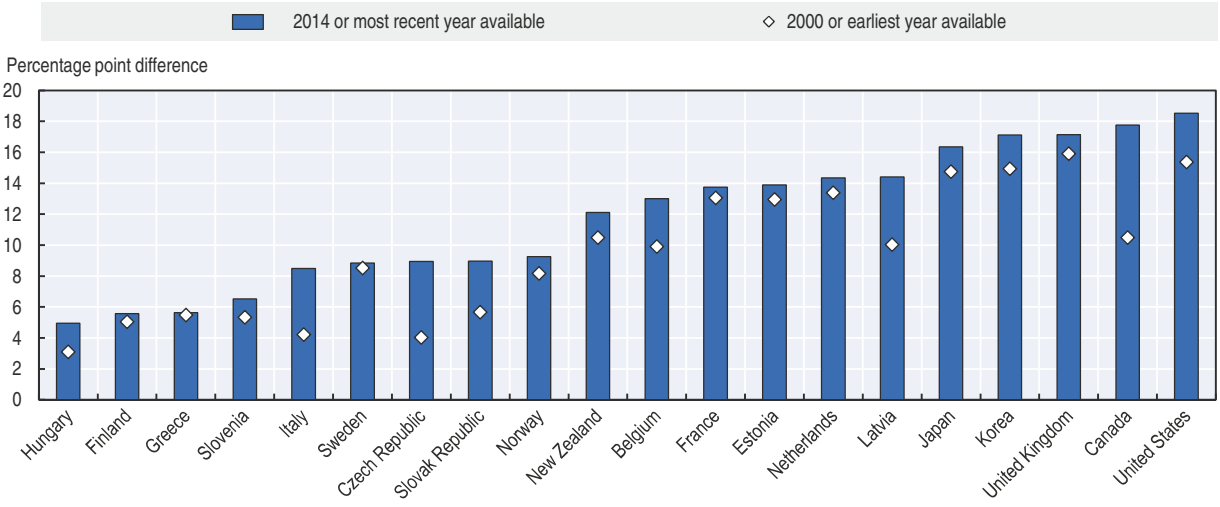
Overall, gaps in education levels are growing

Some evidence suggests that polarisation may actually be increasing when looking below the regional level to compare local labour markets against each other (i.e. at the sub-regional level which better correspond to travel-to-work or commuting areas). In order to assess the gaps between local labour markets, Figure 2.1 shows the difference between the leading and trailing sub-regions in terms of the shares of the population with post-secondary education. This analysis looks across all sub-regions, (including cities, rural and intermediate areas) over the period of 2000 to 2014,[2] but was limited to OECD countries with comparable data available at the Territorial Level 3 (or NUTS3 for European Union countries).

Overall, the rate of post-secondary educational attainment has increased across most local areas, regardless of size and/or level of urbanisation. This is not surprising given that overall levels of education increased in OECD countries generally during this time period. However, the share of the population with post-secondary education tended to increase more quickly in some areas in comparison to others. Namely, those sub-regions that were already doing well enjoyed even greater gains over this time period. For this reason, in most OECD countries, the gaps between local areas at the top and bottom of the distribution have increased.

Figure 2.1. **Geographical gaps in post-secondary education levels, sub-regions, 2000 and 2014**

Percentage point difference between leading and trailing sub-regions



Note: See Endnote 3 for more information.

Source: OECD calculations based on data provided by national statistical offices. This chart is based on the data collected for the country profiles, with the full list of sources included in the overview of the country profiles.

StatLink http://dx.doi.org/10.1787/888933424185

The gap particularly grew in Canada, Czech Republic, Latvia and Italy, due to the larger improvement in education levels for local areas at the top of the distribution compared to those at the bottom. Only in a few countries, including Greece and Sweden, did the gap remain stable over time; local areas at the top and the bottom of the distribution enjoyed a similar increase in the share of people with post-secondary education over this time period.

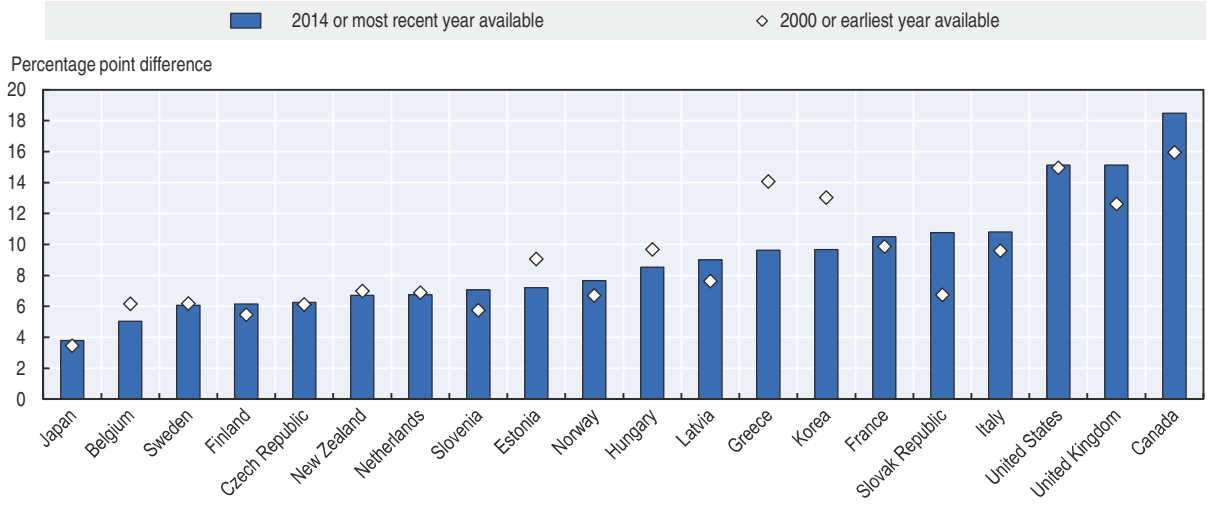
But the picture is more mixed for medium- and high-skilled jobs

When looking at the shares of medium- and high-skilled jobs, the picture is more mixed. Figure 2.2 shows the difference between the leading and trailing sub-regions in terms of the shares of medium- and high-skilled occupations. Between 2000 and 2014,[4] the gap increased in ten out of twenty countries included in the analysis. However, even in the countries where the gap grew, the changes were overall less pronounced than for post-secondary education levels. In countries with a growing gap, two general patterns can be identified. One set of countries (Canada, Finland, France, Italy, Japan, Norway, Slovenia, and the United Kingdom) had an overall increase in the share of skilled jobs over time, but the leading local areas gained a larger share of skilled jobs than the trailing local areas. A second set of countries (Latvia and the Slovak Republic) showed an overall decrease in the share of skilled jobs, with local areas at the bottom of the distribution losing a larger share of skilled jobs than those at the top. Both of these trends lead to growing gaps.

In six countries, the gap between the leading and trailing local areas has decreased, with Greece and Korea showing the most marked changes. In these two countries, similarly to Estonia and Hungary, both sub-regions at the top and bottom of the distribution decreased their share of skilled jobs, but those at the top had a bigger decrease. In Belgium and New Zealand, sub-regions at the bottom of the distribution increased their share of skilled jobs more than sub-regions at the top of the distribution, resulting in reduced gaps.

Figure 2.2. **Geographical gaps in medium- and high-skilled occupations, sub-regions, 2000 and 2014**

Percentage point difference between leading and trailing sub-regions



Note: See Endnote 3 for more information.
Source: OECD calculations based on data provided by national statistical offices. This chart is based on the data collected for the country profiles, with the full list of sources included in the overview of the country profiles.

StatLink http://dx.doi.org/10.1787/888933424199

For four countries (Czech Republic, the Netherlands, Sweden and the United States), the gap between local areas at the top and at the bottom of the distribution was relatively stable over time, meaning that trends across localities within these countries are similar over time.

Assessing the local match between jobs and skills can complement other labour market indicators

Traditional labour market indicators do not tell the full story of local labour market health, and should be complemented by other measures. For example, the employment rate is commonly used to measure the extent to which available labour resources (people who have the potential to be part of the workforce) are being used, and can be an indicator of the inclusiveness of local labour markets. However, it does not capture the quality and productive capacity of jobs available. Local areas with relatively high employment rates may have a predominance of low paid and low quality jobs which only weakly contribute to economic growth, undermine future competitiveness, and trap workers at the bottom of the economic ladder. This has been the case in the United Kingdom. During the crisis, employment rates remained relatively high, but the economy was characterised by lower wages and sub-optimal productivity growth (Bank of England, 2014).

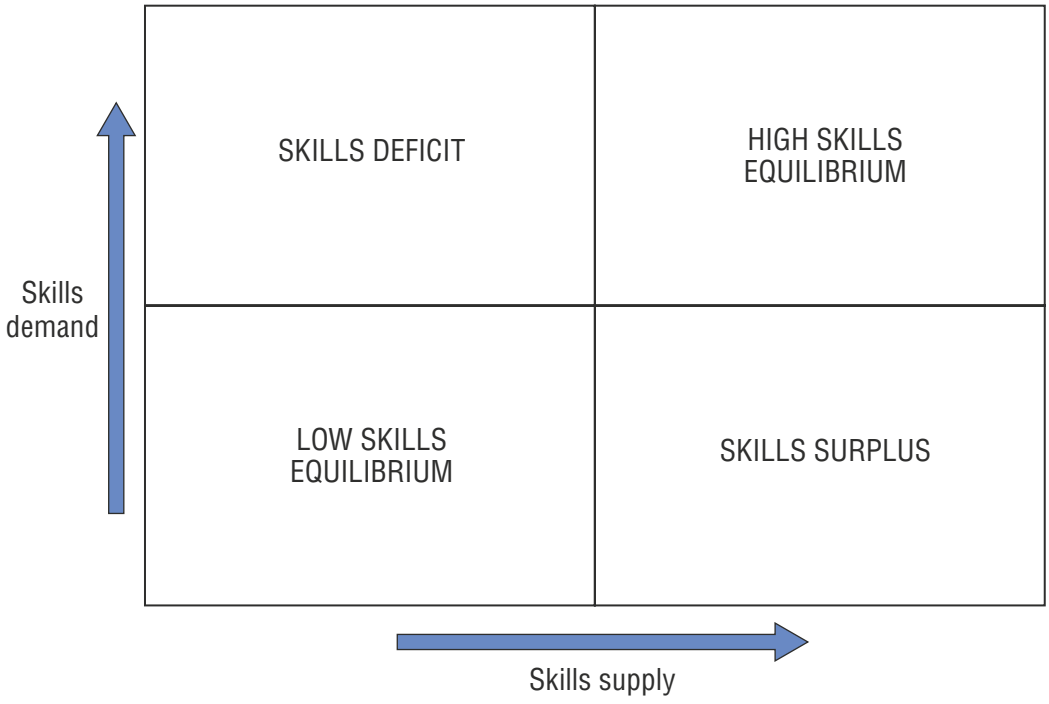
Similarly, low unemployment rates are not necessarily synonymous with a high performing labour market and can actually hide other labour market challenges. Unemployment can decrease because people move in search of employment, go back to school or become discouraged and cease looking for work. In the United States, for example, the economic crisis led to higher rates of education enrolment and an increasing number of discouraged workers, both of which can deflate the unemployment rate (OECD, 2013; OECD, 2015b).

Demographic trends such as population ageing can also affect unemployment rates. This may be particularly relevant for OECD countries characterised by a rapidly ageing workforce, such as Japan and Germany. Given that older workers tend to be less mobile

between jobs (OECD, 2006a), regions with high rates of older workers may have lower turnover rates, thus reducing frictional unemployment. However, once unemployed, older workers are less likely to find a new job in comparison to younger workers (OECD, 2006a). This may result in increased long-term unemployment rates following external shocks such as changes in technology and product markets, or a global downturn. Alternatively, older workers may be discouraged from looking for a job and drop out of the labour force entirely, thus artificially reducing unemployment figures.

Assessing the relationship between the levels of skills within the local workforce (the supply) and the level of skills needed for the jobs available locally (the demand) can complement information collected through traditional labour market indicators to assess labour market health, and provide an indication of the potential for job creation in local economies. The OECD has developed a diagnostic tool which classifies local areas into one of four categories based on the relationship between the supply of and the demand for skills relative to the other local areas within the country (see overview of country profiles for more information on the methodology).

Figure 2.3. **Combining skills supply and demand at the local level**



Source: Froy, F., S. Giguère and A. Hofer (eds.) (2009), *Designing Local Skills Strategies*, *http://dx.doi.org/10.1787/9789264066649-en*; adapted from Green (2003).

As shown in Figure 2.3, a skills deficit can emerge when a relatively high demand for skills is met by a low supply of skills, (the top left box of the diagram). In the reverse situation, the demand for skills is relatively low and the supply of skills is high, resulting in a local labour market where the available skills may not be fully utilised (skills surplus). At the bottom-left corner both the demand and the supply of skills are low (a low skills trap). Lastly, in the top-right corner, both the demand for and supply of skills are relatively high, resulting in a high skills equilibrium.

In places characterised as being in a low skills trap, people may have little incentive to invest in upgrading their skills, as there are relatively fewer higher-skilled jobs on offer. Local employers, in turn, have little incentive to move to higher-skilled production and services, knowing that the local workforce does not have the level of skills required to fill these types of jobs. In this sense, these places may be trapped in low-value added product markets, using competitive strategies that are organised around low-skilled, low-wage work. Finding the right entry point to break this cycle can be a challenge for policy makers.

While matching people to jobs is important, especially in areas of high unemployment, in the longer-term, it may actually be counterproductive for public actors to respond immediately to help employers fill vacancies in certain places. This is especially true for local areas in a low skills trap or in a skills surplus. In some cases, a limited labour supply for a given job may be a signal that the job itself is the problem, rather than an inadequate labour supply. Such jobs may be of poor quality or poorly paid, and the employer may need to consider broader changes to workplace organisation or production methods to attract and retain workers. Public employment agencies "fire-fighting" to fill such vacancies may actually be subsidising business in a way that leads to the inefficient use of public resources (particularly as such placement often leads to poor job retention and labour market "churning") while undermining investment, innovation and structural adjustment, and contributing to low productivity.

Comparing cities against each other can help benchmark their performance in a globalised labour market

While the skills diagnostic tool developed by the OECD is useful in benchmarking the performance of local areas against each other domestically (see country profiles in Part II of this publication), comparing local areas against similar places in other countries can be an important complement to this analysis. For example, cities may benefit from being benchmarked against other cities internationally, or local areas with similar sectoral specialisations can learn from what similar areas in other countries are doing.

As a first step to creating this type of international benchmark, this chapter considers cities. When using the OECD skills supply and demand diagnostic tool, larger cities or major metropolitan areas are often classified as being in a high skills equilibrium when compared to other local areas within the same country (OECD 2014a). This concurs with the broader literature that shows that cities have particular ecosystems that are generally characterised by high levels of skills and productivity. On average, the population within larger urban areas is more educated (OECD, 2014b), and a growing concentration of skilled individuals within major urban centres has been well documented in a number of OECD countries, such as the United States (Berry and Glaeser, 2005; Bacolod et al., 2009), the United Kingdom (Tochtermann and Clayton, 2011) and Germany (Schlitte et al., 2010). The same is true across European regions (NUTS2), with capital regions typically having a relatively higher share of 30-34 year olds with tertiary education qualifications (Eurostat, 2015).

According to the literature on agglomeration economics (Puga, 2010), this clustering of skilled workers can be explained by different factors, including the fact that big cities facilitate the transmission of knowledge between individuals, both purposeful and unintended. This learning dimension of agglomeration mechanisms partly explains why the stock of human capital tends to grow faster in large urban areas (Ahrend et al., 2014). Additional agglomeration benefits include greater employment opportunities (Eurostat, 2015) and higher levels of labour productivity and wages (Glaeser and Mare, 2001; OECD, 2014b). According to

OECD estimates, doubling the population of a city leads to a wage premium between 2% and 5% (Ahrend et al., 2014). This creates an incentive for skilled workers to migrate to urban areas where their skills may be more valued. However, major urban centres are also characterised by pockets of deprivation and relatively high levels of unemployment (see Box 2.1).

Box 2.1. **The urban labour market paradox**

Major metropolitan areas are generally characterised by a high concentration of wealth and job opportunities that co-exist with pockets of deprivation. This urban paradox translates into particular labour market features (OECD, 2006b; OECD/China Development Research Foundation, 2010). In recent years, major urban labour markets across the OECD have become increasingly polarised in terms of the educational attainment of the workforce (OECD, 2014b). Metropolitan areas offer employment opportunities for both highly skilled and low-skilled workers, but middle-skilled occupations tend to be in decline, due notably to the displacement of routine cognitive and manual tasks by information and communication technologies (Autor et al., 2003; Sissons, 2011).

Major urban centres are also characterised by the co-existence of relatively high levels of both employment and unemployment rates. The matching between employers and employees is generally better in "thick" urban labour markets. This means that being in a large city improves both the chances of finding a suitable match and the quality of matches, notably in terms of skills (Puga, 2010).

Yet, at the same time, the share of people who are either unemployed or inactive is often relatively high in large cities. The concentration of unemployment in metropolitan areas has increased in recent years. In 2007, 40% of metro areas in the OECD had unemployment rates above their national averages, whereas nearly half (48%) of metropolitan areas did in 2011-12 (OECD, 2015a). Data from the post-crisis period also show that a number of major urban centres in a high skills equilibrium, including Seoul, Vienna, Brussels, Toronto, the Santiago metropolitan region, Izmir, Istanbul, Attica, Lisbon, Catalonia, and Glasgow also show relatively high rates of unemployment in national comparisons (OECD, 2014a).

A number of factors can explain why some cities have particularly high unemployment rates, including the existence of spatial mismatch (Houston, 2005; Clayton et al., 2011). Inefficient transport networks and high rents in areas close to the main employment centres and commuting corridors can make it difficult to access jobs (OECD, 2014b). This issue typically affects disproportionately low earners as well as unemployed people, who may be discouraged from actively looking for a job. Big urban centres also tend to concentrate disadvantaged groups that may find it difficult to integrate into the local labour market. This is particularly evident in the case of newly arrived immigrants.

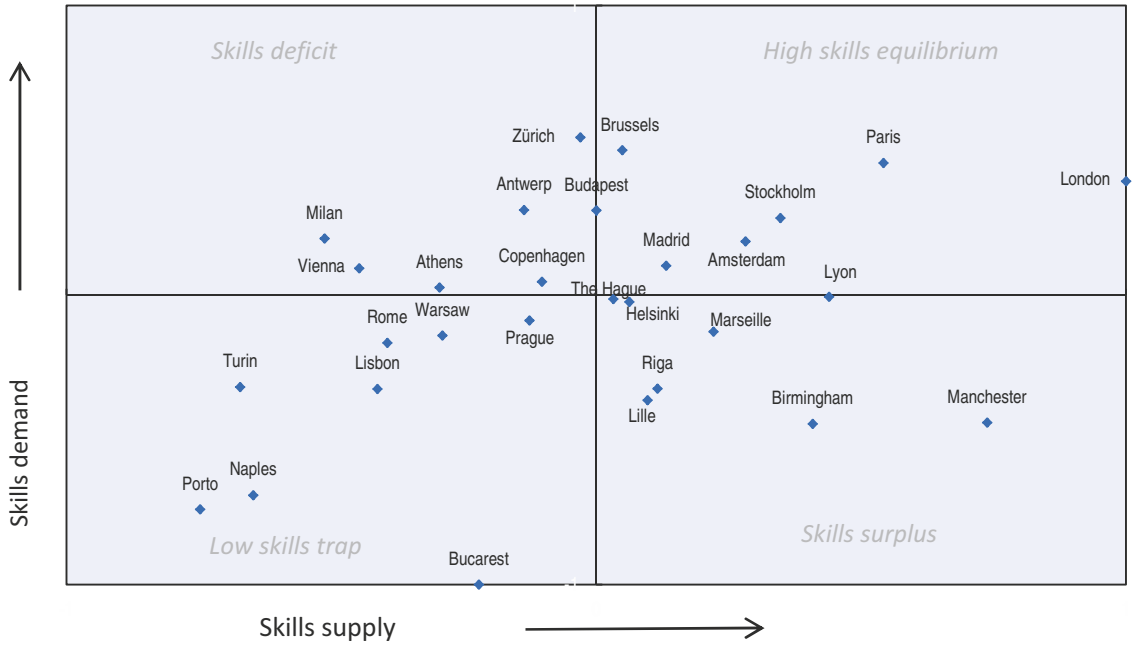
Higher labour productivity and wage premiums for skilled workers clearly signal higher demand for skills in cities. In particular, when examining where employment in knowledge intensive services and high and medium-high tech manufacturing is concentrated within countries, urban centres, including Toronto, Vienna, Athens, Santiago metropolitan region, Madrid, Stockholm, Ankara and Istanbul, London and Seoul (OECD, 2014a) consistently stand out as leaders. This concurs with the vast literature that highlights the role of metropolitan areas as hubs for innovation and the concentration of R&D activities (OECD, 2006b; Buzard and Carlino, 2013; OECD, 2016a).

Cities across the OECD may be more similar to each other than to more peripheral or less urbanised areas within their own countries (OECD, 2016b). Comparing the performance

of cities across OECD countries can help to illuminate how these particular types of local areas compare to each other in terms of the presence of skilled workers and jobs that make good use of these skills to increase productivity. In a knowledge-based economy, skills and jobs are more mobile than ever before, which means that cities are at risk of losing both high-skilled people and high-skilled jobs if the right conditions are not in place. Comparing cities against each other can help them to understand their comparative strengths and weaknesses in this global marketplace. Additionally, given that cities share common labour market features, there is the potential to transfer successful policies and initiatives related to job creation between cities internationally, while allowing for adaptation to the national context (Storper, 1997; Pike et al., 2006; Ranci et al., 2014; OECD, 2014a).

Figure 2.4 compares European cities and city regions with a population above 1 million in terms of the relationship between the supply of skills (measured by the share of people with post-secondary education) and the demand for skills (measured by the share of medium- and high-skilled occupations and labour productivity). The analysis shows that cities from northern and central Europe, including Paris, London, Stockholm, and Amsterdam, are are categorised as being in a high skills equilibrium. This indicates that compared to other European cities, these cities have a relatively high proportion of the population with post-secondary educational attainment and a relatively high level of medium- and high-skilled occupations and productivity.

Figure 2.4. **Combining skills supply and demand in selected European cities and city regions of more than 1 million inhabitants, 2013**



Note: Data for cities and city regions of more than 1 million inhabitants in Austria, Poland, Portugal and Spain are based on the relevant TL2 area as defined by the OECD. Data for Belgium, Czech Republic, Finland, France, Greece, Hungary, Italy, Latvia, the Netherlands, Sweden, Switzerland and the United Kingdom are at the TL3 level. For the UK, data have been combined in cities such as Manchester and London that are split across several TL3 areas to approximate supply and demand for the whole city. For Romania, data are at the NUTS2 level as defined by Eurostat. Data for Italy and France are from 2012, data for Denmark, the Netherlands and Romania are from 2014 and data for Spain are from 2015.

Source: OECD calculations on data from national statistical offices, Eurostat and the OECD Regional Statistics (database), *http://dx.doi.org/10.1787/data-00531-en*.

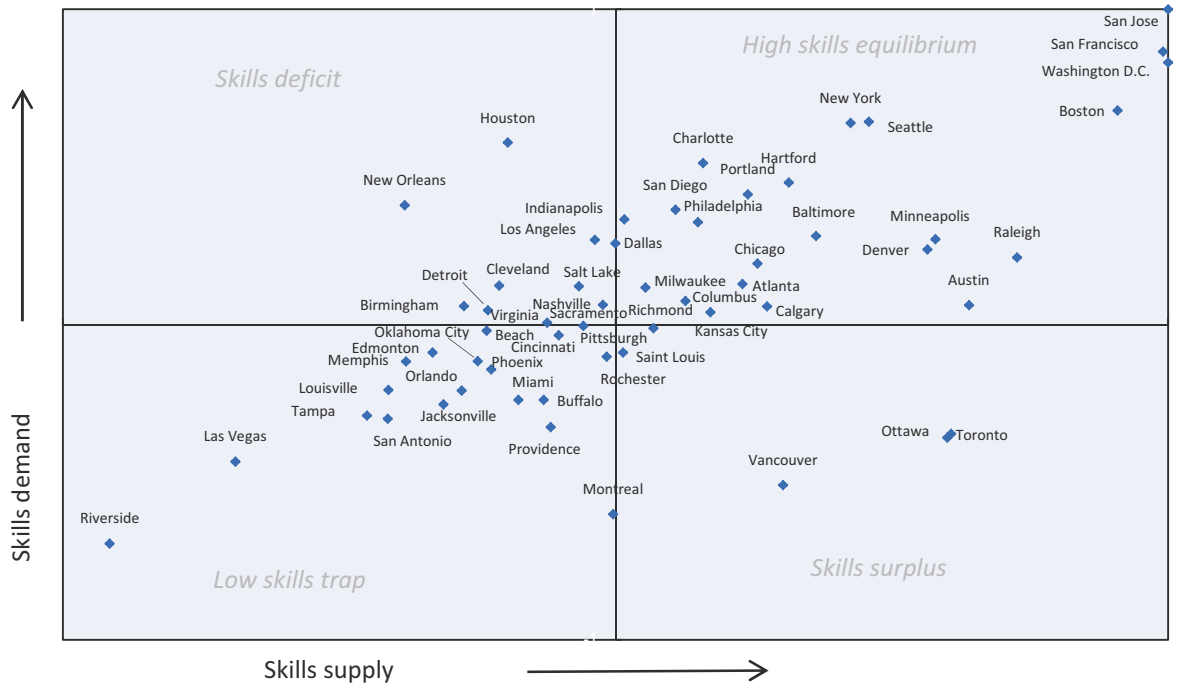
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Lille, Riga, Birmingham and Manchester are in skills surplus meaning that the supply of skills is relatively higher than the demand. This indicates that there is potential for a more optimal use of the workforce's skills as well as an increase in the overall quality of jobs by promoting innovation and productivity.

Milan, Vienna and Antwerp are characterised by the opposite pattern, with the level of skills demand relatively high and the supply relatively low. Investment in skills development in these areas could be potentially rewarding. Cities from southern and eastern Europe, such as Porto, Naples, Lisbon, Turin and Bucharest are classified as being in a low skills trap when compared to their metropolitan peers in Europe. To make these cities more competitive with other European cities, more needs to be done to boost both skills supply and demand.

A similar analysis was undertaken comparing metropolitan areas with a population of more than 1 million inhabitants in Canada and the United States. Figure 2.5 shows San Jose, San Francisco, Washington D.C. and Boston are part of a cluster of very well performing cities falling into a high skills equilibrium. Seattle, New York, Raleigh, Austin, Minneapolis and Denver also show high levels of both skills supply and demand relative to other North American cities.

Figure 2.5. **Combining skills supply and demand in US and Canadian metropolitan areas of more than 1 million inhabitants, 2011**



Source: OECD calculations on data from the U.S. Census Bureau, the US Bureau of Economic Analysis, the Canadian Labour Force Survey and the OECD Regional Statistics (database), *http://dx.doi.org/10.1787/data-00531-en*.

StatLink http://dx.doi.org/10.1787/888933424216

Several major Canadian cities, such as Ottawa, Toronto, and Vancouver clearly fall into a skills surplus. These cities show high levels of supply when looking at the percentage of the population with post-secondary education relative to other cities in Canada and the United States. However, they fall short when looking at the demand for skills and the extent to which jobs are making productive use of the available stock of skills. This analysis provides additional insights into Canada's long standing productivity gap with the United

States, which remains a long-term economic challenge. Looking at measures of labour productivity, Canada's labour force produced USD 42 of GDP per hour worked in 2012, in comparison to USD 52 in the United States (Conference Board of Canada, 2014). This analysis suggests that in addition to other responses, these Canadian cities need to work more closely with employers to move local industries into higher value-added production and services.

Identifying patterns across local skills typologies

Understanding the relationship between skills supply and demand, labour market indicators, and internal mobility can provide further insights into policy priorities to boost job creation and local development. This section identifies patterns in how these indicators are linked in selected countries.[5] The country profiles included additional information for a number of indicators across a larger set of countries.

On average, local areas in a high skills equilibrium tend to have higher employment rates than other local areas in their own countries. This is the case in Canada, France, Italy, Japan, Norway, Poland, Spain, Sweden and the United Kingdom. While local areas in high skills equilibrium tend to perform better in terms of employment rates, there is no straightforward relationship between being in a high skills equilibrium and unemployment rates. In 2014, high skills equilibrium regions had the lowest average unemployment rate in Italy, Poland, Spain and the United Kingdom. However in Sweden and Korea, localities in high skills equilibria had the highest average unemployment rate.

Local areas in high skills equilibrium in Italy, Germany, Japan, Norway, Spain and Sweden have the highest average net internal mobility rates (as a portion of the local area's total population) relative to other local areas in their own countries. Workers may be motivated to move to places in a high skills equilibrium because of the higher skills premiums in cities, usually in the form of higher wages (Berry and Glaeser, 2005; OECD, 2014b). Workers may also relocate internally in search of employment that matches their skills and experience. Skilled workers have a greater probability of finding a suitable match in terms of skills in dense urban labour markets, which usually offer employment opportunities in a wide range of occupations and sectors (Puga, 2010). For example, in the United States, there is evidence that college graduates are more likely to find a job that matches their qualifications and experience in larger and thicker local labour markets. Better matching of skills and employment can also result in higher wages in large cities (Abel and Deitz, 2015). Evidence from Germany (Lehmer and Ludsteck, 2011) and the Netherlands (Kok, 2014) indicates that the wage increase following relocation to another region is greater for those who move from a less densely populated area to a more densely populated region.

Areas in a low skills trap tend to have the lowest average employment rates. This broadly concurs with the literature that finds that areas with low skills demand – which corresponds to low skills trap and skills surplus regions – are more likely to have lower labour market participation (Buchanan et al., 2010; Sissons and Jones, 2014). Local areas in a low skills trap had the highest unemployment rate in Canada, Italy, Japan, Norway, Poland, Spain and the United Kingdom. In countries like Italy and the United Kingdom, which are marked by particularly large gaps between low- and high-skilled regions, this might be related to broader differences in these areas' economic structure and sectoral specialisation. Local areas in the low skills trap often also experience negative internal mobility. For example, this is true in Germany, Italy, Japan, Poland, Sweden and the United Kingdom. In the long-term, this loss of population could represent a risk for the productivity and the prosperity of these local areas in these countries.

Local areas in skills deficits had the second highest employment rates (following high skills equilibrium regions). However, in the case of Germany and Korea, regions in skills deficit actually have the highest employment rates on average. In the case of Germany, Bavaria is the only federal state in a skills deficit, and has an employment rate which is higher than the six federal states in high skills equilibrium (i.e. Berlin, Hamburg, Bremen, Nordrhein-Westfalen, Hessen, and Baden-Württemberg). As for Korea, it should be noted that there is very little variation in employment rates between local areas (e.g. there is a less than two percentage point difference between the highest and lowest performing areas). In Canada, Germany, Japan, Korea and Norway, local areas in a skills deficit had the lowest average unemployment rate. Relatively high employment rates and low unemployment rates make the labour market structure of local areas in skills deficit similar to those in high skills equilibrium.

Overall, local areas in a skills surplus have labour market characteristics that are similar to low skills trap areas, namely relatively low employment rates and high unemployment rates. The only exceptions are Sweden and Poland where local areas in this typology have the second highest employment rate.

Interestingly, local areas in a skills surplus in Poland and the United Kingdom had positive population flows from other regions of the country in recent years. Similarly, in Spain, local areas in a low skills trap showed the highest overall population growth as a consequence of intra-country mobility in recent years. In the case of Spain, there is evidence showing that internal mobility does not seem to be linked to regional real wages and employment characteristics (Mulhern, 2009). These results show that the link between skills and mobility is not straightforward and that factors other than skills may drive internal mobility.

Conclusion

As this chapter shows, local areas show considerable variation in the supply of and demand for skills. When looking at skills supply, the gap between the leading and trailing local areas within countries has generally grown over the last 14 years. The picture is more mixed when looking at medium- and high-skilled occupations, with gaps growing in some countries, and shrinking in others. In addition to comparing local areas against their peers domestically, benchmarking their performance against international peers can also generate rich lessons. For example, comparing cities against each other can better show how they are performing in the global marketplace for skills and jobs.

Using the OECD's skills diagnostic tool in conjunction with other local labour market indicators can help to provide a richer picture of local labour market health, and identify where policy makers can make targeted investments that have the potential to reap the most benefits. For example, while local economies in skills surplus should consider skills development in tandem with measures aimed at stimulating innovation and skills utilisation in the workplace, localities in a skills deficit should invest in developing, attracting and retaining talent. Local economies in a low skills trap would benefit from a comprehensive strategy aimed at boosting the supply of and demand for skills. In high skills equilibria with high rates of unemployment, the focus may need to be on fostering labour market inclusion.

Notes

1. The analysis looks at 24 European countries.
2. When data were not available for the whole period 2000-14 at the same geographic level, the earliest and the latest years available were used.

3. Figure 2.1 shows the difference between the shares of the population with post-secondary education for the leading and trailing sub-regions. Figure 2.2 shows the difference between the shares of the population with medium- and high-skilled occupations for the leading and trailing sub-regions. To minimise the influence of outliers (e.g. big urban centres or very small remote areas), the comparison was done between the sub-regions at the 90th and 10th percentile of the distribution instead of the absolute maximum and minimum. When data were not available for the whole period of 2000-14 at the same geographic level, the earliest and the latest years available were used. Only countries for which data were available for a period longer than six years were included. The years used for the analysis are: 2000 and 2012 for Japan; 2000 and 2013 for Czech Republic, Finland, Korea and Slovak Republic; 2000 and 2014 for the United States; 2001 and 2012 for Italy; 2001 and 2013 for Belgium, Sweden and the United Kingdom; 2002 and 2013 for Slovenia; 2002 and 2014 for Greece; 2003 and 2013 for Hungary; 2003 and 2014 for the Netherlands; 2005 and 2013 for Norway; 2006 and 2012 for France; 2006 and 2013 for New Zealand; 2006 and 2014 for Canada; 2007 and 2013 for Estonia and Latvia.
4. When data were not available for the whole period 2000-14 at the same geographic level, the earliest and the latest years available were used.
5. Countries included in this analysis are Canada, France, Germany, Italy, Japan, Korea, Norway, Poland, Spain, Sweden and the United Kingdom. Only countries with comparable data available for at least 10 years and having at least 12 sub-regions were included.

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PART I

Chapter 3

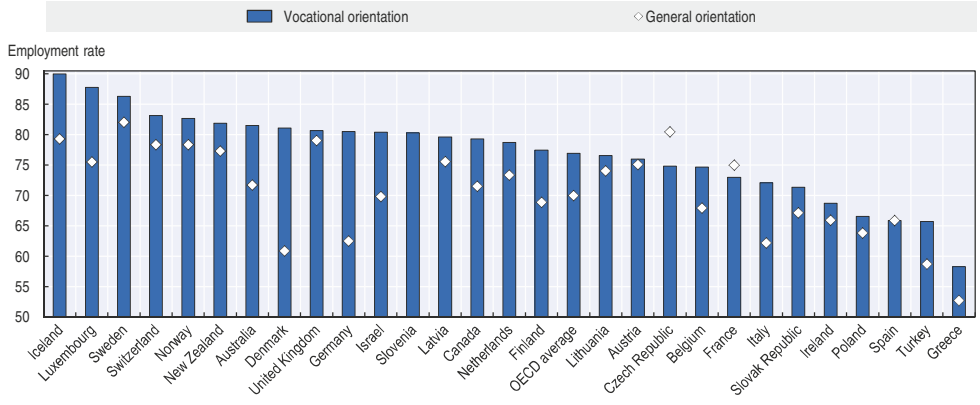
How to tailor vocational education and training to local needs

Local labour markets show considerable diversity in terms of the jobs available and the skills in demand. Vocational education and training (VET) systems should be agile enough to respond to these specific local conditions, while still ensuring a certain level of national coherence. This chapter examines the tools that OECD countries are using to strike this balance. The benefits and drawbacks of different mechanisms are identified, and country examples show how these tools are used in practice. While VET systems show considerable diversity within and across countries, this chapter also highlights some overarching principles that are relevant regardless of the system.

Countries with well-developed vocational education and training (VET) systems tended to fare better in terms of youth unemployment during the crisis, and on average, graduates of upper secondary or post-secondary non-tertiary VET programmes have higher employment rates than those with a general upper secondary education as their highest qualification (see Figure 3.1). At the same time, most OECD countries also spend more per student on vocational programmes at the upper secondary and post-secondary non-tertiary level when compared to general programme orientations (see Figure 3.2). Continuing VET also plays an important role in helping adults upgrade or develop new skills.

Figure 3.1. **VET has a positive impact on labour market outcomes**

Employment rates among adults whose highest level of education is upper secondary or post-secondary non-tertiary, by programme orientation (2014)



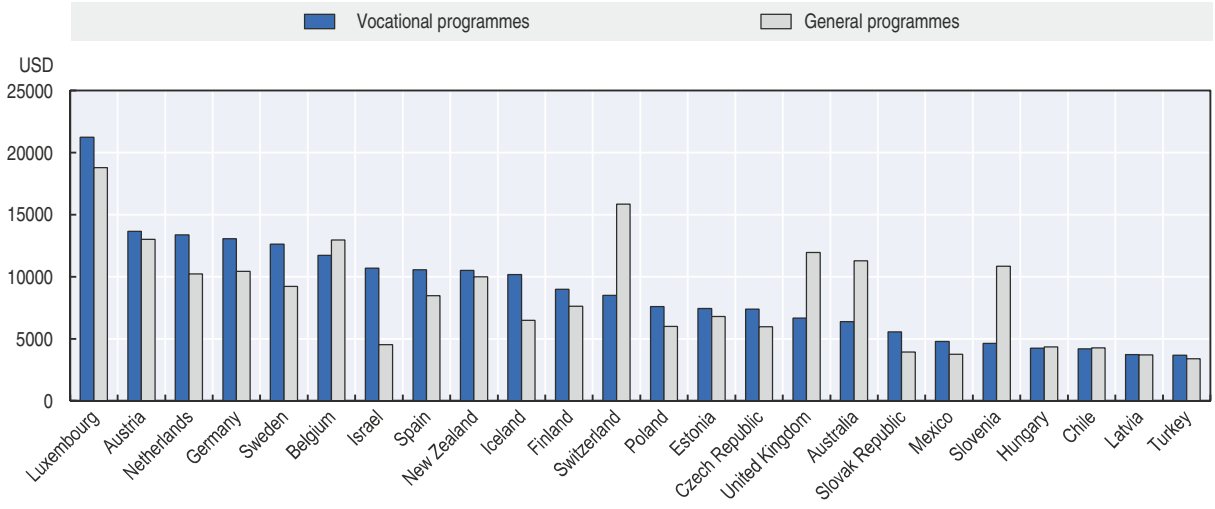
Note: See OECD (2015a), *Education at a Glance* Table A5.5a for notes on data.
Source: OECD (2015a), *Education at a Glance*, *http://dx.doi.org/10.1787/eag-2015-en*.

In recognition of the potential role that high quality VET programmes can play in improving labour market outcomes, as well as the significant investments made in VET, many OECD countries have undertaken reforms to strengthen VET systems in recent years (OECD, 2015b).[1] A key part of many reforms is better aligning VET with the labour market, including through improving skills forecasting exercises, increasing the role of employers in steering VET systems, and modernising VET equipment and teacher/trainer skills. While efforts to improve the relevance of VET to labour market needs at the national level are important, they are only one piece of the puzzle. Within countries, local areas show considerable diversity in the jobs available and skills in demand. Accordingly, as identified by the OECD Skills Strategy, empowering local officials and educators to tailor VET to local labour market needs is an important complement to these broader efforts (OECD, 2012).

This chapter looks at the mechanisms being used across a number of countries to better match VET programmes with local labour market needs. It considers the overall framework for decision-making in VET systems before examining the structure, benefits

Figure 3.2. **VET is often costlier than general programme orientations**

Annual expenditure per student by secondary educational institutions for all services, by type of programme, 2012



Note: See OECD (2015a), *Education at a Glance* Table B1.6 for notes on data.
Source: Adapted from OECD (2015a), *Education at a Glance, http://dx.doi.org/10.1787/eag-2015-en.*

and trade-offs of mechanisms used by countries to allow for local decision-making in VET. Finally, it ends with key issues for consideration and recommendations. While this chapter covers VET broadly, Chapter 4 of this publication looks more specifically at the question of local actions to boost apprenticeships, a specific form of vocational education and training.

Highlights

- Many countries are reforming their VET systems, with better alignment between VET and labour market demands at the top of the agenda. As there is considerable diversity in jobs available and skills in demand at the local level, empowering local stakeholders to tailor VET to local needs is an important complement to better alignment at the national level.
- Given the diversity of VET systems within and across countries, countries are using a wide variety of mechanisms to balance local tailoring with national coherence. Each of these mechanisms have their own trade-offs which need to be carefully managed.
- Regardless of whether policy makers, institutions, or individuals steer local decision-making, attention needs to be paid to ensuring that these decisions are informed by up-to-date and relevant local labour market data and that both short-term and long-term needs are taken into consideration.
- Even when the right governance arrangements are in place, weak implementation capacities can undermine the alignment between VET and the local labour market. Training and capacity-building for VET teachers, trainers and institutions as well as promoting sharing between VET stakeholders can help to strengthen capacities.

Local decision-making in VET can manifest itself in a number of ways. Local officials and educators can have control over the mix and content of courses delivered, discretion over budgets, responsibility for determining eligibility criteria for students, power to make

local staffing decisions, and/or choice over assessment methods. This analysis focuses on two specific aspects of local decision making in VET systems: the sectors and occupations covered by VET programmes and the specific content of the programmes (e.g. skills and competencies developed). It identifies the mechanisms currently being used across a number of OECD countries in these areas, based on an analysis of 51 programmes in 14 countries[2] (see Box 3.1).

Box 3.1. **What do we mean by VET?**

The OECD defines VET as a collection of educational and training activities that are organised to accomplish a pre-determined objective or the completion of a specific set of educational tasks, one of which is to equip people with the skills and competencies required in particular occupations or trades. VET programmes, in addition to professional preparation, may also provide people with general education and prepare them for further education. For a programme to be considered a VET programme, at least one quarter of the content should be vocational and technical. In comprehensive systems where students choose among general and vocational courses, VET programmes would be those that enable students to choose vocational courses that comprise at least 25% of the content of the programmes. VET can be further subdivided into initial and continuing programmes: initial education typically follows a continuous path or paths of progression prior to initial entry into full-time employment, while continuing education covers the learning activity of those returning to education after having left initial education (OECD, 2004).

However, international comparisons of VET programmes are not always straightforward. Firstly, VET programmes do not uniformly fall into the domain of a single ministry. Depending on the country and the programme, the ministry of education, the ministry of employment/labour, and/or ministers relevant to specific types of programmes, such as agriculture, can be involved. Delivery arrangements for VET are also varied, with secondary education schools, private providers, public employment services, universities, technical colleges, unions, employer associations, and individual employers playing various roles within and across countries. It should also be noted that in countries where states, provinces or regions play a large role in the design of VET policy, there can also be considerable intra-country diversity in management and delivery arrangements. Adding to this difficulty is the fact that historically, the International Standard Classification of Education system has not had the level of detail required to reflect the diversity of VET programmes, which makes international comparisons difficult (OECD, 2014a). For these reasons and in order to identify the broadest range of tools being used to tailor VET to local economies, this analysis includes both initial and continuing VET, as well as formal and informal learning.

Source: OECD (2004), *OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications*, *http://dx.doi.org/10.1787/9789264104112-en*; OECD (2014a), *Skills Beyond School: Synthesis Report*, *http://dx.doi.org/10.1787/9789264214682-en*.

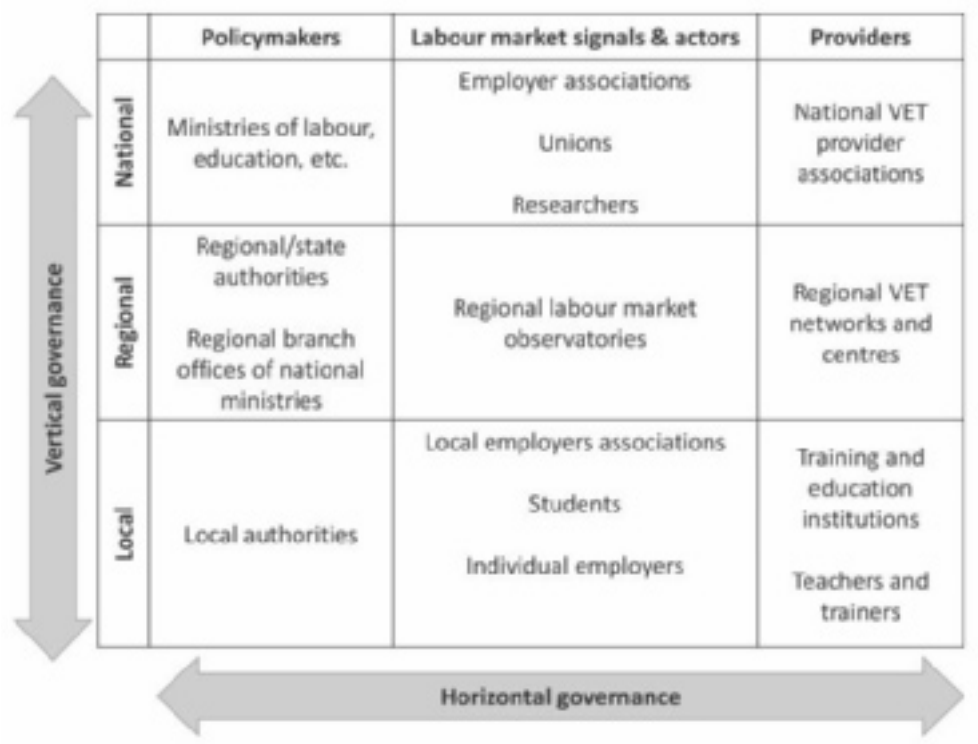
This analysis is based on the understanding that a balance between national coherence and local decision-making is needed. Just as an overly centralised system can be counter-productive in that it fails to account for diversity in local labour market conditions, so too can a system that allows for too much local freedom. Some degree of national coherence can ensure that VET systems feed into national strategic economic and labour market objectives, promote equity across places, and contribute to labour mobility across regions.

International coherence can also matter, as is the case to promote the portability of qualifications across the European Union. Additionally, as many OECD countries are undertaking efforts to improve the prestige of VET, it is important to promote national recognition of qualifications and ensure a consistently high quality of programme.

The who and the how of decision-making in VET

The distribution of decision-making between national, regional and local actors is just one piece of the broader governance framework for VET. The planning and implementation of VET involves a complex web of actors and influences, with considerable variation across and within OECD countries. While mapping the roles of all the various actors involved is beyond the scope of this chapter, Figure 3.3 and the text below provides a stylised framework for understanding VET governance.

Figure 3.3. **Overview of influences on VET systems, with examples of actors at each level**



Depending on the governance structure, VET provision can be shaped by policy makers at the national, regional, and/or local level. Ministries of employment/labour and/or ministries of education are often key drivers of VET systems, although other ministries can also be involved in the design and delivery of programmes in specific sectors. National objectives of VET systems tend to focus on creating a high quality, nationally coherent system that contributes to national economic growth, including through the facilitation of labour mobility. In a European context, supra-national authorities can also play a role. At lower governance levels, regional or local authorities may play a role, as well as regional

branches of national ministries. For regional and local policy makers, high quality VET programmes can help to attract investment and act as an important driver of economic growth.

Both national and local labour market actors can also influence the provision of VET programmes. Individual employers can influence VET provision by providing opportunities for work-based learning or working with local providers to shape programme curricula and objectives. Employer associations, chambers of commerce, and sector organisations, which can be involved in higher level planning, are another channel for employer engagement in VET systems. While employers look to VET to help ensure that workers have the skills they demand now and in the future, their incentives can vary depending on whether they speak individually or collectively. When employers speak collectively through employer associations, they have stronger incentives to advocate for more general skills, while individual employers have more incentive to advocate for more firm-specific skills (OECD, 2010). Similar to employer associations, unions can represent the collective voice of individuals in steering VET provision (although there may be tensions regarding the degree to which they represent the interests of trainees or protect the interests of incumbent workers; see OECD, 2010).

In addition to the direct influence of labour market actors, information about the labour market can come through the engagement of academics and other subject matter experts as well as the collection of labour market information and skills analysis (see OECD, 2016 for more information). Through their enrolment choices, students also have a direct influence on VET provision. In some countries, such as Austria, students also sit on school steering committees, which represent another channel for influence.

These labour market actors can push VET systems in opposite directions. For example, students may be attracted to VET courses that are not in line with employer demands, or employers may work with public actors to open VET courses in response to specific vacancies, but students may not be interested in these courses.

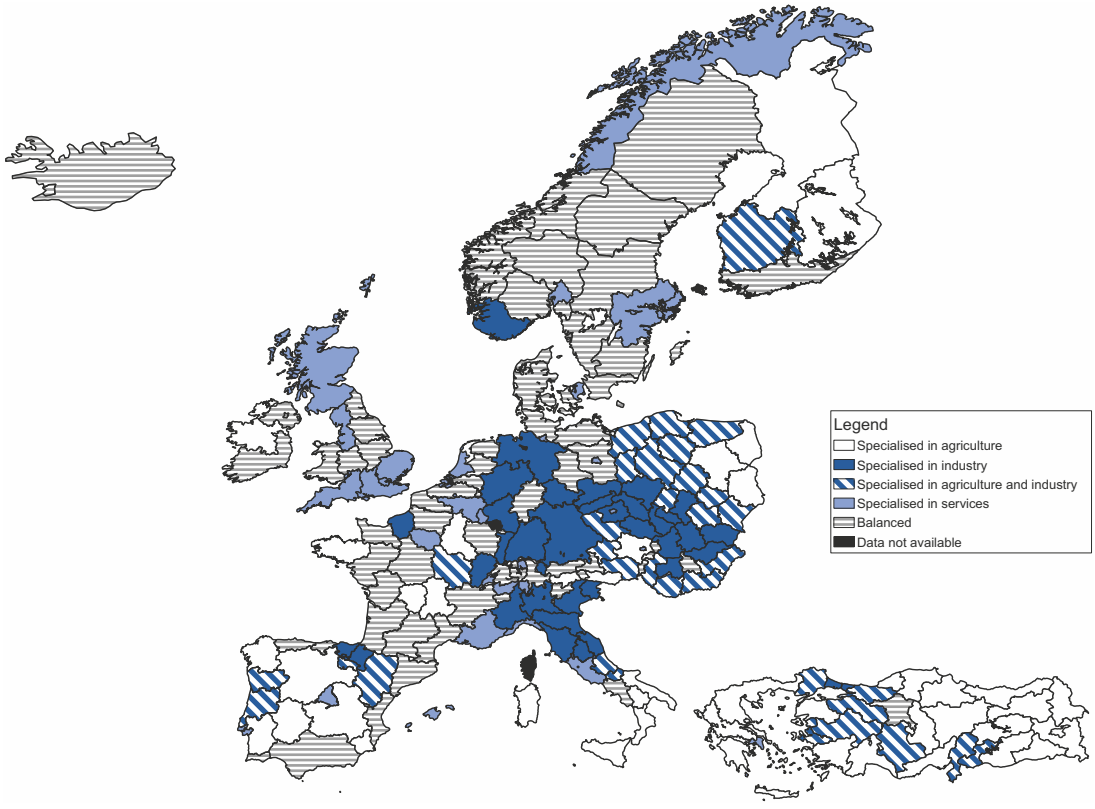
VET providers, including secondary schools, technical colleges, private training organisations or unions, also impact VET provision. While representatives of providers are members of national steering committees in some countries, arguably their biggest influence on VET provision comes through the direct delivery of programmes. To this end, an institution's overall management skills and capacities, including their ability to connect with other stakeholders including employers, and the quality of teachers/trainers, are important.

VET governance mechanisms shape the channels through which these stakeholders are able to influence VET provision, and the balance of influence among them. Across OECD countries, the organisation of VET systems varies considerably, with most research focusing on horizontal governance mechanisms. Tessaring (1998) identified three key types of systems: market-based systems, corporatist regulated-systems, and school-based training systems mainly regulated by the state. Similarly, CEDEFOP (2013a) identifies four models of feedback mechanisms for renewing VET provision: liberal, statist, participatory, and co-ordinated. In addition to these horizontal governance questions, vertical governance arrangements determine the degree to which the design of VET policies and programmes is centralised nationally or if regional and local actors have significant decision-making powers.

VET delivery should align with the local sectoral and occupational labour market profile

Turning specifically to mechanisms for local decision-making in VET, the ability of local actors to align VET delivery with the sectoral and occupational profile of the local labour market is critical. Considerable diversity exists between local labour markets in terms of industrial structure and employment opportunities (OECD, 2014b, OECD, 2010). Figure 3.4 provides a snapshot of the sectoral specialisation of regional labour markets to illustrate this diversity. In comparison to their respective national labour markets, this map shows regions that are relatively more specialised in services, industry, and/or agriculture. As this shows, VET planning based on sector and occupational needs aggregated at the national level will likely be ill-suited to respond to the specific labour market composition of any given local labour market.

Figure 3.4. **Regional labour markets show different sectoral specialisations, TL2 regions in selected OECD countries, 2015**



Source: OECD calculations based on Eurostat (2015), "Regional labour market statistics".

Countries are using a number of mechanisms to allow local actors to tailor the sectors and occupations covered by VET programmes in their local areas. These include: 1) developing a national menu of choices, from which local stakeholders are able to choose; 2) allowing for local choice as long as nationally set parameters are met; and 3) market-based mechanisms, including steering through subsidies. These mechanisms are described in more detail below, along with country examples of each. Table 3.1 at the end of this section provides an overall summary.

National "menu" of options

In the menu model, national stakeholders develop a range of vocational programmes that cover a variety of sectors and/or occupations. This is typically the default approach used, as schools and institutions are rarely mandated to provide the entire range of VET programmes. Depending on the country context, this menu can be developed based on the inputs of actors ranging from policy makers to sector councils to academics to local practitioners. Local stakeholders then choose from this "menu" when deciding which courses to deliver locally. In this way, care can be taken to ensure that each option on the menu aligns with national standards and priorities while allowing local stakeholders to deliver programmes with the most local relevance. However, as discussed further in the conclusion to this chapter, there are often supply constraints – schools cannot immediately respond to changes in demand, as teachers and trainers cannot be easily changed or retrained and new equipment is often costly (OECD, 2010).

For example, in **Poland's** technical upper secondary schools, the basis for VET programmes is defined at the national level by the Ministry of National Education. The Ministry defines the classification of occupations for vocational education, the core curriculum for VET, and the core curriculum for general education. This constitutes the list of occupations for which schools can provide education and training and the associated qualifications and learning outcomes. In total, there are 200 occupations, comprised of different combinations of 251 partial qualifications (CEDEFOP, 2013b). School principals and the regional and local authorities that govern schools are then able to choose among these occupations for local delivery. Regional and Local Labour Market Councils must first give their opinion before a new occupation is added to a school's VET offering.

Sweden is well-known for its highly decentralised school system, and the VET programmes delivered to young people aged 16-19 through upper secondary schools are no exception. The system features a number of mechanisms for local decision-making, including the "menu" model. The "menu" of 12 VET upper secondary programmes is determined nationally, with guidance from a national programme council that consists of representatives from industry, social partners, and some authorities. Within each VET programme, there is also a "menu" of specific orientations. For example, the electricity and energy programme includes automation, computers and ICT, electrical technology, and energy technology orientations. In this sense, there is almost a "menu within the menu" from which providers can choose.

Education providers are able to choose among these national education programmes and specific orientations according to the needs of the region or local area, with an emphasis on responding to student demand. Efforts are currently being made to better link schools and labour market actors, including the establishment of local programme councils as part of the 2011 reform of upper secondary school. However, the organisation and tasks of these local programme councils is not regulated, so actual practices vary across areas.

Within this approach, care must be taken to ensure that options from the menu are chosen such that they strategically align with the local labour market needs. This has been a challenge for the Swedish system, where attempts to align offerings with student demand can result in a mix that is not necessarily aligned with the needs of the market (Skans, 2007). A secondary VET media programme was eventually terminated, as its relative popularity with students lead to an oversupply of trainees in the labour market (Thunqvist and Hallqvist, 2014). Previous OECD research in the Czech Republic, where a similar menu

approach is used in upper secondary programmes, highlighted the need for clearer procedures and more transparent criteria for the development of regional education plans, particularly with respect to the combination of student choice and employer needs to approximate labour market demand for particular programmes (Kuczera, 2010). Care must also be taken to ensure that VET provision is not so narrow as to restrict individual choice or lead to regional "lock-in" in a limited number of sectors.

Local choice within nationally-set parameters

Another approach allows for local stakeholders to determine the sectors and/or occupations covered (without having to choose from a national menu), as long as certain criteria are met. Such criteria can include demonstrating that a demand for a course exists and/or approving the programme through an accreditation process. These parameters can vary in rigidity to allow for different levels of local flexibility.

For example, under the Carl D. Perkins Career and Technical Education Act of 2006 (the main source of federal funds for vocational education in the **United States**), funding is distributed to states, which in turn distribute funding to local education providers. Local providers must submit plans to the relevant state agency describing how funding will be used to meet various programme requirements. At least one of the programmes that local providers offer must include elements of at least one state approved career and technical programmes of study (similar to the menu approach described above). However, local providers are not limited to the offerings developed at the state level, but also have the latitude to develop programmes as long as they meet certain requirements. The requirements are that the courses ensure academic achievement and career and technical skill attainment; link education at the secondary and postsecondary levels; provide industry experience and understanding; be of sufficient size, scope, and quality to be effective; and provide activities to prepare special populations for high skill, high wage, or high demand occupations that will lead to self-sufficiency.

In **Austria,** decisions about the degree programmes offered are taken by the self-government of the particular University of Applied Sciences. According to the Act on Quality Assurance in Higher Education, every newly developed University of Applied Sciences degree programme must undergo an accreditation procedure with the Agency for Quality Assurance and Accreditation Austria (AQ Austria) to obtain formal federal recognition. The accreditation procedure is a peer review process, where external and independent assessors examine the compliance of the degree programme with pre-defined criteria and standards. The University must also conduct a survey of demand for and acceptance of the degree programme.

While this approach offers less in terms of national consistency, it can help to facilitate strategic decisions about local course provision, by requiring the demonstration of local demand or the involvement of labour market partners. Again, like the menu-based approach, this has to be balanced against ensuring there are enough options available at the local level to allow for individual choice as well as the avoidance of regional "lock-in" into a few sectors.

Market-based mechanisms

Finally, a third approach to tailoring VET provision to local labour markets is through market-based mechanisms, namely those where the supply and/or demand for specific sectors or occupations directly dictates provision.[3] Provision can be based on student/

trainee demand for training in a specific sector or occupation, employer demand, or a combination of both. This approach often drives apprenticeship programmes as they require interest from both a trainee and a workplace sponsor. For example, in **Switzerland,** the host companies from a specific region agree to apprenticeship contracts with learners. Vocational schools will then offer classroom instruction for a given VET programme if there are a sufficient number of apprenticeship contracts in place (around 10 people).

There are both advantages and disadvantages to this type of market-based system in terms of aligning the training to labour market needs. In the short-term, the system ensures a reasonable degree of alignment between apprenticeship offerings and labour market demands, but this does not always imply alignment in the longer-term. For example, when the construction industry collapsed in **Ireland** in 2008, thousands of apprentices became redundant within a relatively short period of time. To help avoid situations like this in the future, the new national training authority (SOLAS) now provides five year forecasts of apprentice requirements based on analyses of future market demand. However, the degree to which such analyses have any influence on employers' decisions to sponsor apprentices is not clear, and the system is currently under review. As part of an overall national review of the apprenticeship system, one issue being discussed is the merit of limiting the number of apprentices to forecasted demand, rather than to the perceived requirements of employers. This is intended to "smooth" the current cycle of too many apprentices during recession and too few during periods of significant economic growth.

Australia, on the other hand, uses market-based mechanisms to steer the provision of a broader swathe of its VET programmes. There are 5 000 registered training organisations (RTO) which deliver nationally-recognised qualifications and accredited courses. While each RTO must gain approval from the appropriate regulator to provide particular qualifications or courses, for this delivering subsidised training, the key driver of the actual mix of course provision is the funding available for delivery. Funding and administration differs between states but there has been a general trend towards demand-driven models (OECD, 2014c). For example, starting in 2014, Queensland moved to a fully contestable and demand-driven skills market which expanded choice for individuals and employers to select the qualifications and training providers that best meet their needs (Queensland Department of Education, 2014). Public subsidies for qualifications vary, with lower level qualifications (i.e. qualifications at certificate III level) and "higher priority" qualifications given higher subsidies. Priority qualifications are determined at the state level, and include:

- Those that support key occupational outcomes identified as part of the state's larger economic development strategy, namely agriculture, construction, resources and tourism,
- Those that support other priority skills; and
- Those that are assessed as highly effective in generating outcomes for graduates.

While market based mechanisms may be the most direct way to link VET provision with current demands expressed by individuals and employers, this can come at the cost of longer-term strategic planning (as illustrated by the Irish case of apprenticeships in the construction sector). In Australia, states such as Queensland have used variations in subsidy rates as a way to steer market forces in strategic directions, but as these are set at the state level, there is little space for local strategic priorities to influence provision. Additionally, the move to a market-based system has not been without controversy in Australia, where concerns about superficially attractive but ultimately low quality providers have emerged (Yu and Oliver, 2015). An additional concern about this mechanism

relates to economies of scale, particularly in terms of delivering courses for sectors and occupations for which there are relatively few students/trainees.

Table 3.1. **Summary of mechanisms for local choice of sectors and occupations**

Mechanism	Strengths	Weaknesses
National menu of options: Local actors are able to choose programmes from a menu of options designed nationally.	• Allows for the development of nationally coherent offerings. • Local stakeholders are able to choose offerings most relevant to local contexts.	• Can limit individual choice. • Contingent on having mechanisms in place that promote strategic local decision-making.
Local choice within nationally-set parameters: Local actors are able to decide on programmes as long as they meet nationally set parameters.	• Local stakeholders are able to develop offerings most relevant to local contexts. • Checks can be put into place to ensure that local choices are made strategically.	• Limits national coherence of offerings. • Can limit individual choice.
Market-based mechanisms: Individual and employer choice directly dictate programme offerings.	• Allows for the most direct expression of individual and employer choice.	• Limits ability of local stakeholders to conduct long-term planning. • Competition between providers may have unintended consequences (e.g. superficially attractive but ultimately low quality programmes).

Course curriculum can also be tailored to respond to specific local needs

VET programmes must balance the development of generic, transferrable skills (e.g. teamwork, problem solving, literacy and numeracy) with occupation-specific skills (OECD, 2010). While these generic skills and many of the occupational skills are relevant across local labour markets, there may also be skills and competencies that are specific to local sectors and occupations. For example, training in constructions trades may need to be adapted to account for local weather and environmental conditions, codes and regulations, and architectural styles. Countries are using a number of tools to allow for the local tailoring of course content, including: 1) designating "local" time within the curriculum; 2) setting national curriculum frameworks to be operationalised locally; 3) national accreditation for locally designed curriculum; and 4) modularisation.

Setting aside specific curriculum time for local priorities

In a number of countries, specific time is set aside within VET curriculum to address local needs. In this way, local providers are able to cover both nationally and locally relevant skills and competencies. As part of an overall VET reform and the move to a more decentralised approach, **Slovenia** introduced the concept of "open curricula" in its secondary VET programmes. Within this system, a certain percentage of the national framework curriculum (between 12% and 20% depending on the programme) is left "open" to be designed by schools in co-operation with local partners (e.g. employers, chambers of commerce).

A similar model is in place in **Italy**. In addition to the "school autonomy quota" of 20% of curriculum time afforded to all schools in Italy, Upper Secondary Vocational Institutes have additional flexibility to further customise VET programmes so that they correspond to local needs and skills requests from the labour market. This flexibility is expressed in terms of the adaptability of annual curriculum time, i.e. up to 30% of annual curriculum time in grades 11 and 12 and up to 35% in grade 13. Through this allotted flexibility in curriculum time, some schools were able to participate in a pilot initiative that allows students in grades 12 and 13 to participate in apprenticeships and earn vocational institute high school leaving diplomas while also earning credits towards an occupational qualification.

While this model allows for a balance between nationally and locally relevant curriculum and can create a space for employers and other local stakeholders to engage with schools, its success is contingent on schools and teachers having the skills, knowledge and time to engage partners and develop curricula. Research on how VET teachers handle these requirements suggests that a lack of adequate preparation can hinder their ability to successfully take on these responsibilities, especially when they have been newly assigned to them. For example, a study of the implementation of VET reforms in Slovenia identified a number of challenges related to school curriculum planning, including excessive bureaucracy and the fact that the traditional teacher training was not adequate to prepare teachers for taking on these new responsibilities (Ermenc and Mažgon, 2015).

National curriculum frameworks, operationalised locally

In other programmes, national actors set framework curricula, which local actors are then able to "flesh" out according to local specifications. In some ways, this can be considered part of a broader trend towards outcome-based curricula in VET programmes, which focus less on prescribing inputs (i.e. course content, teaching methods, timetables, etc.) and more on identifying what the learner should "know, understand, and be able to do upon completion of a learning process" (CEDEFOP, 2010).

Italy's Higher Technical Institutes, first established in 2008, are an alternative to academic studies at the tertiary level. The Institutes are intended to have close links with Italy's industrial districts (areas with clusters of small and medium-sized enterprises specialised in specific sectors). The institutes are managed by a foundation set-up specifically for that purpose, which must include members from at least one VET school, a local authority, an accredited higher training provider, a local business, and a university department or a research centre. A 2011 decree jointly adopted by the Ministry of Education and Research, and the Ministry of Labour and Social Policy identified learning outcomes for a menu of 29 technician profiles. Within this framework, these institutes are able to develop tailored curricula based on the specific needs of the local industrial district.

In the **Czech Republic's** secondary vocational education programmes, Framework Educational Programmes (National Curriculum, RVPs), are designed and developed by experts from the National Institute for Education and approved by the Ministry of Education, Youth and Sports (MŠMT). These programme documents specify the general goals of education, the key competencies to be developed, the factual areas of education and their contents and expected learning outcomes. In line with the Framework Educational Programmes, the schools develop their own School Educational Programmes (School Curriculum, ŠVP). These are designed and developed by the pedagogical staff led by the co-ordinator of the school curriculum development. The director of the school is responsible for the development of the school curriculum, which must be approved by the school council (a self-governing body consisting of students, teachers and representatives of the school's founding body).

This approach has a number of benefits. It allows for a balance between nationally and locally relevant curricula and supports the transferability of qualifications. It can also create a space for the involvement of local employers and social partners, if mechanisms are put in place to engage them in curriculum development. However, similar to the "local time" mechanism, the success of this approach is contingent on a number of factors. These include the skills and capacities of providers and teachers, the clarity and precision of the curriculum,

and teacher buy-in and ownership (see CEDEFOP, 2010 for a more general discussion of facilitators and inhibitors to effective implementation of outcome-based curricula).

Local design, national accreditation

Another approach is more bottom-up – the content of programmes is designed locally, but must be accredited based on national specifications. This is the case for **Austria's** Universities of Applied Sciences discussed earlier. University of Applied Sciences degree courses are designed by a group of at least four experts. At least two of these experts must be academically qualified by a habilitation degree or an equivalent qualification, and two of them must be qualified as experts in a relevant occupational field. According to the Act on Quality Assurance in Higher Education, each newly developed University of Applied Sciences degree programme must be accredited with the Agency for Quality Assurance and Accreditation Austria to obtain formal federal recognition.

In **Ireland**, Specific Skills Training and Traineeships were once centrally designed, developed and managed. After a recent reform, the regional Employment and Training Boards are now responsible for engaging subject matter experts to develop appropriate course content, in conjunction with the industry sector or companies concerned. This occurs after it has been established that new labour market demand exists for a new course. In general all new courses lead to an accredited award. Once a training course is developed, it is submitted to the relevant awarding /accreditation body for approval.

While this tool can allow for a good deal of local tailoring, the degree to which it contributes to national coherence depends on the nature of the parameters set. Like the other mechanisms discussed, the quality of courses developed is also contingent on the skills and capacities of local actors. Finally, it may lead to local areas "reinventing the wheel" when developing new courses, although promoting sharing across areas or making already developed courses available as part of national "menus" can help to offset this.

Modularisation

A final approach is linked to the ongoing trend of modularisation of VET programmes. In modularised programmes, "the learning experiences defined in the curriculum are divided into outcome-based units organising teaching, learning and assessment activities. Units are validated separately, increasing the opportunity to combine them according to the learner's needs and interests" (CEDEFOP, 2010). While modularisation is primarily intended as a means to provide flexibility to learners by allowing them to combine study units to customise their programme of study while also enhancing their ability to move between programmes of studies, it can also be seen as a tool to allow more local flexibility in determining the content of VET programmes. By packaging programmes into smaller "modules", providers are able to choose among modules to tailor programmes to local contexts.

Sweden's upper secondary schools use this type of modularised structure. National actors determine the structure of the VET programmes which include a combination of different types of courses: 1) upper secondary foundation subjects, common to all upper secondary schools (e.g. English, history, mathematics); 2) programme specific subjects; 3) orientations; 4) programme specialisations; 5) diploma project; and 6) individual options. Within specific VET programmes (e.g. the energy technology orientation within the electricity and energy programme), schools are able to choose which courses to offer as individual options and may also determine which courses to offer as programme specialisations in consultation with a local programme council. Additionally, providers

may apply to run special variants of VET programmes, which means the courses provided differ somewhat from the nationally determined programme structures. They can also apply to include new courses within their programme (subject to approval and quality assurance by the National Agency for Education).

In **Portugal's** Adult Education and Training Courses, the technological training component of the courses is composed of short-term training units that can be combined to obtain a qualification. Providers are able to pick those units that correspond to the skills most needed in the regional sectors among these short-term training units. They may also submit a request to change short-term training units in order to better meet local labour market needs.

Table 3.2. **Summary of mechanisms for local tailoring of course content**

Mechanism	Strengths	Weaknesses
Setting aside specific curriculum time for local priorities: Specific amount of course time set aside for locally developed content.	• Allows for a balance between nationally and locally relevant curriculum. • Creates space for employers and social partners to engage locally. • Supports transferability of qualifications.	• Contingent on providers and teachers having the adequate capacity to develop relevant local curricula. • Percentage of time decisions may be perceived as arbitrary.
National curriculum frameworks, operationalised locally: Nationally designed framework curriculum is "fleshed out" locally.	• Allows for a balance between nationally and locally relevant curricula. • Creates space for employers and social partners to engage locally. • Supports transferability of qualifications.	• Contingent on providers and teachers having adequate capacities and partnerships to develop relevant local curricula.
Local design, national accreditation: Programme design is done locally, and then accredited according to nationally set standards and parameters.	• Allows for a large degree of local tailoring. • National standards can be set to ensure strategic design decisions are made.	• Potentially limits national coherence. • Contingent on providers and teachers having adequate capacities to develop relevant local curricula. • Can lead to local areas "reinventing the wheel".
Modularisation: VET programmes are broken into defined modules, allowing local actors to tailor which modules are provided.	• Allows for a balance between nationally and locally relevant curricula.	• Combining different kinds of courses can be difficult in practice for providers.

Conclusion and issues for consideration

VET systems show considerable diversity across countries with respect to governance structures, organisation of programmes and participant rates. Different types of VET programmes are also managed differently within countries. Accordingly, there is no "one-size-fits-all" model for how to best manage local decision-making. Rather, consideration should be given to how each of the mechanisms described above fit within the programme framework, and how trade-offs can be best managed within that system.

Regardless of the mechanisms used, a number of guiding principles are relevant. When allowing for local decision-making, it is crucial that these decisions are informed by a strong understanding of labour market needs. Within market-based systems, where choice is arguably most decentralised to individuals and employers, this implies the importance of providing locally relevant career guidance to students and families. For choices made at the policy or institutional level, there is a need for the better collection and use of local labour market information and an ongoing dialogue between VET institutions and local employers. OECD research has identified that all countries have systems and tools in place for assessing and anticipating skills needs, but two broad challenges impede the effective utilisation of information on skills: 1) a misalignment between skills

assessment and anticipation exercises and potential policy uses and 2) insufficient engagement of or disagreement between relevant stakeholders (OECD, 2016).

Implementation matters considerably when determining the degree to which mechanisms for local decision making actually translate into enhanced leeway for local actors on the ground. For example, in programmes where local stakeholders can initiate the development of a new course, long wait times for approval can impede their ability to respond dynamically to changing labour market conditions. Providers and teachers also need the right training, skills and time to be able to flesh out national framework conditions into classroom and training practices. This can be challenging in countries where teachers are not accustomed to these types of tasks. Ongoing pedagogical support (e.g. how to design curriculum) as well opportunities to stay abreast of labour market changes (e.g. through the organisation of internships for teachers in modern workplaces) can be helpful. Promoting sharing and knowledge exchange between local areas can also be beneficial in ensuring that local stakeholders do not constantly have to "reinvent the wheel".

Additionally, narrowly constraining the sectors in which VET is delivered can contribute to locking-in the local economy to a few sectors. Another risk is focusing too much on short-term employer needs to the detriment of contributing to longer-term economic development strategies. This can be especially problematic in areas that fall into a low skills trap, where employers organise their work in a way that relies on low-skilled workers, and the workforce is accordingly characterised by a low level of skills (see Chapter 2 for more information). In such places, VET should focus less on short-term needs, and more on moving employer demand towards higher skilled and more productive activities (OECD, 2014b; Rees, 1997).

Finally, developing effective vertical accountability mechanisms can help to ensure consistent quality of programmes, especially when coupled with horizontal accountability at the local level. Such horizontal mechanisms can include oversight committees or boards with seats for various stakeholders such as local authorities, employers, and unions. Setting up strong and strategic local governance mechanisms that bring together a variety of stakeholders can help to ensure that VET programmes are tailored to local labour markets, contribute to longer term local strategies, and balance demands from employers, individuals and other stakeholders.

Key recommendations

Balance local tailoring with national coherence

- Develop VET systems that strike a balance between national coherence and local decision-making and are complemented by strong horizontal and vertical accountability mechanisms.

Support stakeholders in making "informed" decisions around VET provision

- Strengthen mechanisms to ensure decisions made both at the institutional and the individual level are well-informed. This implies a need to enhance the collection and use of local labour market information and skills forecasting information as well as improve career guidance for individuals and families.
- In determining local VET provision, consider both short-term labour market needs as well as how VET can contribute to moving local economies to higher skilled, more productive industries and services over the long-term.

Strengthen implementation capacity to ensure local stakeholders make best use of the decision-making power they have

- Provide training and support for VET institutions, teachers and trainers in the areas of curriculum development, employer engagement and the understanding local labour market demands.
- Promote sharing between local actors to build capacities and avoid local areas "reinventing the wheel" when planning and delivering VET in more flexible systems.

Notes

1. Between 2008 and 2014, reforms to VET systems were undertaken in Australia, Austria, Belgium, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia Spain, Sweden, and Turkey.
2. Programme information was collected through the 2014 OECD LEED Questionnaire on VET Flexibility as part of the horizontal OECD Skills Strategy work. Members of the OECD's Employment, Labour and Social Affairs Committee and the Education Policy Committee were asked to provide relevant information on the four largest VET programmes (in terms of enrolment) operating in their respective country. Fourteen countries responded, covering a total of 51 programmes. In order to cast as wide of net as possible in identifying how countries are allowing for local decision-making in VET systems, the widest possible range of programmes were considered, including initial and continuing VET as well as formal and informal training. Countries that responded include Australia, Austria, Belgium (Flanders), Chile, Czech Republic, Ireland, Italy, Japan, Poland, Portugal, Slovenia, Sweden, Switzerland, and the United States.
3. There may be some overlap with the menu mechanism described above in cases where the market determines choice from a nationally determined list of courses.

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PART I

Chapter 4

Local actions can make apprenticeships work

This chapter considers the role that local actors can play in furthering the implementation of high quality apprenticeship programmes. It begins with an overview of apprenticeship systems – the institutional and governance structures as well as the barriers that employers and individuals face to participation. It then looks more specifically at the role that local public actors can play in helping to overcome these barriers, from facilitating access for small and medium-sized enterprises (SMEs) to using public procurement to incentivise apprenticeship opportunities. Finally, it looks at how apprenticeships can be a tool for social inclusion at the local level, considering the role of social enterprises and how apprenticeships can be used to further the labour market integration of refugees.

Across the OECD, apprenticeships are increasingly gaining attention as a means of developing skills that are well connected to the workplace. Apprenticeships can also help to tackle low productivity levels and stimulate quality employment opportunities by ensuring that businesses can access people with the right skills. In the context of employers frequently reporting challenges in filling job vacancies at the local level, apprenticeships can contribute to reducing potential skills shortages, particularly if firms are able to retain the learners that they have trained (Clark and Fahr, 2001; De Rick, 2008).

In comparison to OECD countries with school-based vocational education systems, transitions from education to work are smoother in countries with long-established apprenticeship systems and where the engagement of employers, social partners, and other stakeholders is high (Quintini and Manfredi, 2009). Apprenticeship and other dual vocational education and training (VET) programmes have been found to be efficient school-to-work pathways, and have helped to keep youth unemployment low in countries with well-established apprenticeship programmes, such as Australia, Austria, and Germany (OECD, 2010a; OECD 2010b; OECD 2015).

At the local level, effective apprenticeship programmes can help to achieve key economic development objectives. They provide a mechanism to boost the competitiveness of strategic local sectors. Apprenticeships can also be targeted beyond the traditional "trades" to new and emerging sectors which can provide new economic growth opportunities at the local level. For example, apprenticeship programmes can be set up and delivered in service-based occupations, which are a growing source of employment across many OECD countries.

To ensure strong outcomes, it is important that apprenticeship programmes promote quality learning and job opportunities (see Box 4.1). A precondition of a high quality apprenticeship system is effective local implementation. The potential role for local public agencies and governments to enhance apprenticeships is often overlooked at the national level and even by local actors themselves when they do not have the ability to shape local actions. Effective implementation of apprenticeship systems requires active and continued engagement with employers; high quality and transparent educational pathways; strong and flexible VET institutions; and robust labour market information and intelligence to inform learners about expected returns from participating in training.

This chapter considers the role that local actors can play in furthering the implementation of high quality apprenticeship programmes. It begins with an overview of apprenticeship systems – the institutional and governance structures as well as the barriers that employers and individuals face to participation. It then looks more specifically at the role that local public actors can play in helping to overcome these barriers, from facilitating access for small and medium-sized enterprises (SMEs) to using public procurement to incentivise apprenticeship opportunities. Finally, it looks at how apprenticeships can be a tool for social inclusion at the local level, considering the role of social enterprises and how apprenticeships can be used to further the labour market integration of refugees.

Highlights

- Apprenticeship and other dual vocational education and training (VET) programmes have been found to be efficient school-to-work pathways, and have helped to keep youth unemployment low in countries such as Australia, Austria, and Germany where such programmes are well-established.
- Many countries are now seeking to expand and improve their own apprenticeship systems, but the potential role local public agencies and governments can play is often overlooked at the national level and even by local actors themselves.
- Local governments can play a leadership role in expanding apprenticeships by forging partnerships between the education system and employers, building awareness of apprenticeships amongst employers and young people, and using local spending to increase the amount of training places offered by employers. Boosting participation amongst SMEs, who face specific barriers, may be particularly important.
- Local vocational education and training organisations need to ensure that the delivery of programmes reflects new labour market realities. This includes offering more part-time, online, and innovative training arrangements.
- Apprenticeships and other types of work-based learning can also be used as a tool to promote social inclusion. For example, apprenticeships can act as a means to improve the integration of refugees and other disadvantaged groups into local labour markets.

Box 4.1. **Promoting high quality apprenticeship programmes**

Previous OECD research on apprenticeships notes that their success depends on their quality and adaptability to specific individual and local economic circumstances. High quality apprenticeship programmes that are more valuable to youth and more attractive to employers share a number of characteristics, including the following:

- Not limited to specific age groups.
- Facilitate participation by disadvantaged youth.
- Include a strong training component.
- Provide training that is not too narrowly focused.
- Cover multiple sectors and occupations and encourage the participation of women.
- Involve an equitable sharing of costs among employers, public authorities and apprentices.
- Operate according to competence-based completion rather than time-based completion.
- Require good governance to prevent misuse as a form of cheap labour.
- Jointly managed by social partners and relevant institutions.
- Certified and well integrated with the formal schooling system.

Source: OECD (2014a), *"Giving youth a better start in the labour market, www.oecd.org/els/emp/G20-OECD-EC%20 Apprenticeship%20Conference_Issues%20Paper.pdf.*

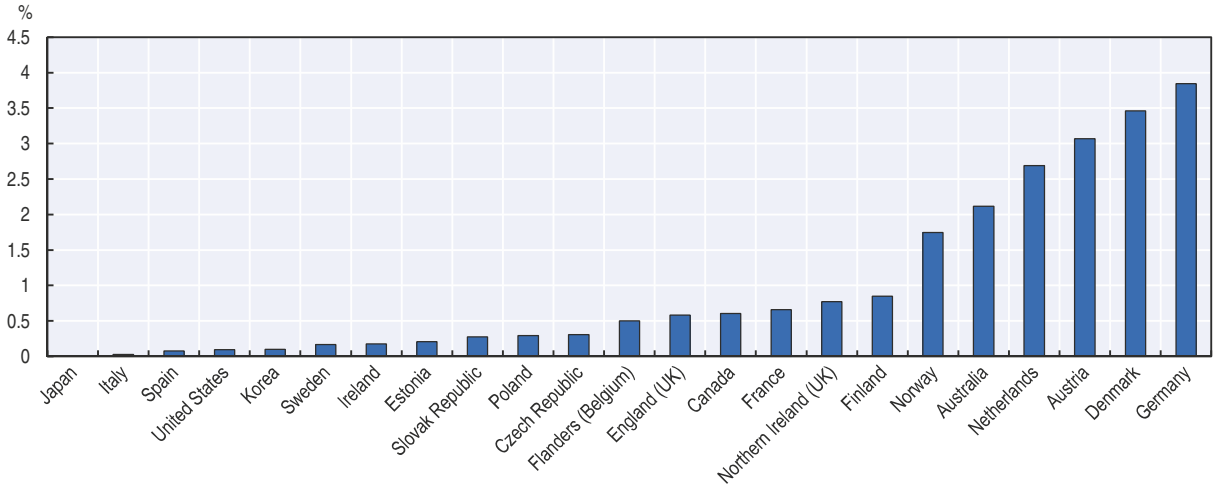
Institutional and governance arrangements vary across OECD countries

While there are many forms of work-based learning (both formal and informal), apprenticeships are a specific type of arrangement. They involve a mix of theoretical classroom-based learning and on-the job training, typically leading to a formal certification, which provides the individual with "journeyperson" status. Across the OECD, the German,

Austrian, Swiss and Danish apprenticeship systems are often regarded as good examples. However, apprenticeship systems and their governance frameworks are embedded in the specific national and regional education, labour market, and industrial relations systems of each OECD country. While such variations makes international comparisons difficult, analysing implementation practices and strategies at the local level can provide important transferrable learnings. Available data across the OECD on the use of apprenticeships shows large variation when looking at the share of the adult population between 16 and 40 with an apprenticeship status.

Figure 4.1. **There are large differences in the use of apprenticeships across the OECD**

Current apprentices as a share of adult population 16-40 year-olds (2012)



Note: In Japan, Italy, Spain, the United States, Korea, Sweden and Ireland the estimated share of current apprentices is not significantly different from zero.
Apprentices are defined as currently studying in upper secondary education or short post-secondary programmes and defining themselves as apprentices or holding an apprentice contract.
Source: Survey of Adult Skills 2012, adapted from OECD (forthcoming), "Costs and benefits of apprenticeships".

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Previous OECD research has shown considerable differences across apprenticeship systems in terms of programme length requirements (e.g. varying by course between one to six years) as well as apprenticeship to journeyperson ratios (OECD, 2014a). Data and evidence on effective apprenticeship models are difficult to ascertain because there is no "one-size-fits-all" institutional approach. Indeed, there is large variation in the broader use of work-based learning within VET systems across the OECD. For example, an OECD survey found large variations in the time spent by VET students in work placements, ranging from less than 25% in countries, such as Czech Republic, Finland, France, Sweden, and the United States to over 50% in Australia, Austria, Germany, Norway, and Switzerland (Hoeckel et al., 2009).

Evans and Bosh (2012) point to the increasing divergence of VET systems across OECD countries. They distinguish between various types of apprenticeship systems across European countries and show that the countries that have successfully established new apprenticeship programmes in the manufacturing and service sectors in recent years share a long tradition of stakeholder co-operation. Göggel and Zwick (2012) also found that the quality of apprenticeships depends on broader occupational groups and qualification

frameworks, which provide for greater mobility. Other characteristics that could impact the quality of an apprenticeship opportunity include a firm's overall human resources management and business strategy.

Both the national and local levels can make important contributions to the deployment and delivery of quality apprenticeship programmes. Table 4.1 provides a snapshot of the range of competences divided between each governance level to illustrate the levers that are available to local actors to shape and influence apprenticeship policies and programmes.

Table 4.1. **The role of the national and local level in promoting apprenticeship programmes**

National level	Local level
• Set legislative and regulatory quality frameworks through curriculum and qualifications standards. • Provide incentives for participation through tax credits, grants, and subsidies. • Co-ordinate by bringing together national social partners. • Collect and disseminate data and labour market information on trends and future occupations.	• Forge partnerships with local employers to promote the benefits of participation and link them to services. • Ensure public actors are speaking with "one voice" by building strong partnerships between employment, training, and economic development actors. • Use social clauses to expand apprenticeship opportunities. • Provide information, advice and guidance to youth and employers based on local job information. • Build capacity among training providers to deliver programmes in an innovative manner.

Employers and individuals face a number of barriers to participating in apprenticeships

Boosting participation in apprenticeship programmes requires recognition of the various barriers and perceptions that limit individual and employer participation. For individuals, imperfect labour market information and inadequate career advice can limit knowledge about potential occupations, expected wages, required educational pathways and employment opportunities that may be available. In many OECD countries, apprenticeship programmes are often viewed as a pathway to "dirty jobs" or less desirable than higher educational programmes. For example, in Flanders, Belgium, apprenticeship programmes tend to attract young people from the lowest vocational track and have a rather negative image (De Rick, 2008; OECD, 2014a). These challenges can be compounded in countries where apprenticeships are only available in a narrow range of occupations or are of low quality with poor labour market outcomes.

Disadvantaged youth, women, and older workers may be excluded from apprenticeship programmes because of eligibility restrictions in terms of age or qualifications. Previous OECD work identified additional barriers faced by disadvantaged youth to accessing high quality apprenticeship programmes, including a lack of basic skills needed to succeed, competition from more skilled youth, reluctance by employers to take them on, and relocation problems (OECD, 2014a).

Apprenticeships can be seen as a trap, notably if apprentices have limited opportunities to access higher level education programmes (OECD, 2015). Issues linked with long-term adaptability and future mobility across occupations can arise if apprenticeship programmes are too specific. However, there is evidence that mobility within a "skill cluster" or labour market segment is possible even for apprentices trained in very specific occupations, and such moves usually lead to a wage gain (Geel and Backes-Gellner, 2009). The career mobility prospects of apprentices are determined by the combination of skills acquired

rather than the occupation in which they have been trained, indicating that undertaking apprenticeship training in a very specific occupation does not necessarily limit subsequent professional mobility.

On the employer side, there are both real and perceived costs associated with accepting an apprentice, including perceived financial and administrative burdens to participation and concerns about apprentices being "poached" by other employers after the initial investment in training has been made. Employers may not view apprenticeships as a means of providing value to the company and may not be willing to make direct or indirect investments in training. This may be linked to a general lack of awareness amongst employers about the value of apprenticeship training and the public support available for those enterprises that do participate. In smaller communities, there may not be enough job opportunities available to incentivise employer participation in apprenticeship programmes, or there may be challenges related to economies of scale in delivering apprenticeship programmes. The design and eligibility criteria of apprenticeship programmes can also act as a barrier to engagement from employers.

What returns can employers expect?

The employers that benefit the most from taking on apprentices are those that show a high level of commitment to the training programme and consider apprentices a valuable resource to the company in both the short and in the longer term. The cost of investing in apprenticeship training for employers depends greatly on the sector – for example, there are higher costs associated with engineering relative to other sectors such as hospitality, retailing and business administration. In the retail sector, the net cost of training is particularly low and some firms are able to recoup their whole investment by the end of the period of training (McIntosh, 2007).

Investing in apprenticeship can generate significant positive returns. This is especially true if employers are able to retain apprentices, because the majority of associated costs are incurred in the early stages of the training period (McIntosh, 2007). Employers can obtain a range of benefits by investing in apprentices, including securing a supply of workers with applied workplace skills, potential replacement of an ageing workforce, lower recruitment costs, and lower labour turnover.

Employers that view apprenticeships as an investment usually develop and implement practices that ensure that apprentices are retained during their training period and beyond. This can be improved by clearly identifying the business case to train apprentices as well as recognising the importance of putting measures in place that will contribute to the personal and job-specific development of apprentices within the firm.

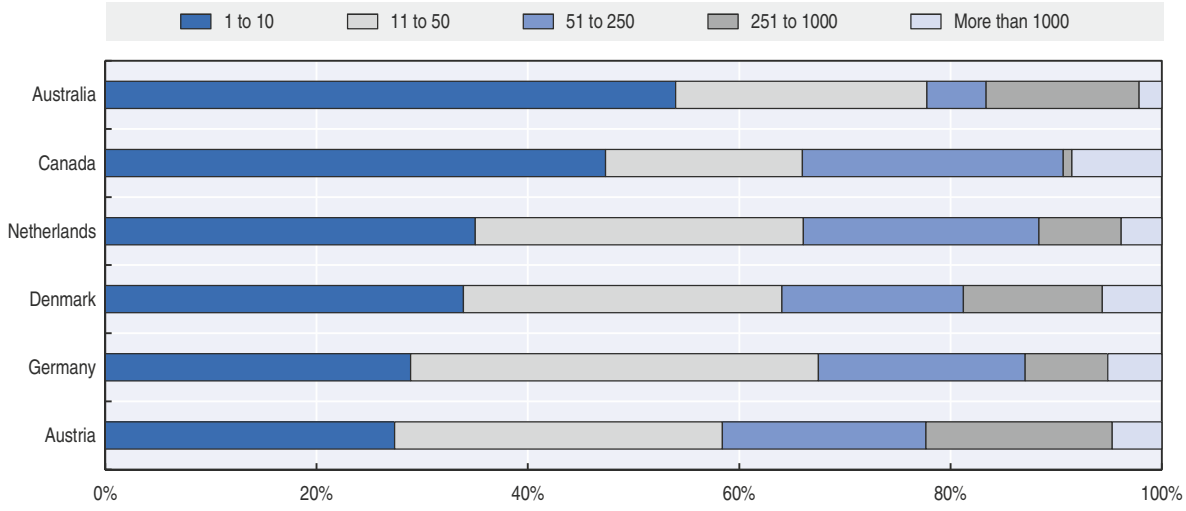
SMEs require targeted policies and programmes to encourage participation at the local level

SMEs are a critical source of job creation and therefore a key target group of employment and economic development agencies. Generally, SMEs have less capacity than larger organisations to be involved in the design and delivery of apprenticeship programmes. They often suffer from information deficiencies and may not be aware of training opportunities available, which reflects the sheer complexity of some VET systems within the OECD. SMEs have different needs to larger employers and their actual and perceived costs of participating in apprenticeship training programmes are generally higher. In many

OECD countries, there are stark differences in the rates of training places offered by SMEs relative to larger employers. However, SMEs represent a large share of overall employment and host a large proportion of apprentices in some OECD countries (see Figure 4.2).

Figure 4.2. **A large share of apprenticeships work in small companies**

Share of apprentices by firm size



Source: Survey of Adult Skills 2012, adapted from OECD (forthcoming), "Costs and benefits of apprenticeships".

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Unlike many large employers, SMEs often do not have a dedicated human resources function, which limits their ability to spend time working with training providers, negotiate available public funding supports, and assist in the design of course content. Furthermore, many small firms operate with product market strategies that emphasise low specialisation of services. A high concentration of such firms can leave a local area in a low skills trap, where there is no incentive to invest in training because of the low skills supply. This can in turn lead to sub-optimal performance for the whole local economy.

In some OECD countries, third parties or intermediary organisations are used to reduce the barriers that limit the participation of SMEs in apprenticeship programmes. Training agencies or "host organisations" that directly employ apprentices can provide SMEs with access to a flexible workforce and help to reduce administrative requirements to participation. Similarly, group training organisations have been set up to act as intermediary organisations on a sector or regional level. These types of organisations work with local employers to implement apprenticeship training and reduce the risks that some SMEs perceive about participating in apprenticeship programmes.

Stimulating local networks and the pooling of resources among SMEs on a sectoral or regional basis can also be an effective way to encourage participation and engagement. Networks among firms can be useful in attracting employers with no prior experience in apprenticeship programmes. Linking small employers with larger companies can also produce potential advantages in terms of cluster development and access to training facilities. Firms can work with each other to demonstrate the benefits of participation and encourage new training places. Furthermore, such networks can give rise to other benefits which may occur through knowledge exchange, including innovation and improved production techniques.

Beyond networking, specific public policy support and outreach measures are needed to actively engage and encourage SMEs to participate in apprenticeship systems. In many cases, public actors need to convince SMEs of the "business case" for changing prevailing practices, which may encourage low-quality working conditions. In Northern Ireland, a skills solution service has been established consisting of a small team of trained "skills advisors". The advisors work with SMEs to provide them with advice on existing skills provision and assist in the design and brokerage of customised training solutions (OECD, 2014b).

Box 4.2. **Approaches to encouraging SMEs to participate in apprenticeship systems**

In **Australia,** Group Training Organisations (GTOs) operate across all States and Territories and play a key role in the business development support to SMEs. The group training network is an established part of the architecture of the VET system in Australia, which includes 150 GTOs, 2 000 field staff and 100 000 host employers. Many GTOs now provide a range of other workforce development related services such as Registered Training Organisations (RTOs) and Australian Apprenticeship Support Network providers. Many are sources of innovation in new ways to serve employer demands for a skilled workforce, and for government initiatives to meet skills gaps and engage disadvantaged job seekers.

In **Norway,** the use of Training Offices has increased a great deal during the last 20 years, and now account for 70-80% of all training companies. The Training Offices have the legal status of a training company, but operate between county authorities and the host employer. Training Offices often take responsibility for recruiting new training companies and coaching staff involved in the tutoring of apprentices. A recent research report on the role of the Training Offices concluded that the Training Offices also carry out the tasks of the county authorities and work actively to assure the quality of the apprenticeship training (Olsen et al., 2014).

The national authorities also offer support to training companies and Training Offices by developing guidelines on the training companies' obligations according to the law and practical examples on how training can be done. These guidelines includes topics such as the role of the training company, how to work with the national curricula at a local level, how to continuously document and assess training, and how to best carry out trade and journeyman's tests.

In **Germany,** the Federal Ministry for Economic Affairs and Energy (BMWi) introduced a Customised Placement of Trainees in Enterprises (PV) programme for SMEs to find young apprentices. The programme targeted SMEs in the crafts and service sector. Under the programme, intermediaries were hired to provide SMEs with advisory and agency services, aiming to achieve a better "match" between apprentices and employers. Since 2011, a significant increase in subsidised PV projects has been reported, with the number of organisations involved increasing from 70 to 105.

Consultants adopt the role of a "headhunter" by supporting the services of SMEs, conducting detailed profile surveys of businesses, presenting the application documents of all suitable candidates as well as making appointments for job interviews. Advisors offer "professional career help" to youth to address the training needs and wishes of candidates, as well as their living conditions.

Box 4.2. **Approaches to encouraging SMEs to participate in apprenticeship systems** *(cont.)*

From 2010 to 2013, 60% of the participants in PV projects seeking apprenticeships were men and 40% were women. About 90% of the advised persons were under the age of 25 years, whereas the proportion of young people aged under 15 years was about 11%. Around 45% of those advised were students from general schools, while more than half had already left school. PV counselled a relatively small proportion of A-level students (10%). The majority included the traditional target group of dual training: youth from lower secondary education and middle school.

Source: OECD (forthcoming, 2016), *Engaging employers in apprenticeship opportunities at the local level.*

Employer ownership and engagement are key to success

Employers are asking to be more involved in the design and delivery of apprenticeships and other work-based training opportunities. Employer and industry engagement is critical to increasing apprenticeship participation and ensuring skills development opportunities are better aligned to demand. In recognition of this, some OECD countries are pursuing employer-led approaches to give firms more opportunity to steer the overall direction and provision of training.

Strong partnerships between the employment and training system and employers in key sectors are critical to improving information exchange and developing programme responses. A high level of employer involvement is a key factor in the success of the German apprenticeship system (Crowley et al., 2013). In some cases, employers can take a leadership role in promoting apprenticeship opportunities within the community (see Box 4.3).

Box 4.3. **Employer leadership to attract and retain apprentices in Australia**

The ABN Group in **Australia** consists of 23 companies that supply a range of services to the residential and commercial construction markets, from financing to property development, and from building to renovations. One of its companies, ABN Training, is the Group's own specialised training arm that was specifically established to manage the apprenticeship programme operating across the ABN Group of companies.

The ABN Group employs 1 700 people, and engages more than 3 000 construction contractors. Around 20% of their workforce is currently comprised of apprentices, compared to an average of approximately 5% amongst the construction sector as a whole in Western Australia.

The main goal of ABN Training's apprenticeship programme is to achieve the highest possible retention of graduated apprentices within the ABN Group, with the broad aim of guaranteeing future accessibility to tradespeople that are skilled to ABN Group's standards and organisational culture. Underlining this is the aim of being able to achieve generational change in standards relative to core issues such as safety, work readiness and quality of work.

The ABN Group is involved in a number of corporate social responsibility and community initiatives through the ABN Foundation, its not-for-profit foundation. ABN Training, besides implementing the company's workforce development strategy, is also seen as an adjunct to the Group's commitment to corporate social responsibility, incorporating

Box 4.3. **Employer leadership to attract and retain apprentices in Australia** *(cont.)*

its owners' desire to improve lives through access to high quality training and contributing to up-skilling the construction sector as a whole.

The ABN Group's workforce development strategy has a "whole of life" approach, and consists of three phases:

- Promotion of career paths in the construction industry to Year 10-12 students;
- In-house delivered apprenticeship programme; and
- A "graduation" programme offering employment solutions both within the ABN Group and the broader building and construction industry to maximise the retention of graduated apprentices.

The main innovation implemented by ABN Group's apprenticeship model has been adapting the standard Group Training Organisation (GTO) arrangement into an internal, enterprise-embedded structure. By doing this, the company has been able to take ownership of its apprenticeship programme as a key part of its workforce development strategy and train apprentices in a way that is aligned with its brand and organisational culture.

Source: OECD (forthcoming, 2016), *Engaging employers in apprenticeship opportunities at the local level.*

In many OECD countries, public actors are taking actions to highlight good examples of employer leadership as well as the benefits that have been attained from participation. This includes policies and programmes to reward employers that represent good practice and provide them with recognition within the business community. For example, the European Alliance for Apprenticeships is working with employers, non-profit organisations, education and training providers and regional authorities on pledges to strengthen collaboration and partnership between business and VET providers. Companies such as Cisco Systems and Microsoft have pledged to participate more in apprenticeship opportunities. This type of initiative is one way of promoting the benefits of apprenticeships to employers while also exerting "peer" pressure on other employers.

Public sector leadership can stimulate opportunity and engagement with apprenticeships

At the local level, local governments can be critical actors in building strong partnerships with employers to promote the benefits of apprenticeship. Increasingly, cities bring together human capital, economic resources, incentives, and the physical infrastructure needed to promote competitiveness and growth (OECD, 2016a). City governments can co-ordinate public agencies to harmonise outreach, and avoid duplication and "engagement fatigue" among local employers. In particular, local leadership from elected officials, mayors and local employment services and economic development organisations is necessary to increase employer participation in apprenticeship schemes. Practical mechanisms through which local leaders can engage business include breakfast meetings, media and marketing campaigns, as well as letters to individual employers promoting apprenticeships.

For example, the City of London launched an apprenticeship campaign in 2012 and made maximum use of the Mayor of London "brand" to recruit existing and new employers to participate in apprenticeships (Evans and Bosch, 2012). The city also set up a call centre to provide specific and specialised support to employers who had questions about the

administrative process of participation. As part of a broader push towards the decentralisation of skills policies, many cities in the United Kingdom have established local apprenticeship hubs, which act as a central co-ordinating and marketing organisation to engage with employers and individuals on apprenticeship programmes (see Box 4.4).

Box 4.4. **Local apprenticeship hubs in the United Kingdom**

There has been a recent push to increase the number of apprenticeships in the **United Kingdom** at both the upper secondary and post-secondary levels. Apprenticeships have received significant policy attention in recent years. In England, the number of apprenticeship registrations has doubled since 2010. The recent establishment of new local institutional structures (e.g. Combined Authorities) and the devolution of funding and greater responsibility to local areas to support economic growth (e.g. via City Deals/ Local Growth Deals) is providing new opportunities for cities to lead, shape and implement skills strategies.

As part of the City Deal process, Manchester decided to invest in skills, with a priority focus on apprenticeships. In Manchester a new Apprenticeship and Skills Hub was set up in 2012-13 with a budget of 6 million pounds to increase the number of people taking apprenticeships at level 3 and above, and to support apprenticeships within SMEs. The initial aim was to increase the number of 16-24 year olds starting apprenticeships by 10% a year every year until 2017/18 – however, this target was later abandoned.

A primary aim of the Apprenticeships Hub was to maximise demand for apprenticeships from employers by carrying out marketing exercises, encouraging the public sector to provide civic leadership by taking on apprentices, and building capacities amongst smaller employers to recruit and manage apprentices. At the same time, there has been a campaign to increase the take up of apprenticeships amongst young people through investing in careers advice and guidance in schools. A third aim has been to boost the capacity of local training providers to develop higher level apprenticeships in growth sectors within the local economy. To date, most of the work of the Apprenticeship Hub in Manchester has focused on the following:

- ***Providing information, advice and guidance to young people:*** In Greater Manchester, the emphasis on the promotion of information, advice and guidance for young people reflects broader concerns about careers advice in schools and colleges, and the extent to which vocational training and apprenticeships were being promoted.
- ***Building capacity amongst training providers:*** The second main area of activity in Greater Manchester to date has been building capacity in the training provider sector, particularly in the field of higher and advanced level apprenticeships.
- ***Engaging employers:*** A key priority for Greater Manchester has been to engage more SMEs, of which there are 97 000 in Greater Manchester. The learning so far is that this process is partly about managing the expectations amongst these employers as to what makes somebody "job ready" at the age of 19.

The Greater Manchester apprenticeships hub is overseen by a core partnership involving the ten Greater Manchester Local Authorities, the Chamber of Commerce, the Skills Funding Agency, the Learning Provider Network, the Colleges Group and the North West Business Leadership team. These organisations are involved in project commissioning, and steering and meet every four months. Other sub-groups focus on other issues, such as marketing, and feature a business representative and a young apprentice.

Source: OECD (forthcoming, 2016), *Engaging employers in apprenticeship opportunities at the local level.*

Steering the outlook of firms through public procurement provisions and better skills utilisation

Other types of public policies can also be used to shape the demand for skills and the number of apprenticeship places offered by employers. Local governments can use their spending power and funding policies to ensure that employers provide apprenticeships. This includes provisions and preferential treatment within public procurement contract arrangements to employers offering apprenticeship places. Recent research has found that these types of arrangements can positively impact the probability of employers offering apprenticeships by 10-35% in Switzerland (Leiser and Wolter, 2015). This impact is primarily targeted towards SMEs, who are less likely to participate in apprenticeship programmes through traditional training arrangements.

For example, local employment and economic development actors can leverage public investments by including social clauses and provisions into new contracts. This approach is taken in Switzerland, where cantons (i.e. the state level) have modified legislative and regulatory frameworks to give preferential treatment to employers that agree to offer and train apprentices (Leiser and Wolter, 2016). Over the last 20 years, most cantons have modified their social public procurement policies to use the government's market power to increase the number of apprenticeship training places. Some municipalities in the Czech Republic have also moved to introduce social clauses into their public procurement processes with the goal of adding human resource management considerations (OECD, 2014c). Local public actors can also demonstrate leadership by directly employing apprentices within public agencies.

Moving towards a more coherent and co-ordinated approach of public support also involves steering local employers towards higher value added production. This would involve promoting workforce development as part of a broader business strategy, which seeks to upscale manufacturing and production processes. These types of policies would seek to embed apprenticeships into an overall workforce development strategy that more effectively deploys skills in the workplace in order to provide employees with more autonomy and wider workplace perspectives. Across the OECD, countries are looking to expand apprenticeship programmes in non-traditional occupations as a way of boosting quality employment opportunities and innovation in the local economy.

Providing flexibility within VET programme delivery can facilitate stronger business-education partnerships

Training institutions can take a lead role as an anchor institution at the local level by reaching out to employers to align their programmes and curriculum to demand. On a general level, VET institutions need to work more closely with the public employment services and "feeder" schools to create clearer, simpler and more recognised pathways into apprenticeship training. The previous chapter outlined how it is best to develop vocational education and training policies within a national framework that provides flexibility for local training institutions to adjust programmes to local labour market considerations and employers.

For example, 36% of British SMEs surveyed stated that having the flexibility to design bespoke apprenticeship frameworks would encourage them to engage more with apprenticeships (CBI and Pearson, 2012). Flexibility in service delivery implies the need for qualification systems that are compatible with the demands of the modern workplace;

therefore, it is necessary to consider the local mix between supply and demand driven approaches and how such systems can be designed in a manner which encourages flexible delivery of learning.

These may include offering part-time training in a modular manner; adapting the school portion of training to current workplace demands; setting up sector advisory committees; providing bridge training; and ensuring programme curricula can be adjusted to reflect demand. Strategies that enable secondary school students to accelerate their transition to apprenticeship programmes can also improve outcomes.

It is important to balance the development of flexible training delivery arrangements within a national system of qualifications and competencies (OECD, 2014b). While employers may have incentives to provide short-term customised training, it is important for young people that the skills acquired through apprenticeship programmes are mobile and transferable. This will ensure career progression opportunities as well as mobility within sectors that may be facing structural adjustments or weak economic activity.

Box 4.5. **Flexible apprenticeship programme delivery in Ontario, Canada**

In **Ontario, Canada,** locally-based community colleges are active in delivering flexible apprenticeship programmes to meet both the needs of employers and apprentices. Currently, Ontario has about 40 000 active apprentices in over 150 trades. About 50% (20 000) of apprentices follow block release training, whereby the apprentices complete the in-school portion of training over 8 weeks at a local college. This type of arrangement is typical of the construction trades, with classroom training delivered during the winter period when business activity is low.

The other 50% of apprentices (e.g. 20 000 individuals) participate in some form of part-time training to complete the theoretical portion of their programme. Part-time options include day release training whereby an apprentice will attend the in-school portion of their training one day per week and spend the other 4 days of the week in the workplace. Another part-time option offered by colleges is night school, whereby the apprentices participate in training that is delivered after work hours.

Colleges also deliver reportable subjects that are part-time and involve an apprentice participating in a programme like a normal college student (e.g. one three hour class per week that follows a typical college semester). Reportable subjects are most often delivered for early childhood educators and development service workers. Reportable subjects are also a primary delivery method for immigrants participating in apprenticeships or mature workers who are pursuing a second career. They are also convenient for apprentices who need to balance family-work responsibilities.

In some cases, programmes can be delivered directly at the location of the employer. For example, Seneca Colleges works with the Community Living Foundation to deliver training programmes on site for Development Service Worker trades. The college instructors make arrangements with the employer to deliver courses to anywhere between 10 to 15 apprentices. The only cost for the employer is providing the training space, while the province covers the costs related to the delivery of the training.

The province is continuing to explore the online delivery of training, although this can be difficult for particular trades. For example, Sir Stanford Fleming College currently delivers an online course for Early Childhood Educators. This model is being examined to see if it can be applied to other trades.

Robust governance and co-ordination mechanisms can promote effective delivery and high quality programmes

Although developing partnerships at the local level can be difficult and time-consuming, it is necessary to ensure a certain degree of co-ordination across different regions and coherence with national frameworks/institutions to promote apprenticeships. Partnerships are a critical governance tool at the local level to bring together the wide range of stakeholders involved in the training system. Developing a coherent and consistent outreach strategy requires local "buy-in" to develop joint strategies and programmes that leverage the expertise and funding levers available.

Social partners have a critical role to play in promoting quality apprenticeship opportunities. In particular, unions can have a strong influence on developing high quality standards to ensure that apprentices acquire skills that make them more resilient and mobile in a changing global economy. Unions have an important role in advising training institutions, employers, and policy makers on the content of training, the value of qualifications, the working conditions and wages of an apprentice, and the optimal funding arrangements to ensure an equitable sharing of costs between the apprentice and the employer.

More broadly, many OECD governments aim to strengthen the intensity of partnerships between training institutions and employers at the regional and local level. Business-education partnerships can be constructive in bringing the key actors in a local area together to construct an action plan for the employment and training system. The Czech government has launched a number of projects to emphasise the need to build stronger partnerships between upper secondary schools and firms. In 2008, the Partnership and Quality research programme was established to enhance the quality of education in schools and educational institutions and develop stronger links with firms by gathering additional information about how schools and businesses co-operate, particularly in the implementation of curriculum reform around apprenticeships. Employers have also typically been involved in qualification recognition and examination boards (e.g. in final exams for apprenticeships) (OECD, 2014c).

In Ireland, 16 Education and Training Boards have been established at the regional level to manage and operate second-level schools, further education colleges, multi-faith community national schools and a range of adult and further education centres that deliver education and training programmes (OECD, 2014d). Each board represents a catchment area of two to three counties and comprises 21 members, of which there are 12 local authority representatives, 2 staff representatives, 2 parent representatives and 5 community representatives – at least one of whom is an employer.

Social enterprises can play a valuable role in developing programs that combine theoretical learning and on-the job training

As discussed above, vulnerable groups are often excluded from mainstream apprenticeship programmes. Social enterprises can be utilised to increase the participation of vulnerable groups in apprenticeship programmes. As employers who give priority to their social mission, they can play an important role in offering programmes that combine theoretical learning and on-the job training to disadvantaged and low-skilled individuals who face multiple barriers to entering and succeeding in the labour market.

Social enterprises provide a unique range of programmes and services to disadvantaged groups, which vary across the OECD and depend on national and socio-economic factors

(Borzaga and Defourny, 2001). In terms of training programmes, formal apprenticeships (i.e. programmes leading to a certification) are used by some Work Integration Social Enterprises (see Box 4.6) but are generally not widely utilised by social enterprises.[1] This presents an opportunity to provide more support to social enterprises to participate in apprenticeship programmes. By building and consolidating skills through these dual programmes, social enterprises can play an important role in easing the transition to sustainable jobs for vulnerable people. While implementing these types of programmes, social enterprises should make sure that apprenticeships do not become a replacement for more secure and longer-term employment opportunities.

Box 4.6. **Réseau Cocagne, France**

Created in 1999, Réseau Cocagne is a national social enterprise in **France** providing work and training for excluded people (e.g. young drop-outs, long-term unemployed, and individual with addictions) through a network including more than 120 market gardens called "Jardins de Cocagne". These market gardens produce certified organic vegetables which are then distributed to local customers. In addition to limiting negative environmental impacts and contributing to local economic development initiatives through the promotion of short distribution circuits, Réseau Cocagne also provides training and apprenticeship programmes.

For example in 2013, Réseau Cocagne and the Centre for Professional Training and Agricultural Promotion and the Apprenticeship Training Unit (CFPPA-UFA) based in the Seine-et-Marne region launched a 12 month training programme which leads to a nationally recognised certificate in "Organic Gardening and Marketing". The training includes 560 teaching hours and 861 working hours.

Réseau Cocagne receives support from the Midi-Pyrénées region, the Rhone-Alpes region, the Ile-de-France region, the French Ministry of Agriculture and the European Social Fund. Réseau Cocagne includes 360 hectares of organic cultures spread all over France. Since 1991, more than 40 000 individuals have been rehabilitated into work. In 2013, Réseau Cocagne won the Louis D. Foundation Humanitarian Price from the French Académie "l'Institut de France". The "Jardins de Cocagne" model is currently being disseminated in Spain, Romania and Japan.

Source: Réseau Cocagne, Réseau Cocagne website, *www.reseaucocagne.asso.fr* (accessed 5 July 2016).

Social enterprises can also use apprenticeships schemes to target broader groups of individuals who are not necessarily disadvantaged. For instance, in 2015, the Department for Business, Innovation and Skills in the United Kingdom launched a new apprenticeship for entrepreneurs initiative that includes a specific pathway for social entrepreneurs. Through this initiative, apprentices can learn from employers while developing a social venture. They also attend a local professional college or training provider to develop knowledge in management, business planning, finance and "social entrepreneurship", which can be directly applied to their employment and to their own enterprise.[2]

Apprenticeships and on-the-job training can be used as a tool to integrate refugees into the local economy

Given the current humanitarian crises and the high influx of refugees in many European countries, a critical policy objective is to establish sustainable mechanisms to foster their socio-economic integration (OECD, 2016b; CEDEFOP, 2015). In this endeavour, apprenticeships,

vocational training and work-based training programmes can provide a skills development avenue to effectively integrate refugees in the labour market and contribute to building a more inclusive economy. By delivering programmes aimed at developing practical skills and competencies linked to the workplace, employers can help refugees with prior qualifications adapt to a new working culture and make the transition to sustainable employment. Language training (both general and on-the job) is critical within programme design to ensure the social integration of refugees, as illustrated in Box 4.7.

Box 4.7. **Siemens' training and internship programs for integrating refugees, Germany**

In 2015, **Siemens,** one of the largest engineering companies in Europe and also one of the biggest private-sector training organisations, launched a long-term programme for integrating refugees in Germany. The programme includes funding of about EUR 1 million and provides internship opportunities, vocational skills training and German language courses.

As an extension of a European training programme which started in 2012, Siemens is offering internships to refugees still in the process of applying for asylum. After a pilot phase, a permanent internships programme was consolidated in 2015 in Erlanger-Nuremberg in order to support workplace integration and orientation for qualified asylum seekers. The programme is designed to be reproduced in other Siemens offices in Munich and Berlin and is also intended to serve as a case study for other companies.

The goal of the programme is to offer on-the-job training and to build professional skills among asylum seekers while reducing potential discrimination. The company sees the potential of qualified asylum seekers as a mechanism to boost the available supply of skills. It is also a corporate social responsibility initiative, which strengthens the image of the company.

Siemens has also designed a six month training programme focusing on language courses and vocational skills preparation in order to help asylum seekers start a successful career. Four special classes for asylum seekers were established in 2015 at the company's offices in Berlin, Erlangen-Nuremberg, Krefeld-Düsseldorf and Karlsruhe.

Source: Siemems (2015) "*Siemens introduces sustainable program for integrating refugees*" press release, *www.siemens.com/press/en/pressrelease/?press=/en/pressrelease/2015/corporate/pr2015090359coen.htm&content[]=Corp*.

Conclusion and issues for consideration

Apprenticeship programmes represent a key policy tool to better link skills development efforts to the workplace. However, they should not be viewed as a panacea for reducing youth unemployment. Apprenticeships can contribute to reducing potential skills shortages, when designed in partnership with employers and when delivered within a quality framework. Both youth and employers can benefit from quality apprenticeship programmes. For youth, apprenticeships provide an opportunity to learn and apply knowledge on the job, equipping them with important skills for long-term labour market success. For employers, apprenticeships programmes can produce a stable pipeline of talent, while boosting productivity.

At the local level, local governments and regional authorities play a critical role in reaching out to business and co-ordinating the range of public supports available. Mayors and other local leaders can act as "change agents" by working with business to promote the

benefits of apprenticeship programmes and encourage stronger participation in these types of programmes.

Lastly, the social enterprise sector offers a unique avenue to target apprenticeship programmes to at-risk and disadvantaged groups, such as refugees, who require practical skills development opportunities to successfully integrate into the labour market.

Key recommendations

Stimulate local partnerships and networks

- Actively encourage business-education partnerships to promote employer engagement in apprenticeships at the local level. Use policy and programme levers to network SMEs in a co-ordinated manner to better identify training needs and opportunities.
- Promote the benefits of apprenticeships to employers in a co-ordinated manner across public sector organisations. This requires bringing together employment, training, and economic development actors.

Encourage public sector leadership and utilise funding levers available

- Encourage leadership at the local level to reach out to employers through breakfast meetings, corporate events, and through recognition of best corporate practices.
- Use the spending power of local and regional government to increase the amount of training places offered by employers. This includes looking for opportunities to add social clauses to public procurement contracts.

Ensure that skills development opportunities are flexible and adaptable to the modern workplace

- Ensure that VET institutions offer apprenticeship programming that is flexible, modular and responsive to the needs of employers and apprentices within a national system of recognised qualifications and competencies. Flexible delivery arrangements could include part-time and day release training as well as online courses in certain trades.

Examine opportunities to use apprenticeships to promote social inclusion, including through engaging the social economy

- Consider the role social enterprises can play in providing apprenticeship opportunities for disadvantaged populations, while ensuring that they are not used as replacement for more secure and long-term employment opportunities.

Notes

1. In the UK for instance, figures from the National Council for Voluntary Organisations' UK Voluntary Sector Workforce Almanac, suggest that the third sector does not use widely apprenticeship schemes. In 2011, only 5% of voluntary organisations were currently employing apprentices, or had employed them in the past.
2. For more information, see *www.smeinsider.com/2015/07/27/apprenticeship-for-entrepreneurs-reflects-new-economic-reality/*.

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PART I

Chapter 5

Making SME and entrepreneurship policy more effective at the local level

Co-ordination between the various stakeholders involved in policy design and policy implementation is critical to avoid duplications, harness synergies between programmes, and make sure that policy gaps are minimised. Co-ordination is especially important in the case of small and medium-sized enterprise (SME) and entrepreneurship policies, as they often fall under the remit of both national and sub-national governments and cut across the responsibilities of different ministries. This chapter examines the national factors that set the context for policy co-ordination and tailoring, and identifies how the right governance mechanisms, delivery arrangements, and data collection and evaluation can improve the implementation of these policies.

The design and delivery of economic development policies have become more complex in recent years. New systems of governance cut across different territorial jurisdictions and give responsibilities in the same policy areas to different levels of government (e.g. national, regional, local) while devolving an increasing number of functions from national governments to regional and local authorities. Supranational authorities – such as the European Commission – have also played a larger role in economic development policy making over the last few decades. As a result, it is not uncommon to see three or four levels of government (e.g. supranational, national, regional and sub-regional) simultaneously involved in policies relevant to entrepreneurship and small and medium-sized enterprise (SME) development. Moreover, SME and entrepreneurship policy include many policy areas (e.g. regulations, access to finance, skills development) that crosscut the responsibility of different ministries and government agencies. This adds complexity to the tasks of policy co-ordination and local tailoring.

Co-ordination between the various actors involved in policy design and implementation is important to avoid overlaps and duplications, harness synergies between programmes (for example, the success of an intervention may depend on the presence of another), and make sure that any gaps (i.e. problems which are left unaddressed) are minimised and filled. To this end, both vertical and horizontal policy co-ordination are important. Vertical co-ordination involves different levels of government (e.g. co-ordination between national and regional governments), while horizontal co-ordination involves co-operation between entities at the same jurisdictional level (e.g. collaboration between two local authorities supporting an industry cluster that spans the boundaries of the two authorities).

Attention also needs to be paid to how policies developed at a higher level of governance (e.g. national or supranational) can be tailored to local conditions in the places they are delivered. Many decades of economic development practices have shown that even the most successful policy approaches need to be adjusted when transferring them to different jurisdictions or areas.

This chapter looks at how issues of co-ordination and tailoring affect the local implementation of SME and entrepreneurship policy, and potential strategies to deliver more co-ordinated and tailored policies. It predominantly draws from the findings of the OECD country reviews of SME and entrepreneurship policy, notably from their chapters on the local dimension of national SME and entrepreneurship policy.

Highlights

- The design and delivery of economic development policies has become more complex in recent years. It is not uncommon to see three or four levels of government as well as multiple ministries and government agencies simultaneously involved in SME and entrepreneurship policy.

Highlights *(cont.)*

- Better co-ordination between the various stakeholders involved in policy design and implementation is important to avoid overlaps and duplications, harness synergies between programmes, and ensure that policy gaps (i.e. problems which are left unaddressed) are minimised and filled.
- Regardless of what governance level policies and programmes originate from, they need to be tailored to local conditions at the level of delivery.
- A number of tools can be used to improve co-ordination and tailoring, including written agreements, national strategies, statutory co-ordination bodies, and co-funding arrangements.
- At the level of programme delivery, using local intermediary organisations can improve tailoring and capitalise on existing capacities, while co-locating services in one facility can lead to improved co-ordination and result in a better experience for SMEs and entrepreneurs accessing the services.

Key issues in co-ordinating and tailoring SME and entrepreneurship policy

Framework conditions can vary significantly at the local level

Framework conditions (e.g. labour market conditions, access to finance, business regulations) differ greatly not only among countries, but also among localities within the same country. This in turn has a direct impact on the entrepreneurial attitudes of the local population and the performance of new and small businesses at the local level. For example, GDP per capita in Mexico is five times greater in the capital city than in the southern state of Chiapas, the poorest state in the country (see Figure 5.1). More generally, industrial activity and economic wealth is concentrated in the north and along the border with the United States, with most of the south lagging behind (OECD, 2013). In Canada, natural resources and population distribution have a direct influence on SME policy delivery. The industry focus of economic policy differs between provinces rich in natural resources (e.g. Alberta) and provinces that have a stronger manufacturing tradition (e.g. Ontario and Quebec), while a distinction between urban, rural and remote areas that cuts across most provinces implies a need for tailored interventions (OECD, forthcoming, 2016a).

There are also clear geographical patterns in economic activity in smaller countries. Italy features a historic divide in development between the richer north and the poorer south that has only been marginally bridged by over 50 years of targeted regional development policies (OECD, 2014). Similarly, economic activity in Israel is heavily concentrated in the three main cities of Tel Aviv, Jerusalem and Haifa (OECD, 2016).

The impact of product market regulations on business activity also varies significantly by region, reflecting different capacities in local administrations. In Mexico, for example, it takes only five-and-a-half days to start a business in the state of Guanajuato, but it takes seven weeks in the state of Quintana Roo (World Bank, 2014). In Italy, an entrepreneur needs six days to start a new business in the cities of Rome and Milan, but 16 days in the southern city of Naples. Since all cities in Italy are part of a nationwide system managed by the Chambers of Commerce, the different number of days mainly reflects different delays in response by local officers (World Bank, 2013).

Figure 5.1. **GDP per capita and business density in Mexican states**

A) GDP per capita



B) Business density



Source: OECD (2013), *OECD Studies on SMEs and Entrepreneurship – Mexico: Key Issues and Policies*, *http://dx.doi.org/10.1787/9789264187030-en*.

While different framework conditions have an impact on SME and entrepreneurship performance, the implications are not always straightforward. In Mexico, business density (i.e. the number of enterprises per thousand people) is the highest in the poorest states of the south-pacific coast, pointing to large swathes of necessity-driven entrepreneurship, while it is the lowest in the northern states which border the United States and whose economies are manufacturing-based (see Figure 5.1). However, the opposite geographic trend is found in Italy, where business density is higher in the richer north, which has a tradition of small business clusters, in comparison to the poorer south where public administration is a major employer (OECD, 2014; OECD, 2013).

Although business densities are similarly high in southern Mexico and northern Italy, the SME policies appropriate for the two places could not be more different. For example, with respect to innovation, Mexican policies will have to make an effort to reach out to a large number of small businesses in traditional low value-added activities through productivity-enhancing policies that have low delivery cost per beneficiary enterprise. In Italy targeted interventions which foster knowledge-based collaboration among SMEs, and between SMEs and research organisations, are more relevant.

The governance context can make it easier – or harder – to effectively co-ordinate policies

The system of government affects policy co-ordination and policy tailoring. In centralised states, such as Israel, where there are only two levels of government (national and municipal), policy co-ordination may be made difficult by the excessive fragmentation of municipalities and the lack of planning and policy making capacity in the smallest municipalities. However, even under these circumstances, policy tailoring remains important. Ways need to be found for local governments to inform national policy makers about specific local development challenges and conditions so such specificities can be taken into consideration when delivering national policies locally.

Policy co-ordination and tailoring is easier in decentralised systems which have formal arrangements in place to share policy responsibilities across different levels of government. For example, local development agencies in France are found at both the regional and department levels (i.e. the second and third tiers of the government structure) and have a mandate that includes support for business creation and business development. In Italy, vocational education and training (VET) is a shared competence between regional and provincial governments, (i.e. also the second and third tiers of the government structure). In most OECD countries, business permits and licenses (e.g. opening licenses, construction permits, etc.) are managed by municipalities, whose capacity will therefore affect the ease of doing business at the local level.

Local capacities to deliver and co-ordinate SME and entrepreneurship policy can be uneven

The quantity and quality of human resources in local governments impact the extent to which local actors are able to co-ordinate policies with the national government. Local economic intelligence is instrumental to informing central governments about the key development challenges faced at the local level, as much as local capacities are crucial to implementing national programmes effectively. This is especially true in centralised states where there are typically fewer layers of government than elsewhere and as a result, relatively weak local capacities can undermine policy implementation. In multi-level

systems of governance, the presence of (in principle) growing competencies at higher levels of the sub-national government mitigates this challenge.

For example, municipalities in Israel have the power to engage in SME development activities. However, small municipalities generally do not use these powers beyond property development due to a lack of resources and human capital capacity at the local level. Larger authorities are more active, and engage in more formal co-ordination with national actors. For example, the Jerusalem Development Agency has an advisory council which includes representatives of both the national and city governments, meaning that any strategies produced at the local level are co-ordinated with national priorities. As there are a small number of large cities in Israel and each is thus strategically important, there is political co-ordination with any major initiatives taken by these authorities. The same does not hold true for smaller municipalities (OECD, 2016).

Effective regional development often needs to transcend administrative boundaries

In many cases, regional development issues transcend regional administrative boundaries. For example, industry clusters often reflect functional rather than administrative geographical areas. Co-ordination between the local governments covering the functional area of the cluster can help to harness latent synergies between firms and institutions in different administrative locations and thus support the development of the cluster as a whole. However, although cluster policy is regionally-based, it has been less likely to involve interregional co-operation. This has been the case in Italy, where regional governments (the second tier of the national government structure) responsible for the development of so-called "industrial districts" tend to collaborate more with the relevant provincial governments (the third tier of the national government structure) than with other regional governments (OECD, 2013). There has also been a lack of coherence across adjoining regions in terms of both incentives and support structures. For example, while the regional development agency (RDA) of Emilia-Romagna assisted enterprises to find the best innovation support from a variety of existing private-sector sources, the corresponding body in Veneto sought to create centres of excellence and deliver innovation support itself.

Similarly, an OECD review of the strategic sectors for each of the 32 states of Mexico (i.e. the second tier of Mexico's government structure) found there was little, if any, emphasis on existing industry interactions between neighbouring states.

Policy co-ordination is also important for legislation, not just programmes

Policy co-ordination should also be carried out with respect to legislation as well as programmes. This is especially true in federal and highly-decentralised countries where sub-national authorities enjoy law-making powers. A lack of co-ordination may result in differing regulations that hamper the expansion of SMEs beyond local borders. The Red Seal programme in Canada, which fosters a set of common standards that allow the recognition of apprenticeship training certifications across provincial jurisdictions, is a case in point, since lack of mutual recognition of skilled-trade qualifications has sometimes resulted in localised skills shortages. By the same token, the use of different industrial standards within the same industry across different provinces can hinder business growth. Different financial market regulations across provinces (financial markets are regulated by provinces in Canada) may also act as a barrier to the establishment of a nationwide financial market for new instruments such as crowdfunding.

Vertical co-ordination between national and sub-national governments is also important in the legislative domain. A case in point in many countries is taxation, where vertical co-ordination is needed to ensure that taxation is neither too favourable nor too unfavourable to SMEs. In Canada, for example, both the federal government and provincial governments apply a preferential corporate income tax rate to small businesses (on the first CAD 500 000 of business income), leading to a small business tax rate of only 15.2% in 2015 (OECD, 2016a forthcoming). Moreover, both federal and provincial governments offer generous tax reliefs on R&D investments undertaken by SMEs, so that the combined tax advantage for SMEs can become significant. On the other hand, corporate income taxation at the sub-national level is usually levied on top of national corporate taxation (for example, in France, Italy, Germany and Japan among others), which means a balance needs to be struck to avoid an excessive tax burden on SMEs. In both cases, dialogue between national and local authorities is needed to ensure that taxation is fair and addresses existing market failures to the extent possible.

Policy coherence facilitates policy co-ordination

Policy co-ordination and local tailoring are both supported by policy coherence over time. It is generally accepted that small business owners are best served when legislation or programme rules do not change too frequently or change without much anticipation. This saves them from having to invest their own time in periodically learning new rules and ensures that they run fewer risks of failing to comply with new laws or regulations.

However, policy coherence is also important for policy makers. A stable policy support framework will enable policy makers to better identify overlaps and contradictions in existing programmes and legislation, thus giving them the opportunity to introduce any changes necessary to strengthen the policy framework. In addition, the actors charged with implementation will benefit from steady rules, as they gain skills and experience in implementing programmes that only require minor year-to-year adjustments.

Mechanisms to improve policy co-ordination and tailoring

There are a number of mechanisms and strategies used by national and local governments to improve the co-ordination and local tailoring of entrepreneurship and SME policies. This section looks at the most common mechanisms in the areas of governance and funding, delivery arrangements, and data collection and programme evaluation.

Governance arrangements

Co-funding programmes

Programme co-funding by different government authorities is a common and relatively effective way to co-ordinate and tailor entrepreneurship and SME policy. When national and local governments commit the same or similar financial resources to a single public programme, they have a vested interest in ensuring that the programme is consistent with the national policy framework for entrepreneurship and SME support while simultaneously addressing local development challenges. Cost-sharing by programme participants – especially for programmes that target growth-oriented firms and larger SMEs – may also be an effective method of ensuring that the contents of the support programme meet the expectations of the participants.

Mexico's SME Fund, which has been more recently replaced with the new National Entrepreneur Fund, is a good example of vertical policy co-ordination through co-funding

arrangements. The SME Fund was a federal initiative in which state governments (the second tier of Mexico's government structure) could co-fund on a one-to-one basis (i.e. one federal peso for each state peso) programmes and projects that addressed local problems. This was formalised though bilateral discussion and the development of annual co-ordination arrangements that determine which programmes the respective contributions would finance. Overall, the SME Fund has proven a valuable policy co-ordination tool although a scarcity of resources at the state level has resulted in unequal contributions from federal and state governments. Box 5.1 illustrates how the SME Fund was used by the state of Queretaro to support the local automotive and aeronautics clusters, thus effectively using a federal fund programme to reinforce a locally strong industry.

Box 5.1. **Using federal policies for local industrial needs: The case of Queretaro in Mexico**

Queretaro's economy contains many large industrial businesses in established international supply chains which can constitute the focus for SME policy support. In particular, there are opportunities in the auto and auto parts sectors, in which the state has specialised since the 1960s, and more recently in the emerging aerospace sector (with the Canadian firm Bombardier as an anchor firm). The presence of international firms in these sectors has led the state government to place strong emphasis on the local implementation of the national Supplier Development Programme in its use of the SME Fund. The programme provides a vehicle to link SMEs into international supply chains through quality accreditation (including achieving costly quality management certifications such as AS9100 in aerospace, and ISO9001 in the auto industry), technological upgrades, and the organisation of events for established transnational companies to meet potential new suppliers. It has also been used to transpose manufacturing knowledge from the existing automotive sector to the expanding aerospace sector.

The state was responsible for developing the approach's design, which included close collaboration with the relevant local support institutions. Thus, efforts to develop local suppliers have been co-ordinated with local business incubators (particularly the high technology incubator) and with the technology centres of the National Council of Science and Technology (CONACYT) that are hosted in the state. These centres focus on industrial automation, advanced manufacturing and electrochemistry, and environmental technologies.

The public sector also has an important role to play in supporting skills development opportunities that meet the need of local SMEs. Unfortunately, this type of activity is often underdeveloped in Mexico's regions compared to other OECD countries. However, in Queretaro, the state government has created an aeronautical university that offers courses ranging from two year technical degrees to masters programmes, with the goal of creating an ecosystem of highly sophisticated SMEs to act as suppliers to Bombardier and other lead firms. It has also supported collaboration between the local College for Professional and Technical Education (CONALEP) and the federal Council for Science and Technology (CONACYT), which enables the budding local aeronautics sector to train mid- and high-level technicians. These workforce development efforts illustrate a way forward for the development of more innovative SMEs in other states.

Source: OECD (2013), *OECD Studies on SMEs and Entrepreneurship – Mexico: Key Issues and Policies*, *http://dx.doi.org/10.1787/9789264187030-en*.

An important lesson from the implementation of the SME Fund is that co-funding arrangements need to be designed in a way that is as simple as possible to encourage participation from sub-national authorities (and intermediary organisations) that may not have the internal capacities and resources to disentangle complex administrative procedures. In Mexico, for example, heavy reporting requirements, delays in the reimbursement of project costs, and single-year funding (rather than multi-year funding) have deterred some states from submitting funding proposals for long-term projects. This made the SME Fund less strategic in its objectives and actions than it could have been.

Canada offers another example where co-funding from different government sources has been used to jointly support certain entrepreneurship policies. A recent example is the 2013 Venture Capital Action Plan, which was primarily financed by the federal government but open to co-funding from interested provincial governments. At the end of 2015, two of the four government-backed funds of funds (i.e. funds which invest in a pool of venture capital funds) had received financial resources from both the federal and some provincial governments. However, Canadian SME and entrepreneurship policy co-funding has been more occasional and less institutionalised than in Mexico. A possible reason is that most Canadian provinces have the constitutional autonomy, scale and financial resources necessary to undertake economic development policies on their own. This makes provincial programmes highly relevant to the local context, although the drawback has been a lack of formal co-ordination mechanisms with federal interventions in similar policy areas.

Statutory policy co-ordination bodies

The establishment of formal statutory bodies responsible for vertical and/or horizontal policy co-ordination is an obvious method of promoting and enhancing policy co-ordination and tailoring. When such bodies meet regularly, they can become useful tools for sharing good policy practices, co-ordinating policy actions that cut across local administrative borders, and implementing national programmes in a coherent manner across the whole national territory. On the other hand, less formal instruments such as working groups and temporary committees run the risk of limiting policy co-ordination to information exchange, with little, if any, resulting collaboration and co-action.

Two cases in point are Italy and Canada. In Italy, policy co-ordination among regions (the second tier of Italy's government structure) and between the regions and the central government around European Union (EU) funding programmes is enshrined in a formal institution called *Conferenza Stato-Regioni*. This institution meets regularly to co-ordinate actions backed by EU funds (see Box 5.2).

Box 5.2. **Italy's Conferenza Stato Regioni**

As part of a process of policy decentralisation to the regions that has been underway over the past 20 years, the Italian government has set up a statutory body called the State-Region Conference (*Conferenza Stato Regioni*) to co-ordinate relations between the State and the Regions. The Conference has been effective, especially in relation to programming EU funds. The State-Region Conference agreed to the National Strategic Reference Framework for 2007-13, which was initially developed by the State in consultation with stakeholders. The framework sets out guidelines for the regions for the development of regional strategies and operational programmes. The same approach is being adopted for the current financing period (2014-20), with the co-ordinating document now called the Partnership Contract.

Box 5.2. **Italy's Conferenza Stato Regioni** *(cont.)*

This appears to be an effective way of co-ordinating policy. However, its use is limited to the framework in which EU funds operate and therefore has not included programmes which are not co-financed by the European Union, including policies which relate to tax incentives and inter-regional co-operation (except where this relates to sectoral operational programmes funded by the European Union, although all of these are in the south).

The regions (and the two autonomous provinces of Italy, Trento and Bolzano) have established a second voluntary body (the *Conferenza delle Regioni e delle Province Autonome*) which seeks to reinforce the interregional co-ordination of policy. This conference seeks to identify common positions for the regions to present their views to central government, and acts as a discussion forum for common issues and inter-regional problems. However, since it does not have a statutory nature, it has mainly acted as a forum for discussions, with the power remaining with the regions themselves. As a result, it is not possible to reach decisions that are binding on all regions unless there is consensus.

Source: OECD (2014), *OECD Studies on SMEs and Entrepreneurship – Italy: Key Issues and Policies*, *http://dx.doi.org/10.1787/9789264213951-en*.

In Canada, on the other hand, policy co-ordination among provinces and between provinces and the federal government in SME policy tends to be issue-driven rather than institutionalised. One explanation may be the division of powers between federal and provincial and territorial governments (the second tier of Canada's government structure). Notable exceptions do exist, including the nationwide recognition of provincially-managed apprenticeship training programmes through the federal Red Seal Programme and collaboration between neighbouring provinces on more narrowly-defined issues.

EU funding programmes offer additional examples of formal policy co-ordination mechanisms. The European Structural and Investment Funds place a strong emphasis on a participatory approach that involves sub-national government authorities, social partners and civil society organisations at both the policy formulation and implementation stages.

Two examples are the Italian Territorial Pacts and Planning Contracts. Territorial Pacts are development plans agreed between local governments and representatives of civil society (mainly entrepreneurs and trade unions) from a number of neighbouring municipalities, which are subsequently endorsed by the central government. The agreements detail a series of co-ordinated private and public investments for the territories involved. Planning Contracts are agreements between the central government and private firms (SMEs and large firms) to stimulate industrialisation in lagging regions by investing in plants and employment in targeted localities. Public money follows the approval of a fully-fledged industrial plan for targeted areas.

Clear division of competences

Competences for entrepreneurship and SME development can be divided between different levels of government in an "exclusive" or "concurrent" way. In the first case, a specific policy mandate (e.g. workforce skills, research and development, industrial estate development, etc.) falls within the responsibility of a single level of government, whereas in the second case the mandate is simultaneously pursued by more than one level of government. The latter is more commonly the case in OECD countries under a range of

different governance systems. Indeed, it is very typical to have a combination of highly-specific local programmes and a national set of programmes that seek to ensure a common standard of support across the whole country.

However, while competences and responsibilities can be shared between different levels of government and this is indeed the most common case across OECD countries, an effort should be made to clarify and formalise this division of tasks and responsibilities. This will facilitate better policy co-ordination and lead to a stronger national framework for SME and entrepreneurship policy.

Cluster development strategies

Clusters are geographical concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (Porter, 1990). Cluster development strategies are a powerful tool for promoting collaboration not only within the cluster amongst and between firms and research organisations, but also among those municipalities which are in the functional region of the cluster. In Israel, for example, the regional cluster programme has connected municipal leaders through voluntary associations of local municipalities in order to create long-term development strategies. In the case of Israel, clusters are independent legal entities established by local municipalities. This arrangement allows them to share assets to achieve economies of scale and thereby maximise benefits for the whole cluster, and to apply for and receive government funding. The five existing clusters (Western Galilee, Eastern Galilee, Eastern Negev, Western Negev, and Beit HaKerem Valley) have attracted funding from both the National Ministry of Interior and the National Ministry of Finance. They both see these clusters as a desirable way to enhance local economic development in peripheral regions and small, local authorities that lack the scale to invest on their own.

The European Commission is also pursuing cluster development through its smart specialisation strategies. Smart specialisation strategies are developed through a participatory approach that involves regional governments, local authorities and social partners. As such, it allows for strong policy tailoring to regional needs. Smart specialisation is a strategic approach to local economic development through targeted support to research and innovation. It involves a process of developing a vision, identifying competitive advantage, setting strategic priorities and making use of a wide range of policies to maximise the knowledge-based development potential of any region, regardless of whether it hosts high-tech or only low-tech industries. Smart specialisation strategies will be the basis for investment from the EU Structural Fund as part of the Cohesion Policy's contribution to the Europe 2020 jobs and growth agenda (European Commission, 2012).

However, there are possible drawbacks to cluster development strategies with respect to policy co-ordination. These strategies may lead to a lack of co-ordination among projects in different regions. Many regions may choose the same generic specialisations, effectively entering into competition with each other, and the central government may have limited control on the strategic impact of each single cluster development initiative. A national approach to co-ordinating cluster development strategies may mitigate this problem, help achieve gains for inter-regional supply chains, and avoid competition between regions with the same apparent specialisations. The Finnish Centre of Expertise Programme (OSKE) is a potential model for co-ordinating cluster development policies across regions (see Box 5.3).

Box 5.3. **Finland's Centre of Expertise programme (OSKE)**

Finland's Centres of Expertise (OSKE) offers a model for the co-ordination of regional innovation support structures and programmes through the development of clusters of national significance. OSKE forms part of the Finnish national innovation strategy. It promotes joint innovation projects between businesses and conducts research that is relevant to the development of internationally-competitive clusters and based on the exploitation of specialised regional innovation infrastructures.

OSKE brings to bear research and training infrastructures and funding from bodies such as Centres for Economic Development, Transport and the Environment (ELY-centres), Strategic Centres of Expertise (SHOK) and the Finnish Funding Agency for Innovation (TEKES) programmes by directing resources to a set of overlapping Centres of Expertise and Competence Clusters. The principle is that there should be one Centre of Expertise in each region, based on regional strengths defined on the basis of sector, technology, expertise or application. Each Competence Cluster should be supported by at least two Centres of Expertise situated in different regions in order to draw on a broad range of expertise and promote interregional collaboration.

The programme consists of 21 regional Centres of Expertise which support 13 national Competence Clusters. A Centre of Expertise is an innovation hub of national significance in a field of expertise relevant to one or more of the clusters. Most of the Centres of Expertise are situated in Science Parks. They bring together a network of regional operators and cluster actors including regional businesses, higher education institutions, research institutes and technology centres and pursue innovation measures that they define collectively on behalf of the region and the national cluster. Competence Clusters do not comprise entire industry sectors, but innovation-intensive sub-areas with the potential to develop the competitiveness and business activity of the cluster as a whole.

The Centres of Expertise and Competence Clusters were initially selected and funded through a competitive bidding process. Although there is a bias towards high technology, some focus on other sectors such as tourism and culture. The programme has been running in different phases since 1994 and has been positively evaluated on a number of occasions.

Source: Ministry of Employment and Economy of Finland (2009), *Evaluation of the Finnish National Innovation System*; The Research and Innovation Council of Finland (2010), *Research and Innovation Policy Guidelines for 2011-2015*.

Standards and certifications

Applying national standards and certifications requires policy co-ordination, especially when the result of an effort to harmonise pre-existing diverging local regulations. A case in point is aforementioned Canada's Red Seal Programme. Apprentices with Red Seal endorsement receive training based on nationally-recognised standards and are certified through a common interprovincial examination. The programme is also administered in close co-operation with industry representatives who develop common standards and designate new Red Seal trades. In doing so, the Red Seal Programme has become an important tool to harmonise different training and certification requirements.

Delivery mechanisms

Utilising intermediary organisations

Intermediary organisations can be defined as public, private or not-for-profit organisations that deliver policies on behalf of the national or sub-national government.

Examples of intermediary organisations are business associations, consultancy companies, NGOs, and semi-public institutions (e.g. chambers of commerce and local development agencies).

There are three main rationales for using intermediary organisations to improve policy tailoring and co-ordination. First, because intermediary organisations are by definition locally based, they are a valuable method of ensuring that public programmes closely address the needs of SME beneficiaries. Second, governments often do not have enough human resources to deliver all public programmes within their own jurisdiction, implying a need for "external help" from other organisations. Third, some programmes may require highly specific knowledge that is not available within the government, which again calls for support from external organisations.

The ways in which intermediary organisations are "recruited" into programme delivery by governments may also vary. Some governments launch calls for tender for programme implementation to which single intermediary organisations or consortia can apply. Other public actors provide initial basic advice to entrepreneurs but then signpost them to a range of private-sector intermediaries when more specific advice is required. Still others follow a less formal approach in which they handpick intermediary organisations for the delivery of selected programme activities.

The use of intermediary organisations for SME policy tailoring and implementation is more common in some countries than in others. Among those whose entrepreneurship and SME policy framework has been reviewed by the OECD, Canada and Mexico have extensively relied on intermediary organisations for policy implementation, while Italy and Israel have used them less. This may reflect the sheer size of the policy delivery area in Canada and Mexico, which may pose challenges for the provision of programmes and services without external support. In Israel, in contrast, one-stop business support centres (i.e. MAOF centres) staffed with government employees have been in charge of the implementation of most SME programmes offered by the central government.

The extensive use of intermediary organisations in public policy delivery raises issues related to quality control, particularly in relation to ensuring that national programmes implemented across the country have a common minimum standard of quality. This issue has been addressed in a number of different ways. First, a number of countries have developed local committees that consist of national and sub-national government officers and third-party members to provide advice on project selection. Other countries have required intermediary organisations that are interested in delivering national programmes to register with a national accreditation system following an assessment of their competencies.

Another approach has been to subject the work of intermediaries to *ex-ante* and *ex-post* evaluation. However, it should be noted that client satisfaction surveys are rarely a good quality control test. They tend to turn back extremely high scores of client satisfaction with programme contents and programme managers. More robust methodologies – such as the establishment of control groups where the performance of programme participants is assessed against similar companies who did not benefit from public support – are often needed to gauge the quality of programmes and the intermediary organisations charged with their delivery.

More generally, the quality of intermediary organisations may vary dramatically, similar to the variation in the capacities of local policy makers. Capacity building of local intermediaries may therefore be necessary, although the extent to which this will be a public

sector responsibility varies in line with the nature of the intermediary organisation. If the intermediary is a public or semi-public entity (e.g. chambers of commerce in some countries), the involvement of the government in the provision or subsidisation of capacity-building activities is warranted. However, if the intermediary is a private sector organisation which receives a fee to deliver the government programme, public sector involvement in capacity building is less justified insofar as the intermediary organisation is able to recover the learning costs related to programme delivery through the implementation fee charged to the government.

The role of regional development agencies (RDAs)

Centrally-supported regional development agencies are unique intermediaries. Regional development agencies may be supported by either regional governments or the national government. Some RDAs are regional policy instruments which have little interaction with the national government or with the RDAs from other localities. However, of more interest to this chapter are RDAs that have been primarily promoted and funded by the national government either with the intention of bridging the welfare gap between a targeted region and the rest of the country, or with the aim of adapting the implementation of national programmes to different regional development needs.

Examples of the first kind of RDA are the Tennessee Valley Authority and the Appalachian Regional Commission, United States federal interventions that sought to encourage growth in historically lagging regions. The second type of RDA of interest to this chapter – those that aim to adapt the implementation of national programmes to different regional development needs – can be seen in both Canada and Turkey. The comparison of these two examples is particularly interesting as it shows how nationally supported RDAs can be established within different governance frameworks, namely in both a federal country (Canada) and in a highly centralised state (Turkey).

In Canada, the federal government established its first four RDAs in the mid-1980s to expand capacities at the local level and boost regional economic growth. In response to the Great Recession of 2008-09, the number (now 6) and functions of Canada's RDAs have been expanded to better address the challenges faced by particular industries due to global trends. The Canadian RDAs develop and implement tailored federal-funded interventions in functionally-defined regions in a way that is complementary to the efforts of the provinces and territories. They generally provide support to SMEs and non-profit organisations for innovation, entrepreneurship, and commercialisation support. For example, the RDAs are in charge of the delivery of the federal Community Futures Programme, which encourages rural community development through small business lending and counselling and other activities. The RDAs are also active in responding to specific local economic challenges, such as industrial restructuring or natural disasters.

In Turkey, RDAs are a more recent initiative that partly originated in response to the integration process with the European Union. This can provide lessons to other countries on how to launch and use this instrument to implement national policies at the local level (see Box 5.4).

Co-locating programmes managed at different governance levels

Co-locating programmes from government institutions in the same facilities is another approach to strengthen policy co-ordination and delivery across different levels of

Box 5.4. **Regional Development Agencies in Turkey**

In 2006, Regional Development Agencies were established in Turkey, a historically centralised state. They are the result of a long-term discussion on regional development policy and were first considered in the 8th National Development Plan (2001-2005). The eventual trigger for their creation was the need to have appropriate institutional structures for harmonisation with the EU regional development policy.

The RDAs have the following tasks: i) prepare regional development plans and strategies; ii) design and implement support programmes for economic and social development; and iii) improve the regional investment climate and attract investors to the region.

Each RDA is governed by a Board of Directors that includes public, private, and NGO representatives and produces an annual work plan in line with both national plans and local priorities, the latter established following comprehensive field research in their region. The Board meets once a month to help promote RDA activities and ensure that they are well-known by entrepreneurs and SMEs at the local level.

At the time of publication, there were 26 regional development agencies in Turkey. They act as delivery organisations in charge of the management of both national and regional funds and do not form an additional tier of public administration. They implement support programmes for SMEs (economic development) and NGOs (social development), but they also have investment promotion units that work to improve the regional investment climate and policy units working with stakeholders to enhance regional innovation ecosystems.

An important lesson from the RDAs in Turkey is that they do not reflect the boundaries of Turkish administrative regions; instead, each corresponds to more than one administrative region. This choice was made in order to achieve critical mass and to organise work around functional economic areas, rather than narrowly defined regions. Two RDAs were initially established as a pilot initiative. Following the evaluation of their activities over two years, the other RDAs were established based on the initial lessons learnt.

Source: OECD (forthcoming, 2016b), *OECD Studies on SMEs and Entrepreneurship – Kazakhstan: Key Issues and Policies*.

government. Co-location enables co-ordination through the co-siting of programmes and investments and the sharing of intelligence among programme managers and practitioners. Furthermore, policy delivery is also supported through a one-stop shop model that facilitates access to public programmes for SME owners and entrepreneurs, ideally organised by technology or industry category regardless of which level of government is administering any specific programme.

This approach is epitomised by Canada's Network of Centres of Excellence. These institutions facilitate collaboration among federal agencies throughout the policy design and funding process. They also enable co-ordination across federal, provincial, and municipal governments at the stage of implementation by co-locating various research centres, incubators and accelerators in one single facility or area. Another example, also from Canada, is the Industrial Research Assistance Programme which provides technology-based mentorship to SMEs. Although the Industrial Research Assistance Programme does not organise its 130 offices primarily by province or territory, it often shares offices with other relevant federal, provincial, and municipal programmes and services. This allows the offices to become "one-stop-shops" that better serve the needs of SMEs.

Using statutory decentralised bodies to deliver programmes

Another approach to vertical policy co-ordination is decentralising government bodies that are linked to or reflect the mandate of a central government body. There are mainly two types of statutory decentralised bodies. The first type is delegation/branch offices of national ministries or agencies. They primarily act as liaison offices between the national and local levels but can also become a source of local economic intelligence for national programming and can be tasked with the implementation of national programmes at the local level. The second type is sub-national government bodies whose mandate mirrors that of a national government body, but within the relevant jurisdiction (i.e. sub-national rather than national). The main difference between the two approaches is that in the first case the sub-national entity is a formal part of the national entity (i.e. a regional/local branch), whereas the link is generally less institutionalised and hierarchical in the second case.

Mexico provides examples of both types of statutory decentralised bodies. The delegations of the federal Ministry of Economy act as the local presence of this ministry in the 32 states of Mexico. However, these offices have primarily played a representational role, with little if any involvement in policy co-ordination between the federal and state governments. This has been a missed opportunity given the scale of Mexico and the need to adapt national policies to local contexts.

In Mexico, some of the states have decided to establish "State-Level Commissions for Regulatory Improvement" (*Comisiónes Estatales de Mejora Regulatoria* – CEMER), whose mandate closely mirrors that of the "Federal Commission for Regulatory Improvement" (*Comisión Federal de Mejora Regulatoria* – COFEMER) but only applies to state-level regulations. The state commissions are not under the authority of the federal commission. The state commissions seek to simplify state-level regulations whereas the federal commission focuses on federal legislation. Despite the lack of formal institutional ties, collaboration between the federal COFEMER and state-level CEMERs has been relatively common, for example on methodologies to assess the impact of new regulations on business. In contrast, collaboration between different state-level CEMERs has been more sporadic. This is also a missed opportunity, since the similar responsibilities and tasks of these commissions would have made the exchange of good policy practices from each state particularly relevant to the objective of regulatory improvement across the country.

Box 5.5. **The state commission of regulatory improvement of Morelos, Mexico**

The State of Morelos has set up a Local Commission for Regulatory Improvement (CEMER) that is focused on simplifying regulations at the state and local level. The CEMER has been very proactive in introducing the Rapid System for Business Registration (SARE) in eight municipalities within the State. This has allowed businesses that do not present social or environmental risks to set up operations in less than 72 hours. In addition, the public registry of business property in Morelos has been made electronic and accessible online, enabling public authorities and private citizens to obtain up-to-date information through the Internet instantly. This advance was the outcome of collaboration between the CEMER and the local university at no cost to the state authorities, as the system has been digitalised by students as part of their work towards the completion of the degree. The CEMER of Morelos estimates that the digitalisation of the registry has resulted in savings for local firms in the range of MXN 14 million (USD 1.1 million) through, for example, reduced notary fees. The reforms

Box 5.5. **The state commission of regulatory improvement of Morelos, Mexico** *(cont.)*

have also involved construction permits, with a new rule that enables some types of micro-enterprises to expand their business by up to 200 square metres without requiring special permission, up from the previous limit of 50 square metres. This change in state legislation has especially favoured micro businesses owned by disadvantaged social groups.

Regulatory impact assessments (RIA) are carried out by the CEMER of Morelos for each new state law in order to streamline business licenses and permits. However, with a staff of only 17 people, this effort should probably focus only on the acts and rules with the greatest potential impact on business, as is the case of the work of the Federal Commission on Regulatory Improvement (COFEMER). In this area, at least, there is therefore scope for further exchange and collaboration on work methods between COFEMER and the CEMER of Morelos.

Source: OECD (2013), *OECD Studies on SMEs and Entrepreneurship – Mexico: Key Issues and Policies*, *http://dx.doi.org/10.1787/9789264187030-en*.

Data collection and programme evaluation

Finally, data collection on the take-up of public programmes, the profile of recipients, as well as more formal programme evaluation, enables the sharing of good policy practices and the local adaptation of successful interventions from elsewhere. For policy sharing to be effective, it is important that data collection and the evaluation of outcomes happen in a routine manner.

For example, statistics about how many firms seek information about specific programmes and how many SMEs apply to the programmes can be generated by web portal software and assessed by policy analysts. By increasing investment and attention to the development of innovative metrics and real-time analysis, governments can enable the rapid evaluation of policy experiments and foster efforts to promote policy diffusion, replication, and co-ordination across localities. This effort, therefore, emphasises the need to collect data directly from SMEs and entrepreneurs about which programmes and policies meet their needs and where gaps remain.

Beyond this data gathering, developing knowledge-sharing systems that disseminate information about what policies have worked in what contexts would greatly increase the ability of national and sub-national governments to more broadly deploy effective policies.

Conclusion and issues for consideration

The formulation and implementation of entrepreneurship and SME policies tends to involve many different government and non-government organisations, which is partly the result of the nature of new and small business support that which is horizontal and cuts across distinct policy fields (e.g. innovation, skills, financing, regulations, etc.). Co-ordination across different government levels is therefore necessary to ensure that there are no redundancies or inconsistencies in the policy offering, no services gaps are left unattended, and that entrepreneurs benefit from access to public programmes in a manner that is as simple as possible. At the same time, differences in local welfare and economic structures justify the adaptation of national programmes to the local economic context.

Policy co-ordination and policy tailoring is affected by several issues, including the specific type of government (e.g. whether it is federal or not, centralised or decentralised)

and the capacities and resources of policy makers at the local level. Different mechanisms have been used in OECD countries to strengthen policy co-ordination and better adapt national policies to local economic conditions, including co-funding, co-location arrangements, statutory co-ordination and decentralised government bodies.

The following policy recommendations are offered to strengthen policy co-ordination and policy tailoring and are broad enough to apply to most OECD countries regardless of the type of government structure in place.

Key recommendations

Formalise co-ordination mechanisms through written agreements, national strategies and statutory bodies

- Strengthen co-ordination between national and sub-national government programmes, including through a written agreement stating clearly how competences are divided and co-funding organised between the different levels of government.
- Establish formal policy co-ordination bodies to bring together the national government with sub-national governments to strengthen co-ordination in areas where policy responsibilities are shared.
- Identify business clusters of national importance and establish a mechanism for support when the clusters operate in multiple municipalities and regions. For example, national competitions could be used to target resources.
- Introduce standards and certifications, including through policy co-ordination, with the aim of harmonising divergent regulations which would otherwise act as barriers to business growth beyond local borders.

Use co-funding arrangements to improve co-ordination

- Use co-funding arrangements in which national and sub-national governments co-participate in the funding of entrepreneurship and SME programmes as a means to advance policy co-ordination and the adaptation of national programmes to local development needs.
- Ensure that these co-funding arrangements are as simple as possible to encourage local government participation and facilitate longer-term strategic projects, for example by reducing paperwork and by enabling the funding of multi-year projects.

Organise programme delivery to capitalise on existing capacities and co-ordinated efforts

- Leverage local intermediary organisations to enhance tailoring to the specific needs of local enterprises. This will be especially relevant for the implementation of public programmes which require technical knowledge that is unavailable within the government.
- Consider co-locating programmes from different government levels in the same facilities to share economic intelligence between programme managers, better co-ordinate national and sub-national policy interventions, and deliver these programmes in a simple way through a one-stop-shop approach.

Use data and evaluations to inform programme development

- Effectively use decentralised government bodies to collect local economic intelligence that can feed into national programme formulation and better adapt national interventions to the local economic context.

- Undertake local project evaluations in order to provide evidence on the most effective and efficient actions at the local level. Share this information with national partners and other sub-national authorities and use it to set out strategic priorities for the evolution of local programme interventions.

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PART I

Chapter 6

Entrepreneurship can bring disadvantaged youth into the labour market

This chapter discusses the potential role of entrepreneurship support can play in bringing disadvantaged youth into the labour market, such as those not in employment, education or training (NEETs) and youth with disabilities. It presents the barriers to business creation faced by disadvantaged youth and discusses the range of policy actions that can help them overcome the obstacles. It highlights areas where actions can be taken at the local level, including the provision of entrepreneurship training, coaching and mentoring; financing; and support for network building. The chapter offers guidance for policy makers and provides examples of good practices from OECD countries.

Youth unemployment is a pressing challenge, and entrepreneurship offers a potential route into the labour market for youth who have ideas and motivations. While one might think that it is not suitable for disadvantaged youth, some of these youth are more active and more successful in self-employment than the mainstream youth population. There is evidence that suggests that when designed appropriately, government programmes can significantly increase the chances of success for young people entering self-employment, with reasonable results on value for public money. It is important that policies and programmes provide bundles of support to address the multiple challenges that disadvantaged youth face. Furthermore, the most successful programmes pay careful attention to the selection mechanisms used to ensure that the support reaches the intended target group and that those receiving intensive support have a reasonable chance of success. While business creation and self-employment is clearly one outcome sought from these policies and programmes, the main objective is to ensure that these youth remain attached to the labour market, regardless of whether it is through self-employment or working as an employee.

This chapter examines how governments can support disadvantaged youth in self-employment. It draws on the series of *Missing Entrepreneurs* books, "Policy brief on youth entrepreneurship", the OECD series of youth entrepreneurship policy reviews and the series of rapid policy assessments of inclusive entrepreneurship policies and programmes.

Highlights

- Youth unemployment continues to be an urgent issue in many OECD countries. While the youth unemployment rate was 15.1% in 2014 across OECD countries, it was greater than 50% in Greece and Spain. The costs of youth unemployment are extraordinarily high, both for the individual and for society.
- Entrepreneurship support is underutilised as a mechanism for strengthening the labour market attachment of disadvantaged youth. It is not a panacea for helping all disadvantaged youth find success in the labour market but it can help a limited group with the ambition and wherewithal to become self-employed while also increasing the overall employability of a larger group.
- While there is a common perception that disadvantaged groups are less active in self-employment, many groups of disadvantaged youth are more likely to be self-employed than mainstream youth and have more success in self-employment. However, they may need support in overcoming the barriers they face in doing so.
- Entrepreneurship support for disadvantaged youth should be delivered within a cohesive strategic framework for promoting labour market attachment and social inclusion. Involving social partners, including youth, business and community organisations, as well as youth in strategy design ensures that the needs of youth are considered and that the experience and expertise of past programmes is utilised.

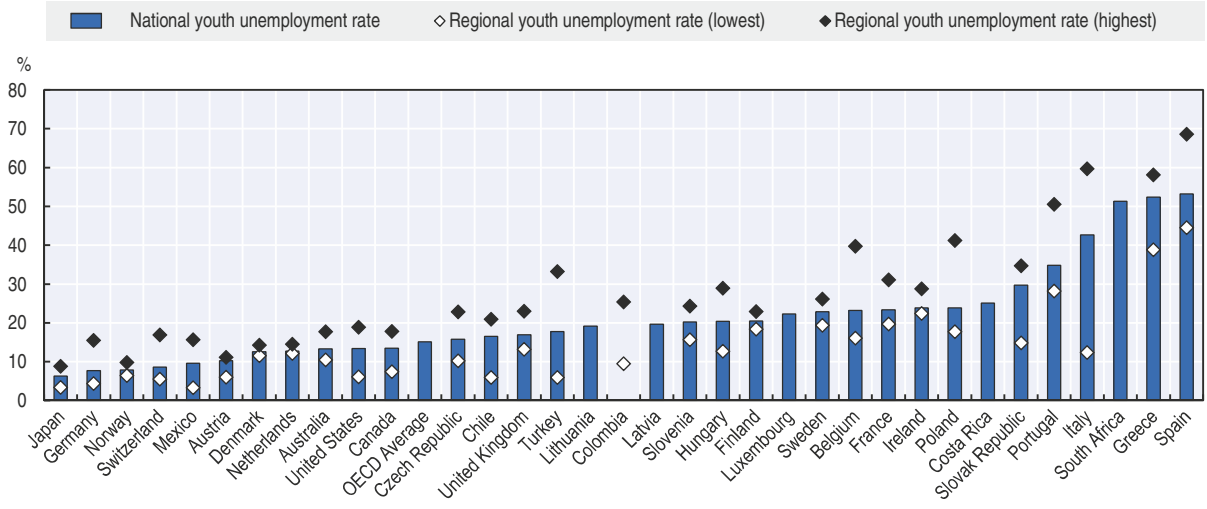
Highlights *(cont.)*

- Embedding entrepreneurship in schools can help to build awareness and the basic skills of youth before they exit the system, but reaching disadvantaged youth may require providing more integrated packages of support delivered in other settings.

The youth unemployment challenge

Youth unemployment is one of the greatest economic and social challenges faced by many OECD member countries over the last decade. In 2014, the youth unemployment rate reached 15.1% in OECD countries. Although this is down from the peak of the crisis when it reached 16.7% in 2009 and 2010 (OECD, 2016a), this represents 10.7 million youth between 15 and 24 years old. The scale and scope of the youth unemployment challenge varies across OECD regions and countries. In 2014, national youth unemployment rates ranged from 6.2% in Japan to more than 50% in Greece (52.4%) and Spain (53.2%) (see Figure 6.1). At the regional level (TL2 level), more than one-third of regions in OECD countries had a youth unemployment rate over 20% in 2014, and 6% of regions had a youth unemployment rate over 50%.

Figure 6.1. **Regional youth unemployment rate, 2014**



Source: OECD (2016a), "Youth unemployment rate" (indicator), *http://dx.doi.org/10.1787/c3634df7-en*; OECD (2016b), "Youth and long-term unemployment", OECD Regional Statistics (database), *http://dx.doi.org/10.1787/f7445d96-en*.

The recent crisis had a greater impact on youth unemployment than previous recessionary periods. Across OECD countries, youth unemployment increased 1.79 times faster than the overall unemployment rate between Q1 2008 and Q4 2010 (Bell and Blanchflower, 2011). This can largely be explained by three structural changes in labour markets (O'Reilly et al., 2015). First, labour market flexibility has increased in most OECD countries, which has made it more difficult for youth to secure stable employment. Second, youth mobility has increased within many regions (e.g. within the European Union), which has increased competition for jobs. Third, the expansion of higher education has not been well-aligned with the needs of labour markets, so youth have skills and qualifications that

are poorly aligned with the demands of employers. Consequently, youth are also now more likely to be in involuntary part-time or temporary employment than during previous economic recoveries, which is not captured in unemployment figures.

Moreover, some youth are more likely to face difficulties in gaining access to productive and rewarding jobs. These "disadvantaged youth" (see Box 6.1) are more likely to withdraw from the labour market and face social exclusion. This imposes a great cost on society.

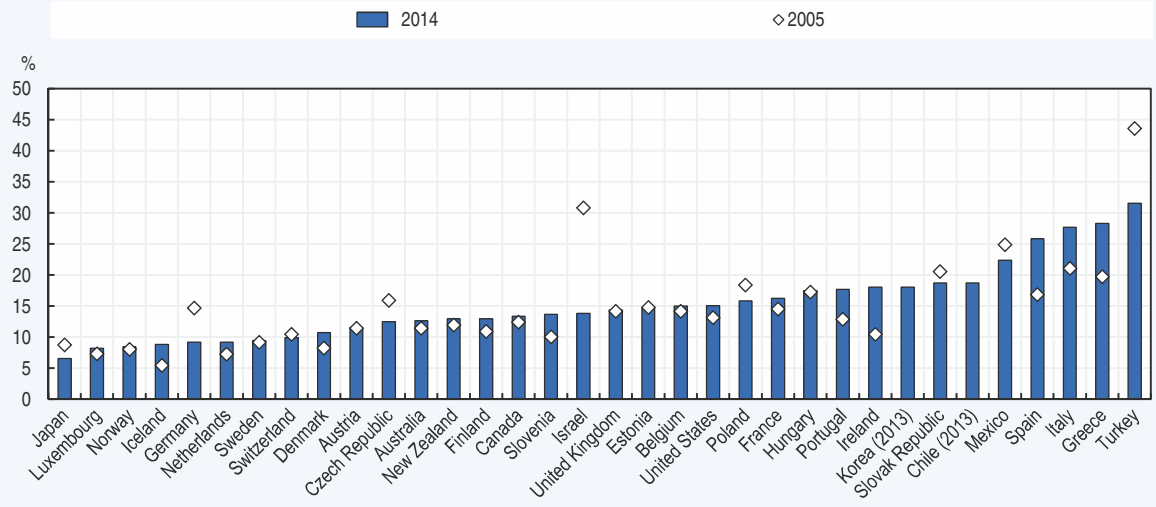
Box 6.1. **Defining disadvantage**

Definitions of disadvantage vary widely across countries and regions across the OECD. The notion of "disadvantaged youth" can be viewed as an umbrella category that refers to young people with unequal opportunities to succeed in the labour market. This unequal access to opportunity can stem from individual disadvantages such as low educational achievement (e.g. early school leaver), economic disadvantage (e.g. unemployed, from a low-income family), personal characteristics (e.g. disability, refugee) or location (e.g. remote rural area, inner city). Disadvantage can also stem from social or economic context (e.g. economic recession). Some youth face multiple disadvantages and thus face even greater barriers to labour market success.

One of the largest groups of disadvantaged youth are those who are not in employment, education or training (i.e. the NEET population). They are less likely to eventually enter the labour force and may impose high long-term costs on society. Across OECD countries, 15.5% of the youth population (15-29 years old) were NEETs in 2014, which is above the pre-crisis rate in all countries except Japan, Germany, Switzerland, Czech Republic, Israel, Poland, the Slovak Republic, Mexico and Turkey (Figure 6.2).

Figure 6.2. **Proportion of youth not in employment, education or training**

15-29 years old



Source: OECD (2016c), *Youth not in employment, education or training* (NEET) (indicator), *http://dx.doi.org/10.1787/72d1033a-en.*

Policy makers have been looking for new solutions to tackle the youth unemployment challenge and have been increasingly tailoring support for disadvantaged youth. This is especially true in the European Union, where several countries face a youth unemployment crisis. Substantial funding has been made available from the European Union's structural funds (i.e. European Social Fund and European Regional Development Fund) to national

and regional managing authorities to support youth in the labour market. Most recently, the Youth Employment Initiative was launched in 2013 to reinforce the 2012 Youth Employment Package, which includes the Youth Guarantee to ensure that all youth up to the age of 25 receive a quality job offer, continuing education, an apprenticeship or traineeship within 4 months of leaving formal education or becoming unemployed. The Youth Employment Initiative has a budget of EUR 6.4 billion for 2014-20 and aims to support NEETs, including long-term unemployed youth and those not registered as job-seekers in regions with a youth unemployment rate above 25% in 2012. The initiative typically supports the provision of apprenticeships, traineeships, job placements and further education leading to a qualification but can also be used to support business creation.

Youth unemployment is a pressing short-term challenge with long-term implications

Spells of unemployment have significant short- and long-term costs for individuals. Data from the US National Longitudinal Survey of Youth indicate that a 6-month spell of unemployment experienced at age 22 results in an 8% lower wage rate, on average, at age 23, and this wage gap continues into their 30s (Mroz and Savage, 2006). This is consistent with earlier research that found that one year of unemployment between the ages of 16 and 23 can reduce annual earnings at age 42 by up to 21% (Gregg and Tominey, 2005). There is also evidence that youth unemployment increases the likelihood of being unemployed later (Gregg and Tominey, 2005) and that there are intergenerational effects – i.e. their children are more likely to be unemployed (Mäder et al., 2014; Bell and Blanchflower, 2011). Moreover, unemployed youth are more susceptible to malnutrition, illness, mental stress, low self-esteem, depression and poor health outcomes later in life (Bell and Blanchflower, 2011). Further, data from the United Kingdom show that unemployed youth are less happy with their family relationships and friendships, and are less confident about their futures (Blanchflower, 2010).

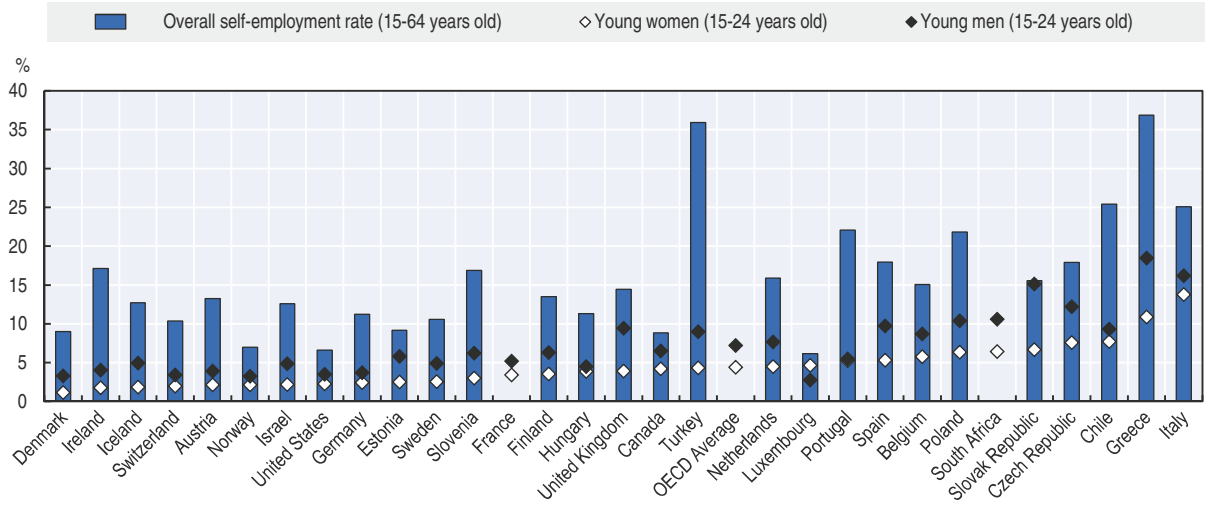
Youth unemployment also has a high cost to the economy as unemployed youth represent a significant stock of unutilised economic resources, which lowers output and reduces the potential for economic growth. Within the 28 European Union Member States, the current economic cost of not integrating NEETs (i.e. excluding lifetime costs) was estimated to be EUR 153 billion in 2011, or 1.2% of GDP in Europe (Eurofound, 2015).

Entrepreneurship has a role to play in moving disadvantaged youth into the labour market

Youth (15-24 years old) are more likely than adults to view self-employment as preferable to working as an employee (45% vs. 37%) and as feasible in the next 5 years (41% vs. 30%) (EC, 2012). Despite this high level of interest in self-employment and the belief that it is feasible, youth are only one-third as likely as adults to be self-employed (see Figure 6.3). In 2014, 7.2% of male youth (15-24 years old) and 4.4% of female youth were self-employed in OECD countries. For young women, this proportion ranged from 1.1% in Denmark to 13.8% in Italy, while for young men it ranged from 3.3% in Norway to 18.5% in Greece.

One might think that youth who belong to disadvantaged groups are less interested and less active in self-employment, but this is not necessarily the case. While NEETs are often less likely to be involved in starting a business than those in school or employment, well-educated NEETs are more likely to be involved in starting a business (OECD/EC, 2012).

Figure 6.3. **Youth self-employment rates by sex, 2014**



Note: Data for Chile and Italy are for 2011.
Source: OECD (2015a), *Entrepreneurship at a Glance*, *http://dx.doi.org/10.1787/entrepreneur_aag-2015-en*; OECD (2016d), *Self-employment rate* (indicator), *http://dx.doi.org/10.1787/fb58715e-en*.

Other disadvantaged groups are also more likely to be involved in business creation than the average youth. There is some evidence that young people with a criminal history in drug dealing were 11-21% more likely to become self-employed later in life than those without this history (Fairlie, 2002). Similarly, research indicates that youth with disabilities are more likely to be self-employed than those without disabilities (Lindsay, 2011), which is also true for adults. There is also evidence in the United Kingdom that some immigrant groups (e.g. Chinese, Pakistani) have higher self-employment rates than the native-born population (Clark and Drinkwater, 2007).

There is also a small body of evidence that suggests that some groups of disadvantaged youth are more successful in self-employment than employment. For example, evidence from Canada indicates that self-employed immigrant youth who export, outperformed non-immigrant youth businesses in terms of sales growth, employment growth, profitability and owners' salary, regardless of whether they exported or not. This is explained by their ability to exploit international markets and networks. However, immigrant youth businesses that did not export were much less successful than non-immigrant youth businesses (Neville et al., 2014). Furthermore, evidence from the United States indicates that self-employed young men who come from families where both parents dropped out of high school earned more than equivalent employed young men (Fairlie, 2005).

Youth typically face more and greater barriers to business creation than adults

Young people face a number of inter-related barriers to business creation that are typically different in scope and scale than those faced by adults. The principal barriers that disadvantaged youth face to business creation are outlined in Table 6.1 (OECD/EC, 2012; 2013a; 2013b; 2014a; 2014b; 2014c; 2015a; 2015b):

Table 6.1. **Barriers to entrepreneurship for disadvantaged youth**

Barrier	Impact	Challenge for disadvantaged youth
Lack of awareness	Young people are often not aware of the requirements and opportunities of business creation and self-employment. This is especially true for non-standard models of entrepreneurship, social entrepreneurship, group entrepreneurship and part-time entrepreneurship. This low level of awareness is typically due to a low level of awareness among important role models such as their parents and teachers.	Disadvantaged youth are less likely to have supportive role models, especially if they are out of the school system, are homeless or are a young offender. Those with a disability may also struggle because their role models may not view entrepreneurship as a feasible activity due to their disability.
Lack of skills	Education and training programmes often do not do enough to nurture entrepreneurial attitudes and skills (e.g. opportunity recognition, risk management, team work); instead they aim to prepare students for a career in employment.	Disadvantaged youth are less likely to have general workplace skills or the skills to operate a business.
Lack of experience	A major determinant of business start-up and entrepreneurship performance for youth is prior work experience. Moreover, relative to older people, youth are much less likely to have managerial or specialised industrial knowledge that would help them in self-employment.	Youth who are unemployed, have a disability or are a young offender are much less likely to have work experience.
Under-capitalisation	Youth, especially disadvantaged youth, tend to have low levels of personal savings and have more difficulty than adults in obtaining external finance. Banks and other financiers typically consider credit history, past business performance and collateral when evaluating potential loans.	Disadvantaged youth are less likely to score well according to such measures.
Lack of developed networks	Due to a lack of experience in the workplace and in self-employment, young people are likely to have limited business networks and business-related social capital. As a result, they may not be able to access a wide pool of resources (e.g. finance, business partners) and ideas. It will also be more difficult for them to build "legitimacy" amongst key stakeholders (e.g. financiers, customers, suppliers).	Disadvantaged youth face this problem to a greater extent because they are less likely to have work colleagues or peers at school, and also have fewer opportunities to interact with adults outside of their family.
Market barriers	Youth entrepreneurs may face "discrimination" from customers who are sceptical about the reliability or quality of their products or services.	This is an even greater obstacle for most groups of disadvantaged youth, such as the unemployed, young offenders, the homeless, or those with disabilities, since there is a social stigma attached to their situation.

National and local policy makers can work in tandem to support disadvantaged youth in entrepreneurship

The primary rationale for policy intervention to support youth in business creation is that there is a gap in latent entrepreneurship activities and actual entrepreneurship activities, due to market barriers, discrimination and information gaps and asymmetries (Greene, 2005a; 2005b). This gap is even wider for disadvantaged youth, who face more and greater barriers to labour market participation and greater levels of discrimination.

The objectives of supporting disadvantaged youth in business creation and self-employment are twofold. First, policy makers can stimulate and support the creation of sustainable businesses by disadvantaged youth, which will provide them with an opportunity to participate in the labour market and generate income for themselves. Although few are likely to go on to create growth-oriented companies, self-employment can increase their engagement in society and the chances that they remain attached to the labour market later in life. Second, entrepreneurship policies and programmes for disadvantaged youth should aim to improve their overall employability since not all young people are well-suited for business creation and self-employment. Not everyone who receives entrepreneurship training or support will go on to successfully start a business, but they should have acquired skills and experience that make them more employable. This should also be considered a positive outcome.

Since youth face multiple inter-related barriers to successful business start-up, there is a need for multiple policy responses that are tailored the specific barriers faced by disadvantaged youth. Generic policies are likely to be unattractive to disadvantaged youth and will probably have limited impact because such policies are unable to help them overcome their specific challenges. Policies and programmes need to simultaneously increase awareness about different models of entrepreneurship, while also supporting disadvantaged youth in acquiring entrepreneurship skills, developing entrepreneurial mindsets and attitudes, accessing finance and building entrepreneurship networks. They also need to be consistent with, and linked to, broader social and youth employment policies.

However, some question whether promoting and supporting entrepreneurship for disadvantaged groups is good public policy (e.g. Shane, 2009; Storey, 1994). Such a conclusion ignores that the choice faced by the public policy maker is often not between funding a potential entrepreneur from a disadvantaged group and funding a high growth business. Instead, policy makers are faced with supporting the costs associated with unemployment of individuals, or supporting their transition into employment or self-employment. The benchmark, therefore, is not the difference between choosing between two types of business but, instead, choosing between two different labour market states.

Overlapping competences call for co-ordination

Within government, national, regional and local authorities are all involved in supporting business creation and self-employment. At the national level, ministries with responsibility for industry, employment, social affairs and education have a role in shaping entrepreneurship policies. Some of these responsibilities may also belong to regional governments, who, along with local government and non-government organisations, are responsible for the implementation of policies and programmes. This leaves significant scope for inconsistencies, duplication and gaps in support offerings. Linkages are therefore needed across different national ministries, with regional and local governments, as well as across the various government agencies and non-government organisations involved in entrepreneurship and self-employment support.

One of the most effective approaches to co-ordinating youth entrepreneurship support is to develop a national strategy and action plan for youth entrepreneurship support. Many approaches are used across OECD countries. Some countries develop specific entrepreneurship strategies (e.g. Lithuania, see OECD/EC, 2015c) while others embed youth entrepreneurship strategies within broader youth employment strategies. The latter approach has been taken in Spain with the Strategy for Entrepreneurship and Youth Employment 2013-16, which identifies actions to support specific groups of disadvantaged youth such as NEETs and youth with disabilities (EEEJ, 2013) (see Box 6.2).

Regardless of the approach taken to developing a youth entrepreneurship strategy, it is important to begin with an assessment of the needs of youth interested in entrepreneurship and to consider the range of needs of different types of youth. Simultaneously, a mapping exercise is needed to understand current offerings and to identify key stakeholders. Next, a stakeholder consultation is needed with youth, youth associations and those delivering the support to understand whether there are any gaps in the current support provision or if there is scope to improve the quality of the provision. Following the consultation, the lead ministry should draft a plan in co-operation with key stakeholders. The plan should indicate objectives, timelines, resources and data that will be collected and used to assess progress.

Box 6.2. **Strategy for Entrepreneurship and Youth Employment 2013-16, Spain**

The Strategy for Entrepreneurship and Youth Employment 2013-16 was designed by the Ministry of Labour and Social Affairs in February 2013 and aims to support young people under 30 years old. (However, in some cases, women and disabled people under 35 years old are eligible to benefits from the supports) Its main objective is the promotion of measures that encourage the integration of youth into the job market or encourage self-employment and entrepreneurship (EEEJ, 2013).

The strategy aims to fulfil four main objectives: i) improve the employability of young people; ii) increase the quality and stability of youth employment; iii) promote equal opportunities for access to the labour market; and (iv) foster entrepreneurship.

In order for these four objectives to be achieved, 100 measures have been identified, of which 15 were labelled as emergency measures to be given priority in the short-term. Measures to support youth in business creation and self-employment are intended to be medium- and long-term actions whereas employment measures are intended to be temporary – once the unemployment rate falls below 15% they will be scaled back. Examples of measures include a reduced rate (80%) of social security contributions for new youth-owned start-ups for 6 months, a possible continuation of unemployment benefit payments for 9 months for youth who start businesses out of unemployment, and the establishment of entrepreneurship offices within public employment services to provide advice and support to new youth entrepreneurs.

As of June 2015, 365 000 young people have benefitted from the measures developed between 2013 and 2014 under the 2013-16 Youth Employment and Entrepreneurship Strategy, most of them from employment subsidies.

Source: OECD/EC (forthcoming, 2016), "Supporting youth entrepreneurship in Spain: A review of policies and programmes".

The next step is to design an implementation framework that outlines how the strategy will be implemented and indicates awareness raising activities and how stakeholders will be engaged. Finally, it is important to monitor the activities, evaluate the performance of different measures, and adjust the programme accordingly. (See Chapter 5 for further discussion on the governance of entrepreneurship policies.)

Tailor outreach strategies to reach youth on the margins

One of the key issues for securing programme take-up is engaging disadvantaged youth. The conventional information channels, such as advertising, publicity in the business press or referral by chambers of commerce and private sector accountancies, are not well-suited for disadvantaged youth who are less likely to use these standard gateways into business support. For example, potential entrepreneurs who dropped out of school before the age of 15 are more likely to find it very difficult to locate and access information on business start-up (56.4%) than those who are highly educated (45.4%) (EC, 2009). It is therefore important for programmes to partner with youth and community organisations that already work with disadvantaged youth, as well as reach out to important role models (e.g. teachers, family members) to the extent possible. For example, SUCCESS! in Ile-de-France is a regional programme that aims to raise awareness about social entrepreneurship and to support disadvantaged youth in launching social enterprises in co-operation with various community youth organisations and schools (see Box 6.3).

Box 6.3. **SUCCESS!, France**

SUCCESS! was initiated by l'Atelier, a regional resource centre created by the Council of Ile-de-France and the Chamber for Social Economy in Ile-de-France. It aims to increase awareness about the social economy and social entrepreneurship as a viable career path among youth (18-34 years old), either through working as an employee in a social enterprise or by working as a social entrepreneur. It is targeted primarily at unemployed youth and students who have dropped out of school but is also open to students in secondary school and higher education.

It is composed of four modules, namely:

- Discovering the social economy;
- Working in the social economy;
- Doing business in the social economy;
- Promoting the social economy.

The programme uses nine workshops to cover these modules. Each workshop is approximately 2.5-3 hours long and has 15 to 20 participants. Together, these workshops allow youth to discover and understand social entrepreneurship, and how they can launch their own projects in this field, through participative activities (e.g. games, movies, speed-dating with social economy professionals, visits to social enterprises). These workshops are delivered by l'Atelier in partnership with local youth organisations, community groups and schools.

More intensive, individual support is also available to those who seek to launch their own idea. This support includes a diagnosis of the strengths and weaknesses of the project and referrals to technical training, investors, public support programmes and professional consultants.

To reach a wide audience, the personnel in charge of various organisations aiming to help young people not in employment, education or training, have been trained to use the tools and workshops offered by SUCCESS! For example, l'Atelier has established partnerships with important youth organisations, including municipal youth offices (*Antennes Jeunes*), youth employment and training centres (*Maisons de l'emploi* et *de la formation*) and the second chance schools (*Écoles de la deuxième chance*). The programme also trains young ambassadors so that they can raise awareness among their peers through neighbourhood associations, students' networks or universities.

More than 4 000 youth living in the region Ile-de-France have participated in the programme between 2011 and 2013.

Source: L'Atelier (n.d.) "Success! Catalogue des animations and ressources pédagogique", *http://admin.atelier-idf.oonops.eu/ressources/documents/4/9355,Catalogue-animations-SUCCESS_BAT.pdf*.

A second key issue relates to the appropriateness of the support offered. A generic offering will not be effective at attracting youth on the margins of society. As discussed earlier, youth entrepreneurs from disadvantaged groups face a wide variety of barriers that are specific to different contexts. The needs of an unemployed university graduate will not be the same as a youth with a criminal record. The support provision must be able to meet these various needs to attract clients.

Thirdly, the nature of the programme interface with the client is important. Given the substantial barriers they face, disadvantaged youth will need much more intensive interactions and frequently have difficulty interacting with the mainstream education and

employment support system. Given that they are typically on the margins of the labour force, trust is important to attracting disadvantaged youth into support programmes and maintaining their engagement. The staff delivering the support will likely need training to help them understand their clients' context.

Help youth develop entrepreneurial skills and mindsets

Entrepreneurs need a range of skills to start up and successfully operate a business, including both the workplace skills required of employees (e.g. job-specific skills, communication) and further skills that reflect the additional demands of running a business (e.g. opportunity recognition, risk management). While some of these entrepreneurship skills may not be absolutely necessary for business success, possessing them is likely to increase the chances of building a sustainable business.

One of the key roles of policy in supporting disadvantaged youth in business creation and self-employment is to help them develop entrepreneurial knowledge, skills and attitudes. This includes soft skills such as a sense of initiative, creativity, autonomy and teamwork (OECD, 2014; OECD/EC 2013a) and social and emotional skills in the case of social entrepreneurship (OECD, 2015c). These skills and competencies will be beneficial for self-employment or when working as an employee. Key approaches for supporting the acquisition of entrepreneurship skills and the development of entrepreneurial mindsets include entrepreneurship education, training programmes and coaching and mentoring.

The objectives of entrepreneurship education are to increase awareness about entrepreneurship and its potential as a labour market activity, develop a positive attitude towards entrepreneurship and develop entrepreneurial mindsets, attitudes and skills. All of these are relevant for all students, regardless of whether they are interested in starting a business. One of the greatest benefits of entrepreneurship education is that it can reach a broad base of youth and, if delivered early during education, can help at-risk youth build skills and attitudes for setting up businesses before they exit the education system. The keys to successfully designing and implementing an entrepreneurship education programme are to use active learning methods, provide opportunities for students to experience entrepreneurship and offer increasingly practical and realistic education for older students. It is equally important to provide training and support for teachers who deliver entrepreneurship education and to inspire young people through contact with real entrepreneurs.

However, many disadvantaged youth are outside of the education system so it is necessary for policy makers to consider other tools to support them in entrepreneurship. The most common approach is to provide entrepreneurship training through a series of workshops, or part-time training programmes that last two to three months. Entrepreneurship training programmes should provide hands-on opportunities for youth to develop entrepreneurship skills and apply them. The keys to success include using "real" entrepreneurs to deliver the training, the use of business simulations, business idea and plan competitions and actual start-ups to gain hands-on experience. An example of this approach is dreamStart in Brussels, Belgium (see Box 6.4), which provides entrepreneurship training for unemployed youth. One of the success factors for this initiative is the intensive involvement of volunteers (i.e. retired and active professionals from the private, financial and public sectors), who act as trainers and business counsellors. This increases the relevance of the training and reduces the operating costs of delivering it.

Box 6.4. **dreamStart, Belgium**

Launched in 2013, dreamStart aims to help address the youth unemployment challenge in Brussels by helping unemployed youth (under 30 years old) start a business.

dreamStart is an initiative of microStart, which provides microcredit and support to micro-entrepreneurs in Belgium. dreamStart operates as a business plan development course but special attention is paid to participants' personal development given the broader challenges that they face. Participants are selected through in-take interviews that assess their business ideas, motivation and likelihood of success. The structured business plan development programme is delivered over two months, during which participants meet three full days per week. During the programme, participants receive training and advice from volunteer experts in the private, public and financial sectors. dreamStart ends with an evaluation of business plans, where experts provide advice on implementation. However, the decision to start the business is left to the trainees. Finance and other start-up supports are provided by other services of microStart.

The initiative has supported 104 young entrepreneurs over five 2-month project cycles. Of the youth who completed the course, 60% started a business within a year. One-third of these worked full-time in their business and two-thirds combined their business start-up with paid employment.

For more information, please see: *http://microstart.be/fr*.

Source: OECD/EC (2016), *Inclusive Business Creation: Good Practice Compendium*, *http://dx.doi.org/10.1787/9789264251496-en*.

Coaching and mentoring is another effective method of facilitating the acquisition of entrepreneurship skills and preparing disadvantaged youth to be self-employed. Coaching and mentoring are similar concepts but are often distinguished from each other. Coaching tends to be a short-term relationship that focuses on a specific challenge, whereas mentoring is longer-term and tends to support professional and personal development. In the case of disadvantaged youth, these individual supports are also critical for supporting personal development and building self-confidence.

One example of a tailored mentoring programme for disadvantaged youth is the Young Entrepreneurs Project in Boston, United States, which supports youth with disabilities (see Box 6.5). Each participant is assigned a mentor to support them in working towards becoming active in self-employment or employment. One of the strengths of this initiative is that it has an intake process for mentors, as well as training and networking sessions for them. These help ensure that mentors are qualified and equipped to help achieve the initiative's objectives. Other key success factors for coaching and mentoring programmes are ensuring a good match between the youth and the coach or mentor, limiting the length of the relationship to avoid creating dependence and defining clear objectives for the relationship.

Complement access to finance with soft supports

Standard public policy approaches to facilitating access to finance include grants, microcredit, loan guarantees, as well as enabling and supporting the development of new financial mechanisms such as crowdfunding. Re-payable instruments are preferred to grants because they impart a sense of responsibility to the entrepreneur and they reduce the level of risk borne by the public sector (OECD/EC, 2014b). Given the multitude of barriers

Box 6.5. **Partners for Youth with Disabilities' Young Entrepreneurs Project, United States**

The Partners for Youth with Disabilities organisation was founded in 1985 and has grown from a single programme that served nine youth to five programmes that support several hundred young people per year. Its Young Entrepreneurs Project (YEP) was established in Boston in 1995 to teach young adults (13 to 19 years old) with developmental disabilities or from low-income families about starting and managing a small business. The YEP programme is an inclusive career-readiness programme that aims to address barriers to the labour market for youth with disabilities by introducing them to entrepreneurship and teaching them about its potential as a career. The programme is delivered weekly to youth at inner-city schools using a three tier approach:

- *Academic Learning*: Youth complete a 30-hour course on financial literacy ("Banking on Our Future"), entrepreneurship, team-building, problem-solving, stress and time management and planning.
- *Real-world Experiences*: Guest speakers, job shadow days, field trips, and trade shows are used to complement classroom learning. YEP participants have an opportunity to start real businesses in their communities.
- *Mentoring*: Mentors from the business community contribute guest lectures, job shadow opportunities, and mock interviews.

More than 85 students per year participate in the classroom and after-school activities each year. The YEP annual budget is USD 118 835 (approximately EUR 106 818).

Over the past 15 years, YEP has supported more than 800 youth. Pre- and post-participation surveys suggest that the programmes have made a positive impact to the participants' independence, skills and career potential.

For more information, please see: *www.pyd.org/young-entrepreneurs-project.php*.

Source: The Boston Foundation (2015), "Partners for Youth with Disabilities", The Giving Common: Your Place for Informed Giving in Massachusetts, *www.givingcommon.org/profile/1101511/partners-for-youth-with-disabilities/*.

that disadvantaged youth face to entrepreneurship, single one-shot financial instruments are not the most appropriate solution. There is a need to provide a range of financial instruments in combination with a package of complementary supports (e.g. training, coaching and mentoring).

A key to success for facilitating access to finance for disadvantaged youth entrepreneurs is to provide sufficient funding to ensure that the business has a reasonable chance of success. This can be accomplished by integrating coaching and mentoring into a combined offer of finance and "soft" support. For example, the Prince's Trust in the United Kingdom complements start-up grants for "unbankable" unemployed youth with workshops and one-on-one coaching and mentoring (see Box 6.6). A key success factor of this initiative is that support is provided in phases. Only those who can demonstrate motivation and a feasible idea are able to receive large loans and the most intensive soft support.

Loan guarantees are another potential approach to support disadvantaged youth. This involves the government creating or contributing to a fund operated by a public or private financial institution, which then offers banks guarantees for loans that they make to target groups corresponding to the objectives of the fund. This lowers the risk assumed by the banks and therefore increases their willingness to lend without collateral. While there will

Box 6.6. **The Prince's Trust Enterprise Programme, United Kingdom**

The Prince's Trust Enterprise Programme aims to support disadvantaged youth in entering the labour market. It provides a variety of training courses and supports youth interested in starting a business by providing grants, training and coaching. The initiative also offers loans to support certain types of start-ups.

The Enterprise Programme is open to unemployed youth (18-30 years old). The support is delivered in four stages:

- *Meet the team*: Interested youth are invited to attend a free information session to learn about the Enterprise programme and the available supports.
- *Explore*: This four day workshop covers the basic skills needed to launch a business. The first day focusses on developing goals and planning to acquire the skills to reach the goals. Personal finance and business legal structures are also covered. Participants learn about marketing on the second day and finance and pricing on the third day. The fourth day concentrates on business planning.
- *Building your business*: One-on-one coaching is provided to help participants conduct market research, build a business plan and plan their financial goals. Participants who complete their business plan receive a certificate and are provided with information about the "Will it Work" grants of up to GBP 200 (approximately EUR 323).
- *Launch*: Participants present their business plan to the Business Launch Group who assess whether the business idea is viable and sustainable. Youth entrepreneurs with "approved" ideas are provided with a mentor for two years, as well as access to a range of free and discounted business support services for three years.

The initiative also offers other financial products, including additional start-up grants and low interest loans of up to GBP 7 500 (approximately EUR 9 675), which are on offer through the Start Up Loans Company.

In fiscal year 2014-15, the Enterprise Programme had 15 981 participants, of which 7 299 were ongoing clients (Prince's Trust, 2015). An earlier evaluation (DTZ, 2007) showed that during 2004-05, the programme generated 155 additional start-ups and helped an additional 416 start-ups start sooner, on a larger scale, or at a higher quality. The cost per start-up, taking Business Gateway expenditure into account, was GBP 2 351 (approximately EUR 3 460), GBP 15 565 (approximately EUR 22 920) per fully additional start-up and GBP 7 989 (approximately EUR 11 760) per net job created.

For more information, please see: *www.princes-trust.org.uk/help-for-young-people/enterprise*.

Source: OECD/EC (2013a), *The Missing Entrepreneurs: Policies for Inclusive Entrepreneurship*, *http://dx.doi.org/10.1787/9789264188167-en*; OECD/EC (2012), "Policy Brief on Youth Entrepreneurship", *http://dx.doi.org/10.1787/5jxrcmlf2f27-en*.

be public costs associated with the fund's share of losses on defaulting loans, there are also some potential returns from fees charged to banks and a share of interest charged to entrepreneurs.

Loan guarantees present several advantages from the point of view of policy makers. They draw on the expertise of the banking sector for credit risk assessment and loan monitoring. Their cost will largely depend on the loan default rate, which increases the incentive to run the programme properly, for example by actively involving the banking sector and setting clear operational rules (e.g. firm eligibility, coverage ratio, guarantee period, etc.). They favour the integration of clients into the mainstream credit system rather than targeting them through ad-hoc interventions.

Another new approach that is relevant for disadvantaged youth is self-funded communities (SFC). These are small savings groups, where the members are also stakeholders and benefit from a fair turnover for their savings/investments. In practice, each SFC has between 10 and 30 people who contribute small amounts of money to the groups fund, which allows them to become shareholders of the SFC. The central fund is used to offer small loans to members, typically approximately EUR 400. SFCs also provide services to its members, such as small credits and small insurances, while generating revenue through interests on loans. The target clients are typically low-income earners, and SFCs are very popular within migrant communities.

Other emerging financial markets may not always be suitable for disadvantaged youth. Peer-to-peer lending and crowdfunding platforms are popular with young entrepreneurs (Molenaar, 2015) but these require internet access and the skills to effectively present a business idea in an attractive and concise manner. Disadvantaged youth may not always have these skills, nor internet access. This underlines the need to complement financial support with training or more intensive individual support.

Support the development of entrepreneurial networks

Networks can have a profound impact on the development of individual entrepreneurial intentions and motivations and play a major role in the ability of people to identify business opportunities, validate business ideas and access resources such as customers, business partners, suppliers and advisors (OECD/EC, 2015b). Entrepreneurial networks are especially relevant for disadvantaged youth who are less aware about the potential for entrepreneurship and less likely to view it as desirable and feasible. Appropriate networks can also help them address information and knowledge gaps.

Policy makers can help disadvantaged youth develop entrepreneurship networks, which will increase their access to resources and ideas. The keys to successfully developing entrepreneurship networks for youth are to ensure that the network is sufficiently linked to the mainstream business community and that it provides opportunities for face-to-face interaction with other entrepreneurs. A strong network manager is needed and network promotion is necessary. For example, the Confindustria Young Entrepreneur Association in Italy (see Box 6.7) is an umbrella organisation that supports local networks and offers members networking opportunities at national and international levels (OECD/EC, 2015d).

Box 6.7. **The Confindustria Young Entrepreneur Association, Italy**

The Confindustria Young Entrepreneur Association has three objectives: i) promote an entrepreneurial culture within Italy; ii) contribute to improving Italy's competitiveness; and iii) encourage and support young entrepreneurs.

It is a national umbrella network that is composed of local member associations. Members of the local networks are entrepreneurs between 18 and 40 years old. The association organises seminars and workshops on the business experiences of the younger generation and aims to provide a platform for information and knowledge exchange among members. It promotes initiatives aimed at raising business awareness of economic, social, political and technical issues. The local networks organise and host local events such as debates and intensive networking activities with other local groups and associations. They also have a regular newsletter. The association is also active internationally through its role as one of the founding members of the G20 Young Entrepreneurs Alliance.

Box 6.7. **The Confindustria Young Entrepreneur Association, Italy** *(cont.)*

Young entrepreneurs have a range of possibilities for participating in this network. At the local level, they can connect with other entrepreneurs in their community and improve their skills through workshops and other events. The association also offers opportunities to build national and international networks.

The network has greatly expanded over the years and today counts 12 500 members associates, organised across 105 Provinces and in 20 Regional Committees.

Source: Confindustria, Confindustria website, *www.giovanimprenditori.org* (accessed 6 July 2016); Confcommercio, Confcommercio website, *www.confcommercio.it* (accessed 6 July 2016).

There is a growing trend of using online platforms for networking purposes since they have great reach and can be delivered with relatively low cost. However, online networks may not always be appropriate for disadvantaged youth since they may not have access to the internet and may have low levels of digital skills (OECD, 2015b). Furthermore, those with disabilities often face challenges in accessing websites and online tools despite the use of assistive technologies (OECD/EC, 2014c). Policy makers should also avoid creating too many specialised networks because this will only reinforce the gap between the disadvantaged groups and the mainstream population.

Conclusion and issues for consideration

There is evidence that youth, including disadvantaged youth, are interested in entrepreneurship. However, it is clear that they face many challenges in creating businesses and that these obstacles are greatest for disadvantaged youth. Despite this, many groups of disadvantaged youth are more active in entrepreneurship than youth in the mainstream so entrepreneurship support has the potential to be an effective instrument in a policy maker's toolkit for addressing social inclusion and labour market challenges for youth. Entrepreneurship is not a panacea for helping all disadvantaged youth find success in the labour market but it can help a limited group with the ambition and wherewithal to become self-employed. There is also potential to improve the employability of others through entrepreneurship training programmes and through the experience of starting a business.

In supporting disadvantaged youth in entrepreneurship, policy makers need to recognise that it is not suitable for all. There is a risk that pushing a young person into self-employment and leading them to failure might be incredibly damaging, especially for youth who are already on the margins of society. A negative experience may permanently damage their self-confidence and push them out of the labour market for good. Participant selection is therefore a crucial element of designing entrepreneurship programmes for disadvantaged youth. While self-selection is an important for identifying motivated individuals, programmes also need to vet business ideas to ensure that they are feasible.

Key recommendations

Deliver entrepreneurship support for disadvantaged youth within a cohesive strategic framework that promotes labour market attachment and social inclusion

- Develop an action plan that aims to help disadvantaged youth enter the labour market through self-employment or working as an employee, and ensure that responsibilities are assigned to a government ministry or agency.

- Engage social partners, including youth, business and community organisations, in the development of a strategy and action plan to ensure that the needs of youth are considered and that the experience and expertise of past programmes is utilised.
- Monitor progress and evaluate for impact, effectiveness and efficiency, and feed results back into the initiative.

Embed entrepreneurship in schools to provide awareness and basic skills to youth before they exit the system

- Use hands-on learning methods and provide older students with opportunities to get practical experience of entrepreneurship.
- Promote different models of entrepreneurship, including "hybrid" and social entrepreneurship.
- Support teachers by developing new teaching material and by providing teacher training.

Provide integrated packages of support to address the multi-faceted barriers faced by disadvantaged youth, rather than relying on a single narrowly defined support instrument

- Deliver support in partnership with organisations that already have established relationships with targeted groups of disadvantaged youth to increase awareness about support offerings.
- Provide financial support in combination with training, coaching and mentoring.
- Help young entrepreneurs from disadvantaged groups build entrepreneurial networks so that they can increase their access to ideas, business partners, customers and financial resources.

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PART II

Country profiles

Overview of country profiles

This section provides guidance for the interpretation of the data included in the country profiles. It presents the methodology used to build indicators and analyse the data while also noting limitations in terms of cross-country comparability and data availability.

The country profiles provide a framework for monitoring local labour market dynamics in OECD and LEED member countries. Sub-regional data are presented for a number of core indicators: local employment growth, skills supply and demand, and the employment rate. The most recent data available as well as trends over time are presented.

Country profiles have been prepared for 36 countries: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Country profiles were not prepared for Iceland or Luxembourg, as they are composed of only one statistical region.

Definition of local and regional areas

To approximate local labour markets, data are analysed at the sub-regional level. This corresponds to the Territorial Level 3 (TL3) regions as defined by the OECD. For most European countries, TL3 regions correspond to the third level of administrative divisions used in the Nomenclature of Territorial Units for Statistics (NUTS 3 regions).

When data on the TL3 level was not available, regional data at the Territorial Level 2 (TL2) were included. For most European countries this corresponds to the second level of administrative divisions (NUTS 2 regions).

For a number of countries, including Canada, New Zealand and the United States, the OECD territorial classification could not be used because of compatibility issues with national data sources. Further information on the geographical level and years of analysis included in the country profiles can be found in the tables below for each of the indicators analysed.

Data sources

Data used in the country profiles chapter were provided by national statistical offices or sourced from the OECD Regional Database or Eurostat. Data availability informed the choice of the years used for the analysis, with efforts undertaken to use the most recent data available.

Attention was paid to ensuring comparability over time and across countries. Where there has been a change in the national geographic aggregations or national data collection

methodology, the analysis was conducted only using the years for which comparable data were available. In some cases, internationally comparable data were not available, as noted in the tables below.

1. Local employment growth

Local employment growth is measured as the average annual rate of change in the number of people employed over a given time period. By looking directly at the rate of change, this metric enables within and across country comparisons. It should be noted that the averages are calculated over a long period of time, and fluctuations may occur *within* this period (such as those due to the onset of the financial crisis and the subsequent recovery). In addition, the change in the number of people employed does not reflect changes in the quality of employment or make a distinction between full-time and part-time employment. Additionally, as it is a residence-based measure, it may be impacted by factors such as high rates of commuting.

For all countries included in the analysis, except Latvia and South Africa, the number of people employed refers to the population aged 15 and above. For these two countries, the reference age group is 15-64.

Wherever possible, the employment growth rate was calculated over the most recent ten years of data available. The table below summarises the years and data sources for each country.

Table 7.1. **Data specification for local employment growth**

Country	Geographical level	Years	Source
Australia	49 sub-regions	2004-14	OECD Regional Database
Austria	9 regions	2003-13	OECD Regional Database
Belgium	11 sub-regions	2004-14	OECD Regional Database
Canada	65 Economic Regions	2005-15	Labour Force Survey, Statistics Canada
Chile	15 regions	2010-15	Nueva Encuesta Nacional de Empleo [New national survey of employment], INE
Czech Republic	14 sub-regions	2005-13	OECD Regional Database
Denmark	5 regions	2008-14	Labour Force Survey, Statistics Denmark
Estonia	5 sub-regions	2004-14	OECD Regional Database
Finland	19 sub-regions	2004-14	OECD Regional Database
France	96 sub-regions	2004-14	OECD Regional Database
Germany	16 regions	2004-14	OECD Regional Database
Greece	13 sub-regions	2004-14	OECD Regional Database
Hungary	20 sub-regions	2004-14	OECD Regional Database
Ireland	8 sub-regions	2004-14	OECD Regional Database
Italy	103 sub-regions	2004-14	OECD Regional Database
Japan	47 sub-regions	2004-14	OECD Regional Database
Korea	16 sub-regions	2004-14	OECD Regional Database
Latvia	6 sub-regions	2005-15	Labour Force Survey, Central Statistical Bureau of Latvia
Lithuania	10 sub-regions	2005-15	Labour Force Survey, Statistics Lithuania
Mexico	32 regions	2005-15	Encuesta Nacional de Ocupación y Empleo [National survey on occupation and employment], Inegi
Netherlands	12 sub-regions	2004-14	OECD Regional Database
New Zealand	12 sub-regions	2004-14	OECD Regional Database
Norway	19 sub-regions	2004-14	OECD Regional Database
Poland	16 regions	2005-15	Eurostat Regional Labour Market Statistics
Portugal	7 regions	2004-14	OECD Regional Database
Romania	8 regions	2010-14	Household Labour Force Survey (AMIGO) National Institute of Statistics

Table 7.1. **Data specification for local employment growth** *(cont.)*

Country	Geographical level	Years	Source
Slovak Republic	8 sub-regions	2004-14	OECD Regional Database
Slovenia	12 sub-regions	2005-14	Labour Force Survey, Statistical Office of the Republic of Slovenia
South Africa	9 regions	2008-14	Quarterly Labour Force Survey, Statistics South Africa
Spain	19 regions and autonomous cities	2005-15	Eurostat Regional Labour Market Statistics
Sweden	21 sub-regions	2004-14	OECD Regional Database
Switzerland	7 regions	2005-15	Eurostat Regional Labour Market Statistics
Turkey	26 regions	2004-13	Labour Force Survey, Turkish Statistical Institute
United Kingdom	128 sub-regions	2005-15	Annual population survey, UK Office for National Statistics
United States	3 144 sub-regions	2000-14	Census and American Community Survey, U.S Census Bureau

2. Skills supply and demand

The OECD 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* for skills, the percentage of the working age population having 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 which require a relevant period of work experience. Where possible the classifications are based on the International Standard Classification of Occupations (ISCO) at the first digit. The standard categories for medium- and high-skilled occupations used are categories 1 (Managers), 2 (Professionals), 3 (Technicians and associate professionals), 6 (Skilled agricultural, forestry and fishery workers) and 7 (Crafts and related trade workers). However, in some cases due to data availability or other country specificities, the national classification of occupations was used instead. These are noted in the table below.

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. As such, they complement information on medium- and high skilled occupations. For countries where neither GVA/GDP per worker nor wages were

available, the percentage of medium- and high-skilled occupations was taken as the sole indicator of skills demand.

In combining the two demand variables into a composite index a weight of 0.25 has been allocated to the first variable (occupation) and 0.75 to the second (GVA/GDP per worker or wages). The productivity measure was given a larger weight as it is a workplace-based variable which precisely refers to the area where the person actually works. In contrast, data on employment in medium- and high-skilled occupations are residence-based.

More information on the data used for computing the demand indicator for each country have been detailed in the table below.

Computing indices

To build the supply and demand indices, it was necessary to bring the variables in a common unit (scale) of measurement using a standardisation method. The inter-decile range method is used, as it is not influenced to a great extent by outliers. See the formula below:

$$(X_i - X_{med}) / (X_{9th} - X_{1st})$$

Where: X_i = value for $TL3_i$ or $TL2_i$

X_{med} = median

X_{9th} = 9^{th} decile

X_{1st} = 1^{st} decile

Trend analysis

OECD analysis has shown that there is not only variation in the classification of regions and sub-regions according to the supply and demand for skills at any given time, but also differences in terms of how the supply of and demand for skills changes over time. In order to track these changes, trend analysis has been conducted to identify those places improving the most in one or both indicators. The top 20% of regions or sub-regions with the highest increases (in absolute terms) during the period of analysis are listed in a table in this section of each country profile.

Data specification

The data used for the skills supply and demand analysis are collected using official sources. Data on the supply of skills and on employment by occupation are always collected through the national labour force surveys or the national population censuses. Data on GDP per worker and GVA per worker are sourced from the regional accounts or the OECD Regional Database while data on wages are sourced from country specific sources. The detailed explanation of data sources for demand, as well as the regions and indicators used for the analysis is included in the table below.

Table 7.2. **Data specification for skills supply and demand**

Country	Geographical level	Years	Sources	Demand indicators used	
				Occupation	Productivity
Australia	49 sub-regions	2014	Labour Force Survey, Australian Bureau of Statistics	Managers; professionals	Not available
Austria	9 regions	2004-13	Austrian Microcensus – Labour Force Survey and Regional Accounts, Statistik Austria	Standard ISCO categories	GVA per worker

Table 7.2. **Data specification for skills supply and demand** *(cont.)*

Country	Geographical level	Years	Sources	Demand indicators used	
				Occupation	Productivity
Belgium	11 sub-regions	2001-13	Labour Force Survey, Statistics Belgium and Regional Accounts, National Bank of Belgium	Standard ISCO categories	GVA per worker
Canada	64 Economic Regions	2006-14	Census and Labour Force Survey, Statistics Canada	Business, finance and administrative occupations; health occupations; management occupations; natural and applied sciences and related occupations; occupations in art, culture, recreation and sport; occupations in social science, education, government service and religion	Average weekly wages
Chile	15 regions	2010-15	Nueva Encuesta Nacional de Empleo [New National survey of employment], INE	Managers; professionals; technicians and associate professionals; craft and related trades workers	Not available
Czech Republic	14 sub-regions	2000-13	Labour Force Survey and Regional Accounts, Czech Statistical Office	Standard ISCO categories	GVA per worker
Denmark	5 regions	2008-14	Labour Force Survey and Regional Accounts, Statistics Denmark	Standard ISCO categories	GDP per worker
Estonia	5 sub-regions	2007-13	Labour Force Survey and Regional Accounts, Statistics Estonia	Managers; professionals; technicians and associate professionals	GVA per worker
Finland	19 sub-regions	2000-13	Register of Completed Education and Degrees, Employment statistics and Regional Accounts, Statistics Finland	Standard ISCO categories	GVA per worker
France	96 sub-regions	2006-12	Population census, Insee and OECD regional statistics	Managers; directors and chief executives (10+ employees); self-employed professionals in regulated occupations, and related occupations; senior government officials, professionals; intermediate professionals (public sector); intermediate professionals (private sector); technicians; craft and related trades workers	GVA per worker
Germany	16 regions	2011	Population Census and national accounts, German Statistical Offices of the Länder and Federal Statistical Office	Standard ISCO categories	GVA per worker
Greece	13 sub-regions	2002-14	Labour Force Survey, Hellenic Statistical Authority and Eurostat	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker
Hungary	20 sub-regions	2003-13	Labour Force Survey and Regional Accounts, Hungarian Central Statistical Office	Standard ISCO categories	GVA per worker
Ireland	8 sub-regions	2010-14	Quarterly National Household Survey (QNHS) and Regional Accounts, Central Statistics Office	Managers, directors and senior officials; professionals; associate professional and technical; skilled trades	GVA per worker
Israel	15 sub-regions	2013	Labour Force Survey, Central Bureau of Statistics	Managers; professionals; practical engineers, technicians agents and associate professionals	Not available
Italy	103 sub-regions	2001-12	Labour Force Survey and Regional Accounts, Istat	Managers, directors and senior officials; scientific professions; technicians and associate professionals	GVA per worker
Japan	47 sub-regions	2000-12	Population Census, Employment status survey, Statistics Bureau of Japan and OECD Regional Database	Administrative and managerial workers; professional and technical workers	GVA per worker
Korea	16 sub-regions	2000-13	Local area labour force survey and Regional Accounts, Statistics Korea	Standard ISCO categories	GVA per worker
Latvia	6 sub-regions	2007-13	Labour Force Survey and Regional Accounts, Central Statistical Bureau of Latvia	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker

Table 7.2. **Data specification for skills supply and demand** *(cont.)*

Country	Geographical level	Years	Sources	Demand indicators used	
				Occupation	Productivity
Lithuania	10 sub-regions	2011-14	Labour Force Survey and Regional Accounts, Statistics Lithuania	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker
Mexico	32 regions	2005-15	Inter-census and Encuesta Nacional de Ocupación y Empleo [National Survey on Occupation and Employment], Inegi	Managers, professionals and technicians	Average hourly wages
Netherlands	12 sub-regions	2003-14	Labour Force Survey and Regional Accounts, Central Bureau of statistics	Standard ISCO categories	GVA per worker
New Zealand	12 sub-regions	2006-15	Household Labour Force Survey and Regional Accounts, Statistics New Zealand	Managers; professionals; technicians and associated	GDP per worker
Norway	19 sub-regions	2005-13	Labour Force Survey and Regional Accounts, Statistics Norway	Standard ISCO categories	GVA per worker
Poland	16 regions	2002-13	Labour Force Survey and Regional Accounts, Central Statistical office Poland	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker
Portugal	7 regions	2001-13	Labour Force Survey and Regional Accounts, Statistics Portugal	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker
Romania	8 regions	2011-14	Households Labour Force Survey, National Institute of Statistics and Eurostat	Managers; professionals; technicians and associate professionals; craft and related trades workers	GVA per worker
Slovak Republic	8 sub-regions	2000-13	Labour Force Survey and Regional Accounts, Statistical Office of Slovak Republic	Standard ISCO categories	GVA per worker
Slovenia	12 sub-regions	2002-13	Labour Force Survey and Regional Accounts, Statistical Office of the Republic of Slovenia	Managers; professionals, technicians and associate professionals; craft and related trades workers	GVA per worker
South Africa	9 regions	2008-14	General Household Survey and National Accounts, Statistics South Africa	Standard ISCO categories	GDP per worker
Spain	19 regions and autonomous cities	2005-15	Labour Force Survey and Regional Accounts, National institute of statistics	Standard ISCO categories	GVA per worker
Sweden	21 sub-regions	2001-13	Swedish register of Education, Swedish Occupational Register, Regional Accounts, Statistics Sweden	Standard ISCO categories	GDP per worker
Switzerland	7 regions	2010-13	Labour Force Survey, Swiss Federal Statistical Office	Standard ISCO categories	GVA per worker
Turkey	26 regions	2008-14	Household Labour Force Survey, Turkish Statistical Institute	Managers; professionals; technicians and associate professionals; craft and related trades workers	Not available
United Kingdom	128 sub-regions	2001-13	Annual Population Survey and Regional Accounts, UK Office for National Statistics	Managers, directors and senior officials; professional occupations; associate professions and technical occupations; skilled trades occupations	GVA per worker
United States	3 144 sub-regions	2000-14	Census and American Community Survey, U.S. Census Bureau and Bureau of Economic Analysis	Management, business, science, and arts occupation	Average annual earnings per job

3. Employment rate

The employment rate measures the extent to which labour resources (people available to work) are being used. Data on the employment rate for the latest year available are displayed on a map while trend data on this indicator are presented in a chart.

Employment rate is measured as the proportion of the population that is employed. It generally refers to the working age population (15-64) but can also be calculated for different age groups. Specifications of the age groups as well as the sources used for the analysis are presented in the table below.

Table 7.3. **Data specification for employment rate**

Country	Geographical level	Years	Source	Age group
Australia	49 sub-regions	2005-15	Labour Force Survey, Australian Bureau of Statistics	15 and over
Austria	9 regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Belgium	11 sub-regions	2004-14	Eurostat Regional Labour Market Statistics	15-64
Canada	64 Economic Regions	2005-15	Labour Force Survey, Statistics Canada	15 and over
Chile	15 regions	2010-15	Nueva Encuesta Nacional de Empleo [New National survey of employment], INE	15 and over
Czech Republic	14 sub-regions	2005-15	Labour Force Survey, Czech Statistical Office	15 and over
Denmark	5 regions	2008-14	Labour Force Survey, Statistics Denmark	15-64
Estonia	5 sub-regions	2004-14	Labour Force Survey, Statistics Estonia	15-74
Finland	19 sub-regions	2005-15	Labour Force Survey, Statistics Finland	15-64
France	96 sub-regions	2004-14	OECD regional database	15 and over
Germany	16 regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Greece	13 sub-regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Hungary	20 sub-regions	2005-15	Labour Force Survey, Hungarian Central Statistical Office	15-74
Ireland	8 sub-regions	2006-15	Eurostat and Central Statistical Office	15 and over
Israel	15 sub-regions	2013	Labour Force Survey, Central Bureau of Statistics	15 and over
Italy	103 sub-regions	2005-15	Labour Force Survey, Italian National Institute of Statistics	15-64
Japan	47 sub-regions	2005-14	OCED Regional Database	15 and over
Korea	16 sub-regions	2005-15	Local Area Labour Force Survey, Statistics Korea	15-64
Latvia	6 sub-regions	2005-15	Labour Force Survey, Central Statistical Bureau of Latvia	15-64
Lithuania	10 sub-regions	2005-15	Labour Force Survey, Statistics Lithuania	15-64
Mexico	32 regions	2004-14	OECD regional database	15 and over
Netherlands	12 sub-regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
New Zealand	12 sub-regions	2005-15	Household Labour Force Survey, Statistics New Zealand	15 and over
Norway	19 sub-regions	2005-15	Labour Force Survey, Statistics Norway	15-74
Poland	16 regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Portugal	7 regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Romania	8 regions	2010-14	Households Labour Force Survey (AMIGO), National Institute of Statistics – Romania	15-64
Slovak Republic	8 sub-regions	2004-14	Labour Force Survey, Statistical Office of the Slovak Republic	15-64
Slovenia	12 sub-regions	2005-14	Labour Force Survey, Statistical Office of the Republic of Slovenia	15-64
South Africa	9 regions	2008-15	Labour Force Survey, Statistics South Africa	15-64
Spain	19 regions and autonomous cities	2005-15	Eurostat Regional Labour Market Statistics	15-64
Sweden	21 sub-regions	2004-14	Labour Force Survey, Statistics Sweden	16 and over
Switzerland	7 regions	2005-15	Eurostat Regional Labour Market Statistics	15-64
Turkey	26 regions	2005-15	Labour Force Survey, Turkish Statistical Institute	15 and over
United Kingdom	128 sub-regions	2005-15	Annual population survey, UK Office for National Statistics	16-64
United States	3144 sub-regions	2000-14	Census and American Community Survey, U.S. Census Bureau	15 and over

Note on Latvia

While Latvia has been a member of the LEED Directing Committee for a number of years, it was not an OECD member at the time of preparation of this publication. Accordingly, Latvia does not appear in the list of OECD members and is not included in the zone aggregates.

Australia

This profile examines the health of local labour markets in Australia. It analyses data at the sub-regional level, which corresponds to the country's 49 TL3 sub-regions as defined by the OECD.[1]

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Australia, the number of people employed grew by an average annual rate of 1.9% between 2004 and 2014.[2] Figure 8.1 shows the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 4.2% in Bunbury to a decline of 2.4% in Murray. Figure 8.2 highlights the 20 sub-regions showing the highest average annual employment growth rate. While these sub-regions had the highest growth rates, their contribution to national employment growth varied due to their different population sizes.

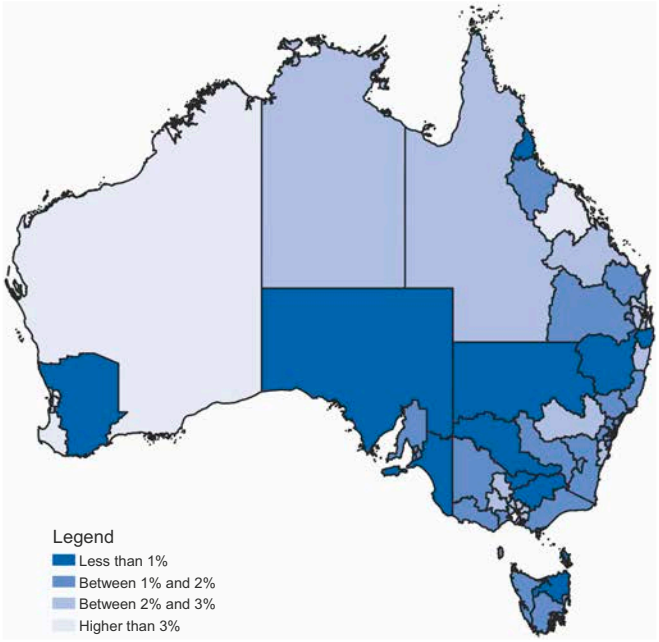
Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations) can provide further insights into the quality of local job creation and the potential for future growth. Figure 8.3 shows that in 2014, 18 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Seventeen sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 14 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Trend data were not available for these indicators in Australia.

Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15 and over in 2015 are shown in Figure 8.4. Darwin had the highest employment rate at 75.8% while Wide Bay had the lowest employment rate at 45.4%. To highlight those places making the most progress over time, Figure 8.5 shows the 20 sub-regions that registered the highest average annual increase in their employment rate between 2005 and 2015. A number of other regions show negative values, reflecting the fact that the overall employment rate in Australia slightly decreased during this time period.

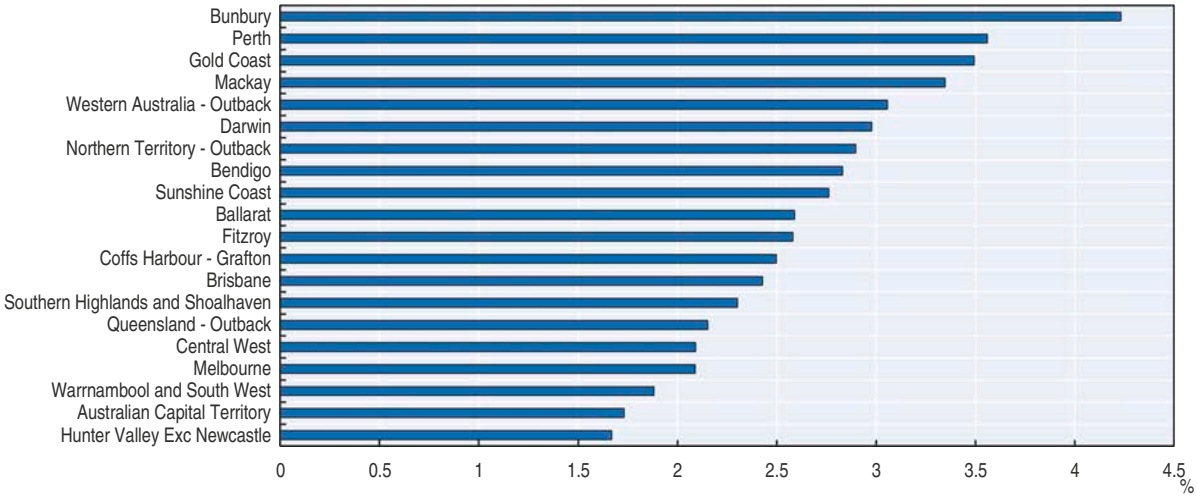
Figure 8.1. **Local employment growth over time, Australian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424243

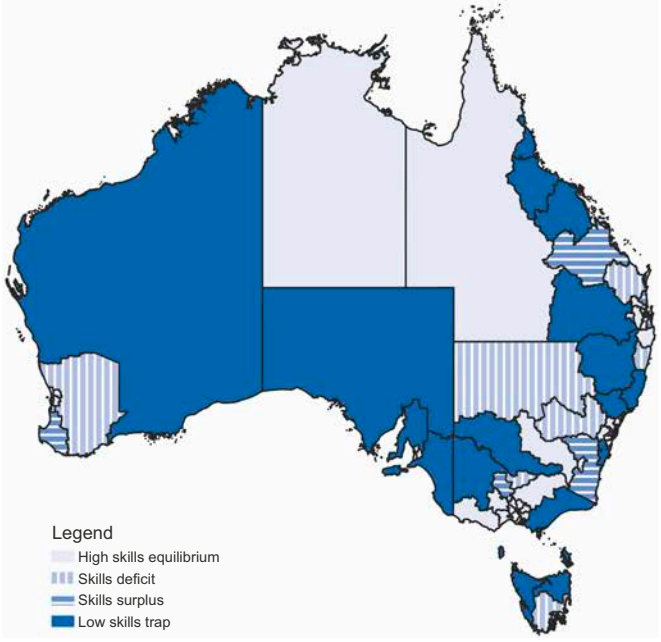
Figure 8.2. **Local employment growth over time: Best performing Australian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424259

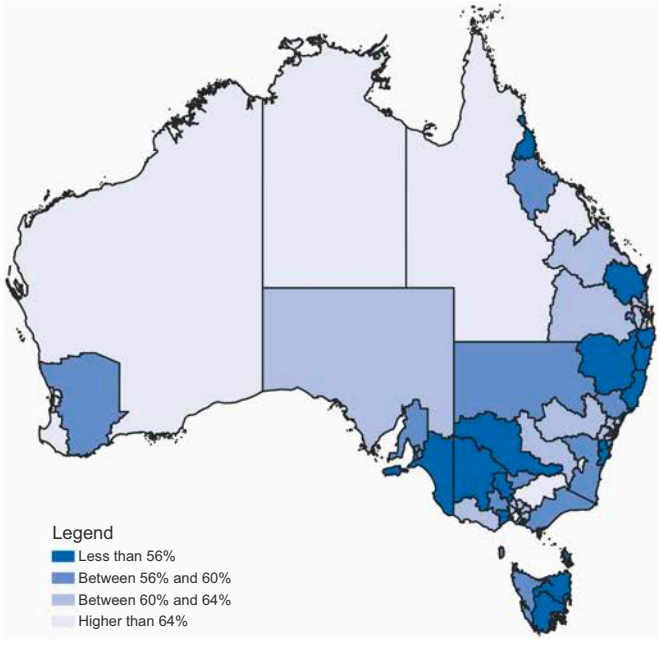
Figure 8.3. **Skills supply and demand, Australian sub-regions, 2014**



Source: OECD calculations based on data from the Labour Force Survey, Australian Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424262

Figure 8.4. **Employment rate (population 15 and over), Australian sub-regions, 2015**

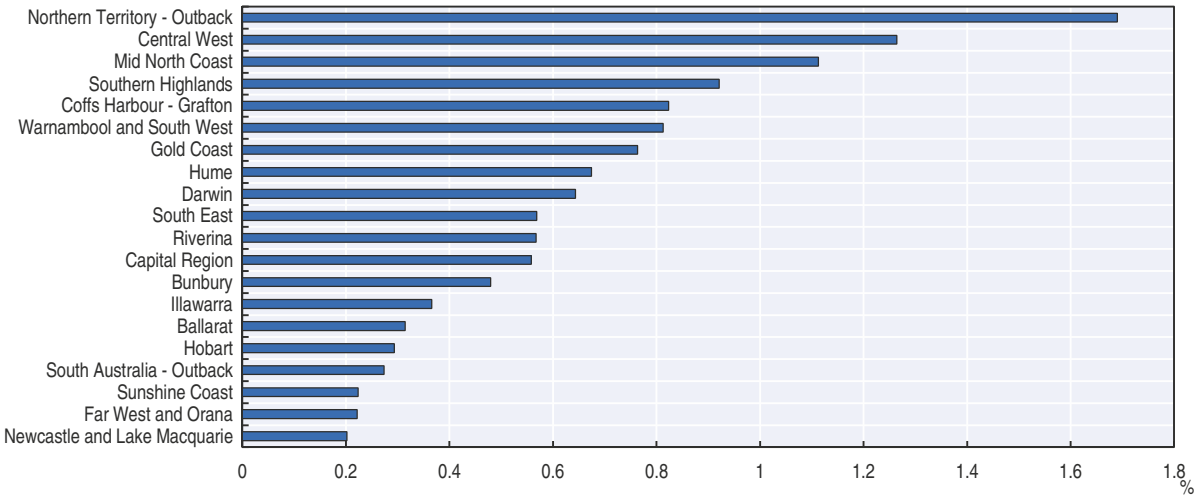


Source: OECD calculations based on data from the Labour Force Survey, Australian Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424274

Figure 8.5. **Employment rate change over time: Best performing Australian sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Australian Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424286

Notes

1. The analysis is based on regional labour force estimates for the 106 Statistical Areas Level 4 as defined by the Australian Bureau of Statistics which have been aggregated into 49 TL3 sub-regions. As data at this geographical level are subject to a high degree of variability, caution should be exercised when using these estimates.
2. The number of people employed may be impacted by the fact that Australia has a relatively high rate of part-time employment.

Austria

This profile examines the health of local labour markets in Austria. It analyses data at the regional level, which corresponds to the country's nine states (Bundesländer).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Austria, the number of people employed grew by an average annual rate of 0.9% between 2003 and 2013.[1] Figures 9.1 and 9.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 1.4% in Tyrol to an increase of 0.6% in Carinthia. While the Tyrol and Vorarlberg regions had the highest growth rates, Vienna actually contributed more to national employment growth than both of these two regions combined due to its larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 9.3 shows that in 2013, 3 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining three regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 9.1 lists the regions with the highest increase in skills supply and/or demand between 2004 and 2013.

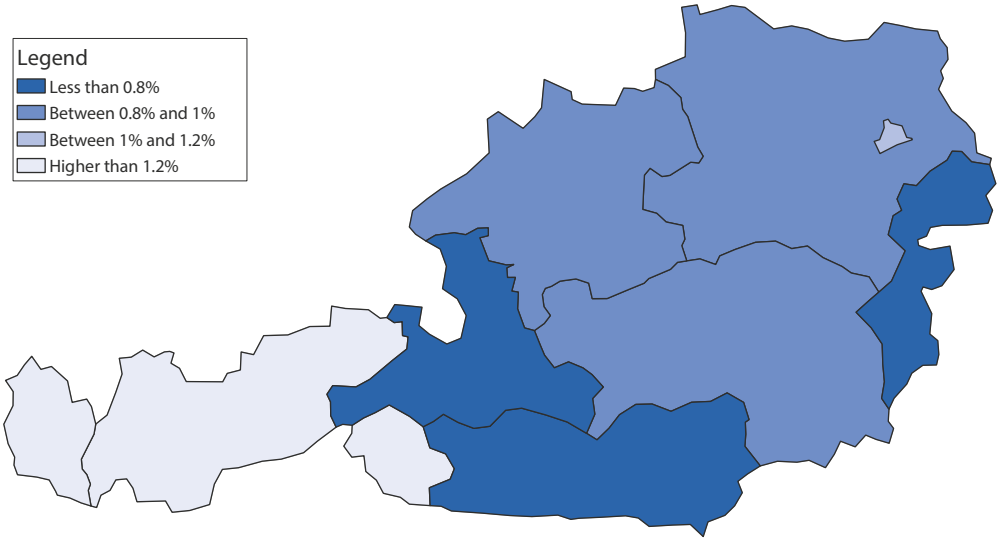
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 9.4. Vorarlberg had the highest employment rate at 75.1% while Vienna had the lowest employment rate at 64.6%. To highlight those places making the most progress over time, Figure 9.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. For Austria, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

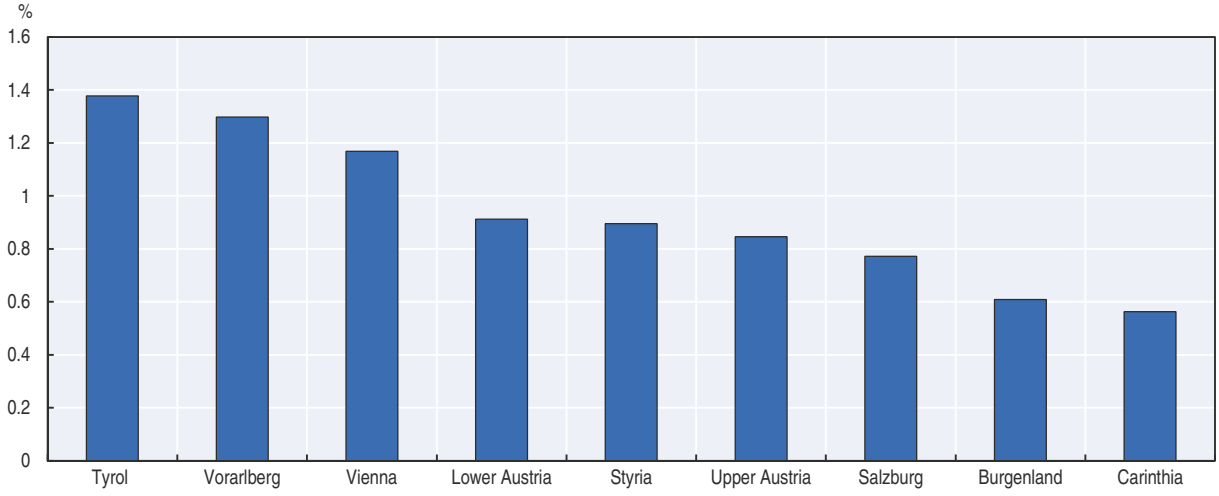
Figure 9.1. **Local employment growth over time, Austrian regions, 2003-13**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424299

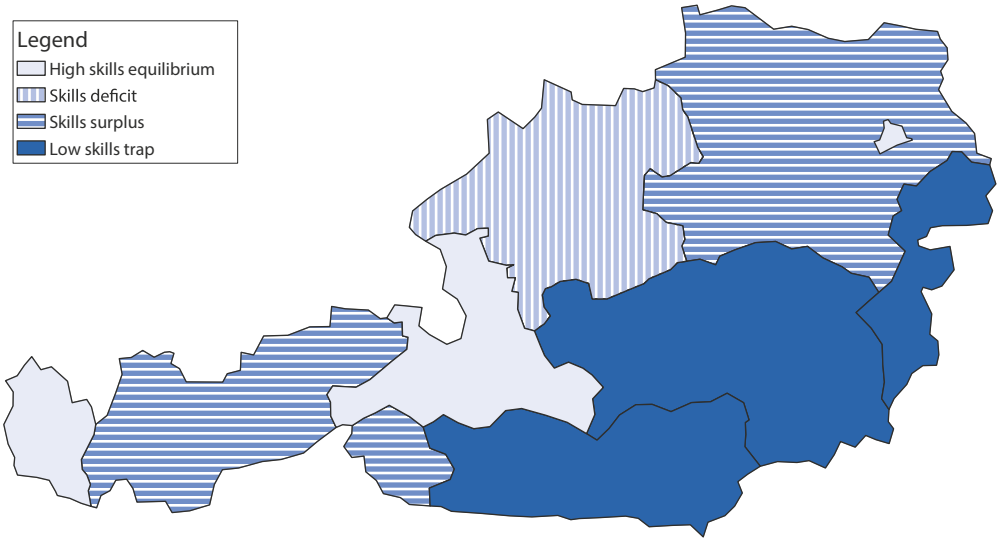
Figure 9.2. **Local employment growth over time: Ranking of Austrian regions, 2003-13**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424300

Figure 9.3. **Skills supply and demand, Austrian regions, 2013**



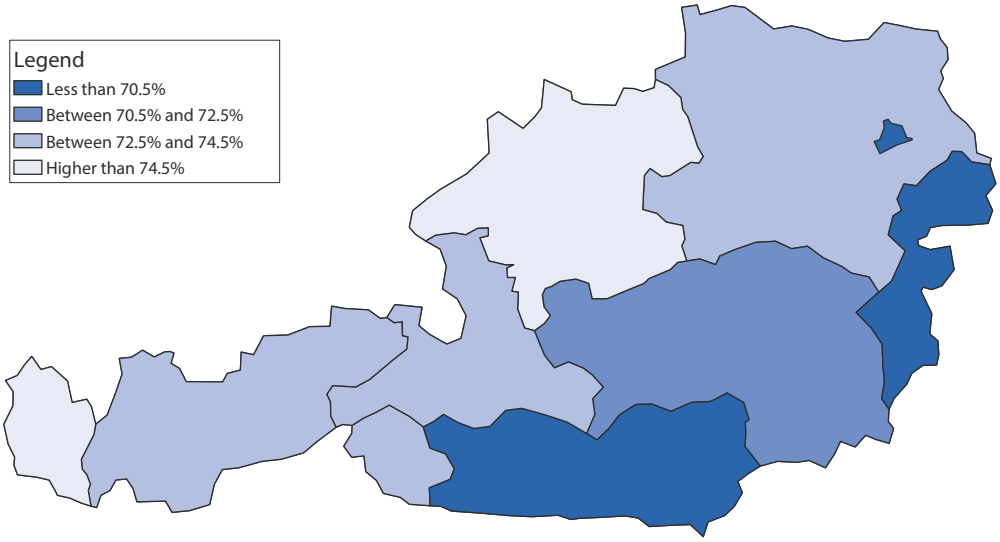
Source: OECD calculations based on data from the Austrian Microcensus – Labour Force Survey and Regional Accounts from Statistik Austria, and the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424315

Table 9.1. **Places with the highest increase in skills supply and/or demand, Austrian regions, 2004-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Burgenland	• Vienna	• Salzburg

Figure 9.4. **Employment rate (population 15-64), Austrian regions, 2015**

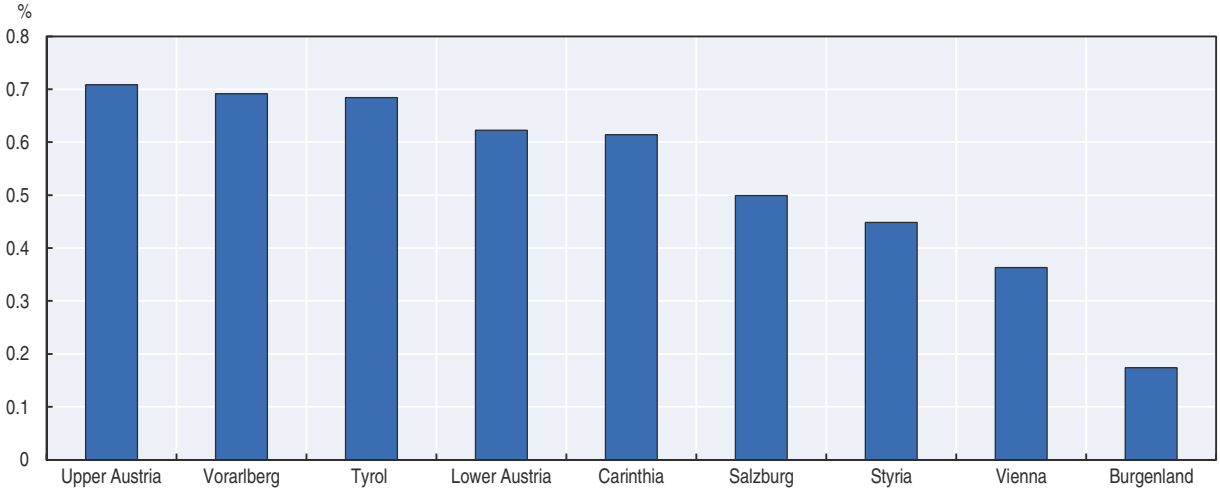


Source: Eurostat (2016), *Regional Labour Market Statistics* (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933424328

Figure 9.5. **Employment rate change over time, Austrian regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), *Regional Labour Market Statistics* (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933424339

Note

1. The number of people employed may be impacted by the fact that Austria has a relatively high rate of part-time employment.

Belgium

This profile examines the health of local labour markets in Belgium. It analyses data at the sub-regional level, which corresponds to country's ten provinces as well as the Brussels Capital Region.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Belgium, the number of people employed grew by an average annual rate of 0.9% between 2004 and 2014. Figures 10.1 and 10.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.5% in the Brussels Capital Region to an increase of 0.4% in West Flanders. While the Brussels Capital Region and the province of Luxembourg had the highest growth rates, the former contributed more to national employment growth due to its larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 10.3 shows that in 2013, 5 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Five sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. West Flanders was the only region in a position of skills surplus, with a relatively high supply of skills and low demand for skills. Table 10.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2001 and 2013.

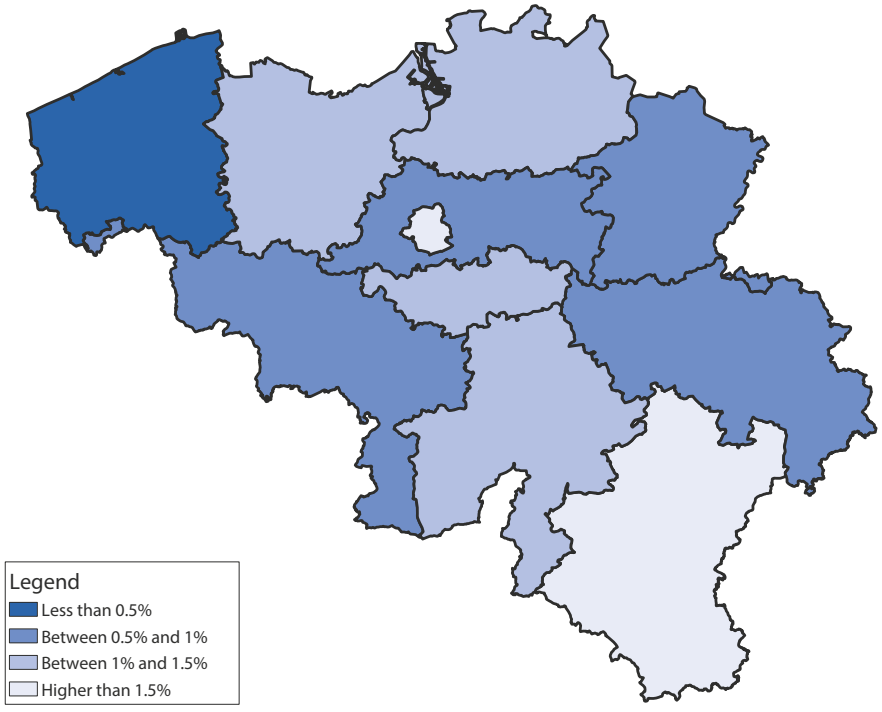
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-64 in 2014 are shown in Figure 10.4. East Flanders had the highest employment rate at 68.3% while Hainaut had the lowest employment rate at 52.7%. To highlight those places making the most progress over time, Figure 10.5 shows the average annual change in the employment rate at the sub-regional level between 2004 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Belgium, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

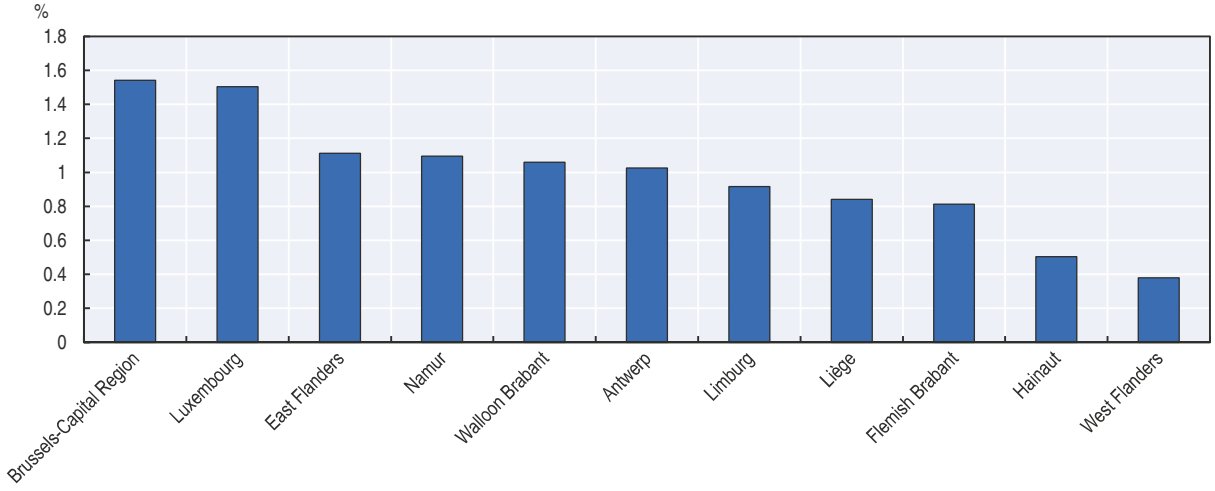
Figure 10.1. **Local employment growth over time, Belgian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424349

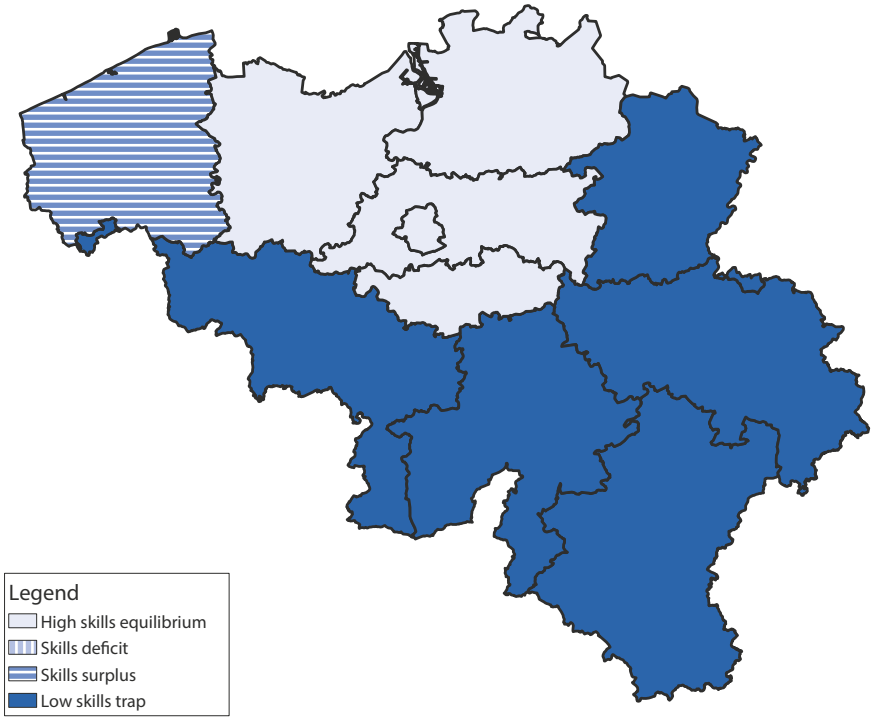
Figure 10.2. **Local employment growth over time: Ranking of Belgian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424353

Figure 10.3. **Skills supply and demand, Belgian sub-regions, 2013**



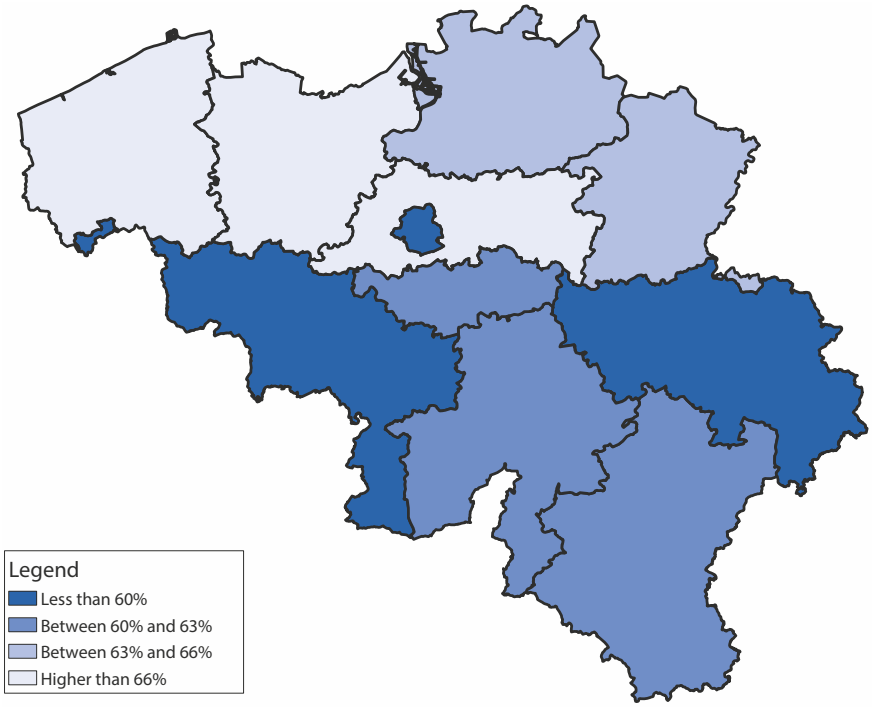
Source: OECD calculations based on data from Labour Force Survey, Statistics Belgium and Regional Accounts, National Bank of Belgium.

StatLink http://dx.doi.org/10.1787/888933424361

Table 10.1. **Places with the highest increase in skills supply and/or demand, Belgian sub-regions 2001-13**

Increase in supply	Increase in supply and demand	Increase in demand
• East Flanders • West Flanders		• Antwerp • Brussels Capital Region

Figure 10.4. **Employment rate (population 15-64), Belgian sub-regions, 2014**

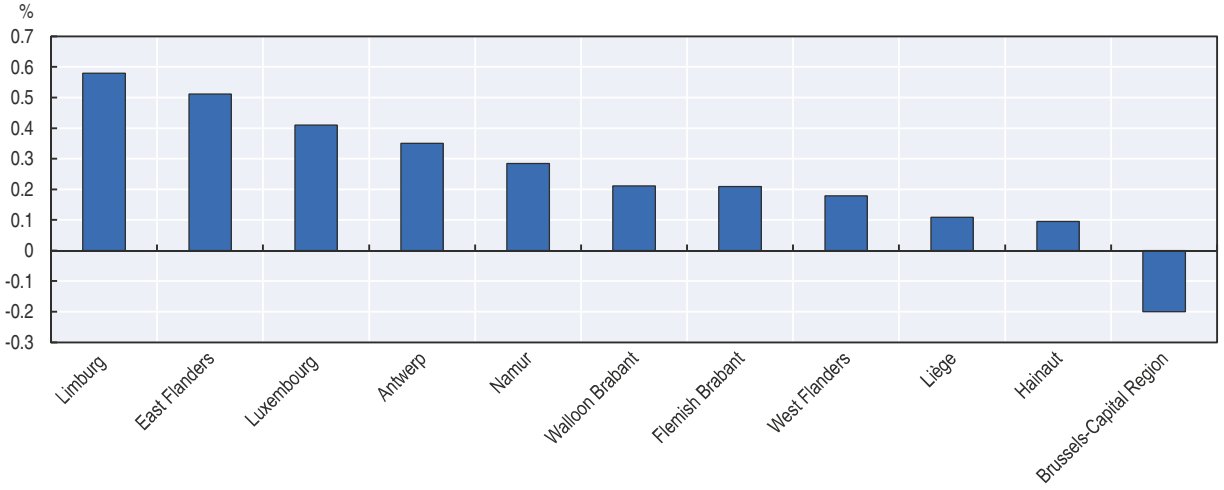


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933424371

Figure 10.5. **Employment rate change over time, Belgian sub-regions, 2004-14**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933424388

Canada

This profile examines the health of local labour markets in Canada. It analyses data at the sub-regional level, which corresponds to the country's 65 Economic Regions.[1]

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. The number of people employed in Canada grew by an average annual rate of 1.1% between 2005 and 2015. Figure 11.1 shows the average annual employment growth rate across sub-regions for 2005-15. It ranges from an increase of 3.7% in Wood Buffalo – Cold Lake (AB) to a decline of 1.1% in Cape Breton (NS). Figure 11.2 shows the 20 sub-regions with the highest average annual employment growth rate, although their contribution to national employment growth overall varied with their population sizes.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and wages)[2] can provide further insights into the quality of local job creation and the potential for future growth. Figure 11.3 shows that in 2014, 22 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Ten sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 33 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 11.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2006 and 2014.

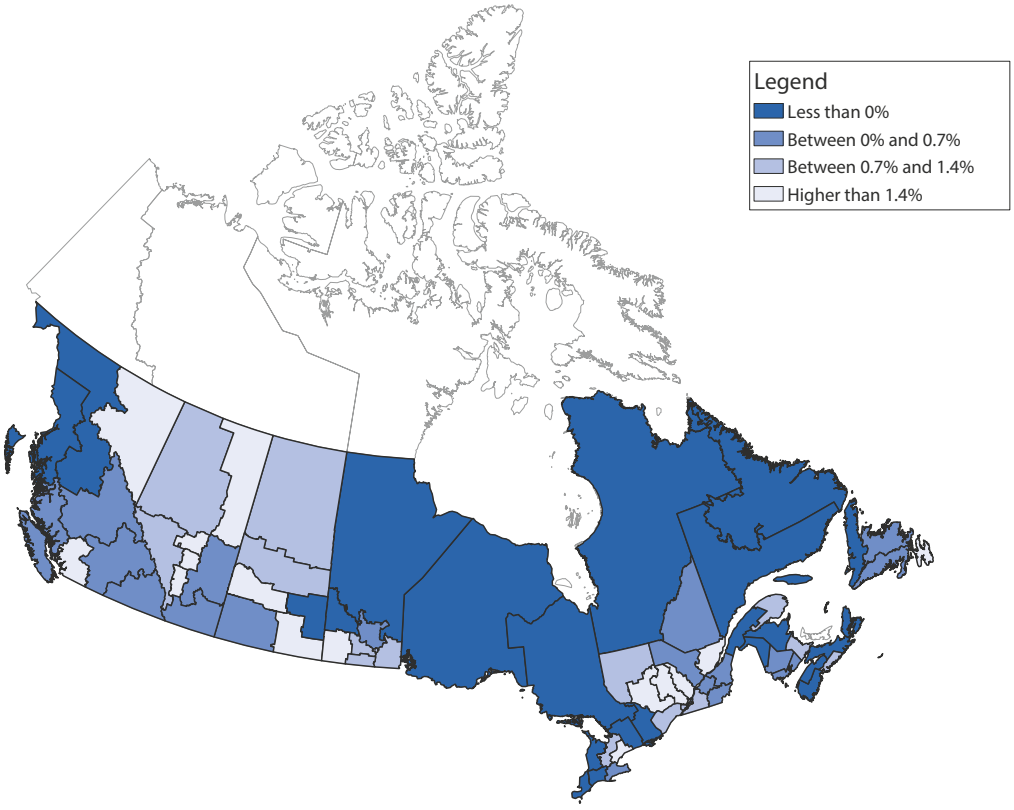
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 11.4 shows the 2015 sub-regional employment rate for the population 15 and over. Wood Buffalo – Cold Lake (AB) had the highest employment rate (72.6%) while South Coast – Burin Peninsula and Notre Dame – Central Bonavista Bay (NL) had the lowest (45.0%). To show those places making the most progress over time, Figure 11.5 shows the 20 sub-regions that registered the highest average annual increase in their employment rate between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

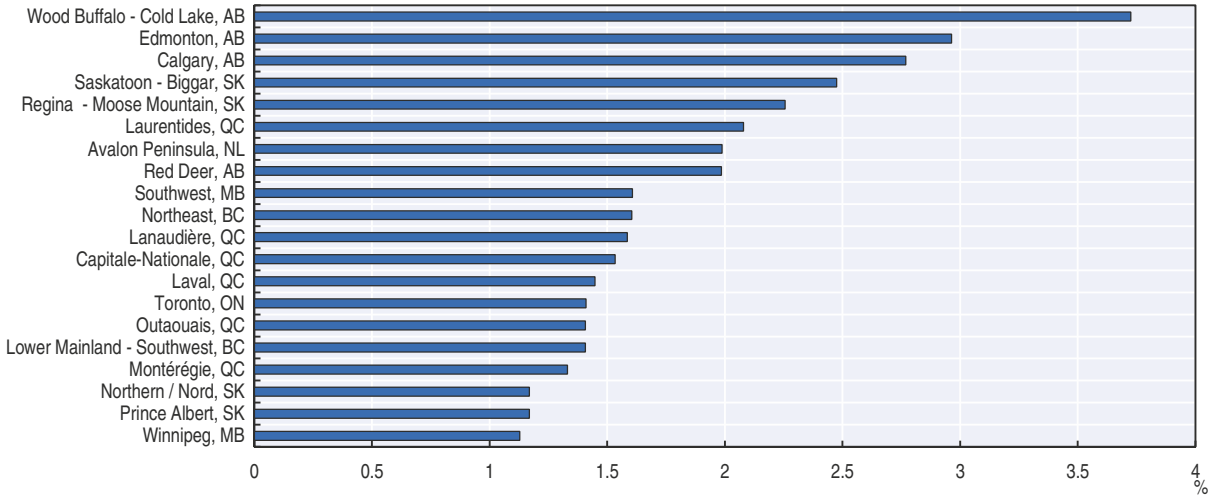
Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. Table 11.2 highlights the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 11.1. **Local employment growth over time, Canadian sub-regions, 2005-15**
Average annual change (%)



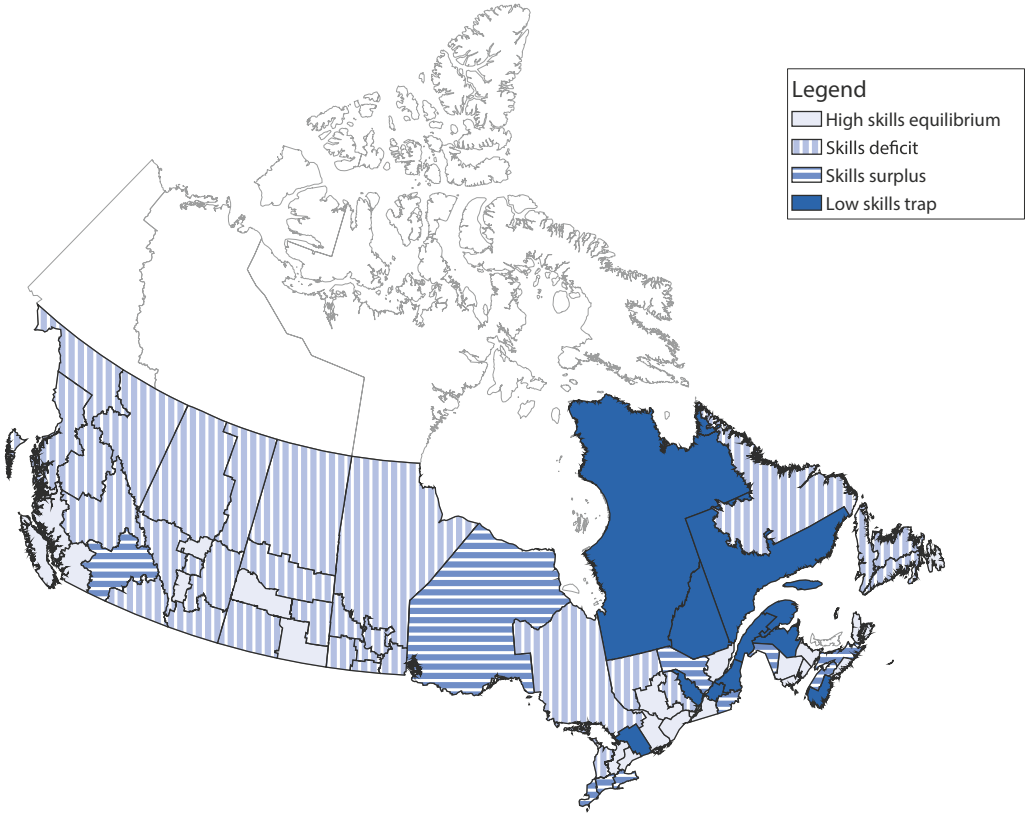
Note: Yukon, Northwest Territories and Nunavut are not included in the analysis, as data for these three territories are not disaggregated at a level that can be considered representative of local labour markets.
Source: OECD calculations based on data from the Labour Force Survey, Statistics Canada.
StatLink http://dx.doi.org/10.1787/888933424397

Figure 11.2. **Local employment growth over time: Best performing Canadian sub-regions, 2005-15**
Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Canada.
StatLink http://dx.doi.org/10.1787/888933424405

Figure 11.3. **Skills supply and demand, Canadian sub-regions, 2014**

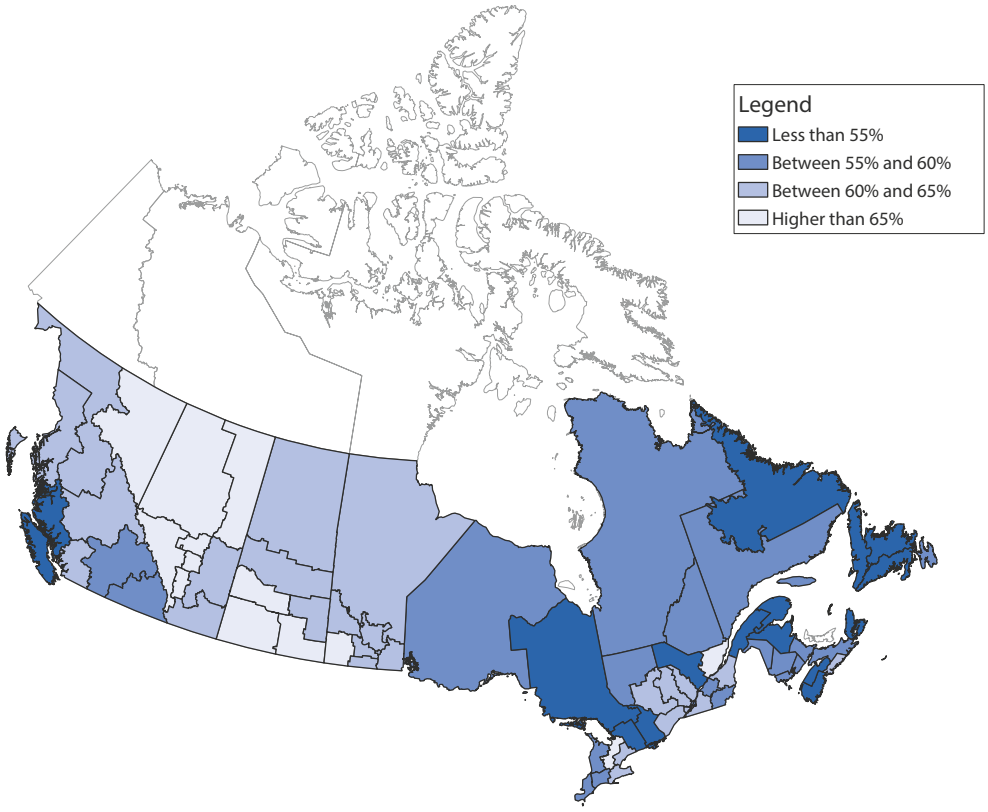


Note: Yukon, Northwest Territories and Nunavut are not included in the analysis, as data for these three territories are not disaggregated at a level that can be considered representative of local labour markets.
Source: OECD calculations based on data from the Labour Force Survey, Statistics Canada.
StatLink http://dx.doi.org/10.1787/888933424413

Table 11.1. **Places with the highest increase in skills supply and/or demand, Canadian sub-regions, 2006-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Bas-Saint-Laurent, QC	• Avalon Peninsula, NL	• Abitibi-Témiscamingue, QC
• Côte-Nord and Nord-du-Québec, QC	• Cape Breton, NS	• North Coast and Nechako, BC
• Mauricie, QC	• Gaspésie – Îles-de-la-Madeleine, QC	• Parklands and Northern, MB
• Northwest, ON	• Northeast, BC	• Regina-Moose Mountain, SK
• Prince Albert and Northern, SK	• South Coast-Burin Peninsula and Notre Dame-Central Bonavista Bay, NL	• South Central and North Central, MB
• Saint John-St. Stephen, NB		• Southwest, MB
• Swift Current-Moose Jaw, SK	• West Coast – Northern Peninsula – Labrador, NL	• Yorkton-Melville, SK

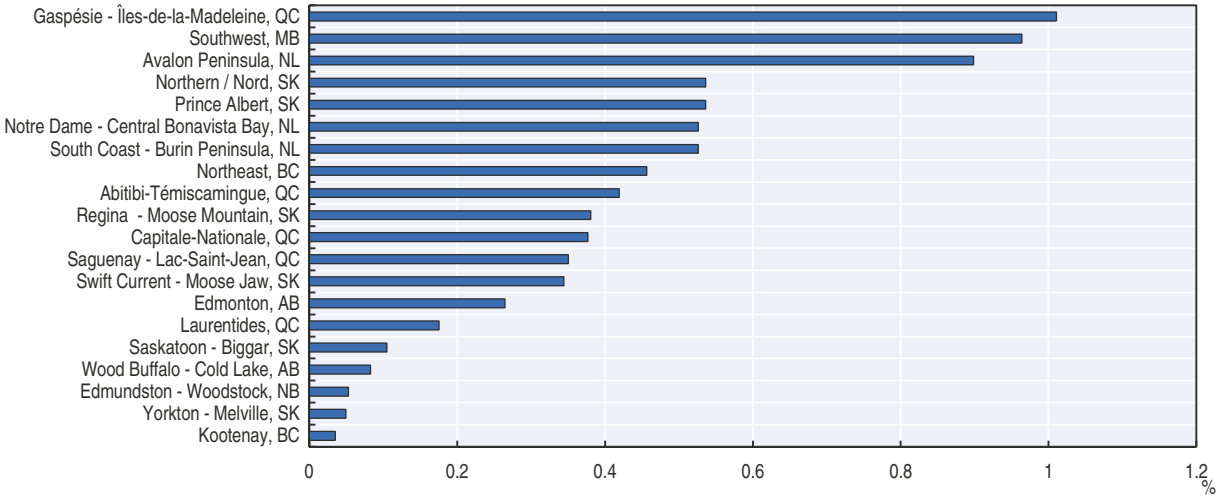
Figure 11.4. **Employment rate (population 15 and over), Canadian sub-regions, 2015**



Note: Yukon, Northwest Territories and Nunavut are not included in the analysis, as data for these three territories are not disaggregated at a level that can be considered representative of local labour markets.
Source: OECD calculations based on data from the Labour Force Survey, Statistics Canada.
StatLink http://dx.doi.org/10.1787/888933424423

Figure 11.5. **Employment rate change over time: Best performing Canadian sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Canada.
StatLink http://dx.doi.org/10.1787/888933424438

Table 11.2. **Places to watch: Canadian sub-regions making progress across indicators**

• Avalon Peninsula, NL	• Northeast, BC
• Chaudière-Appalaches, QC	• Prince Albert and Northern, SK
• Gaspésie-Îles-de-la-Madeleine, QC	• Saguenay-Lac-Saint-Jean, QC

Note: Canadian sub-regions improving more than the median across employment growth (2005-15), skills supply and demand (2006-14), and employment rate (2005-15).

Notes

1. Yukon, Northwest Territories and Nunavut are not included in the analysis, as data for these three territories is not disaggregated at a level that can be considered representative of local labour markets.
2. In some sub-regions, high wage values may be driven by the concentration of natural resources.

Chile

This profile examines the health of local labour markets in Chile. It analyses data at the regional level, which corresponds to the country's 15 first-level administrative divisions (regiones).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Chile, the number of people employed grew by an average annual rate of 1.9% between 2010 and 2015.[1] Figure 12.1 and 12.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 4.4% in Aysen to a decrease of 0.2% in Arica y Parinacota.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations) can provide further insights into the quality of local job creation and the potential for future growth. Figure 12.3 shows that in 2015, 6 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Five regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining four regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 12.1 lists the regions with the highest increase in skills supply and/or demand between 2010 and 2015.

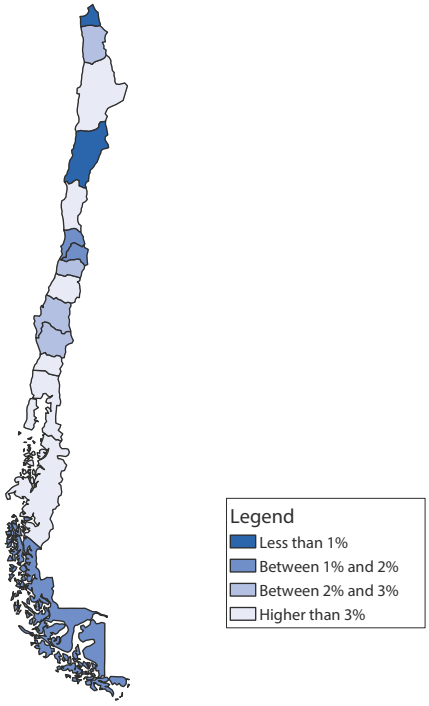
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15 and over in 2015 are shown in Figure 12.4. Aysén had the highest employment rate at 67.7% while Bío-Bío had the lowest employment rate at 50.8%. To highlight those places making the most progress over time, Figure 12.5 shows the average annual change in the employment rate at the regional level between 2010 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Chile only two regions consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate between 2010 and 2015. These regions are Los Lagos and Los Rios.

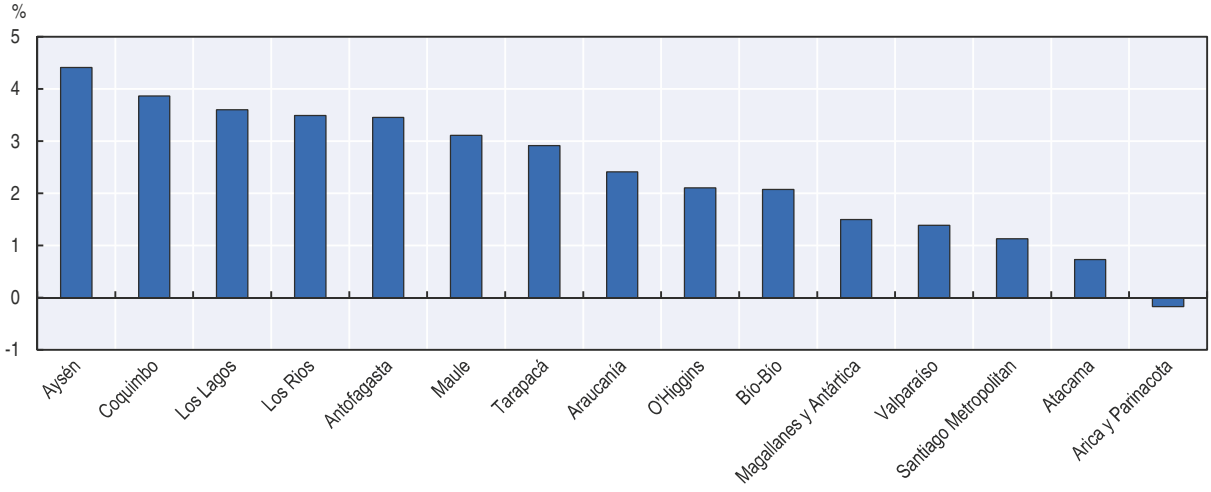
Figure 12.1. **Local employment growth over time, Chilean regions, 2010-15**
Average annual change (%)



Source: OECD calculations based on data from Nueva Encuesta Nacional de Empleo [New National Survey of Employment], INE.

StatLink http://dx.doi.org/10.1787/888933424447

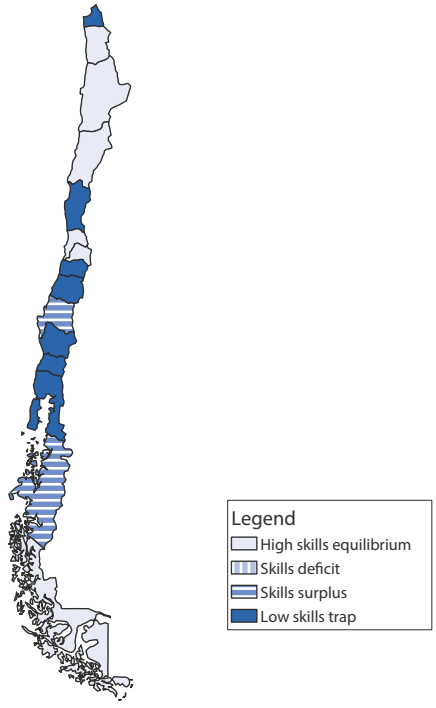
Figure 12.2. **Local employment growth over time: Ranking of Chilean regions, 2010-15**
Average annual change (%)



Source: OECD calculations based on data from Nueva Encuesta Nacional de Empleo [New National Survey of Employment], INE.

StatLink http://dx.doi.org/10.1787/888933424458

Figure 12.3. **Skills supply and demand, Chilean regions, 2015**



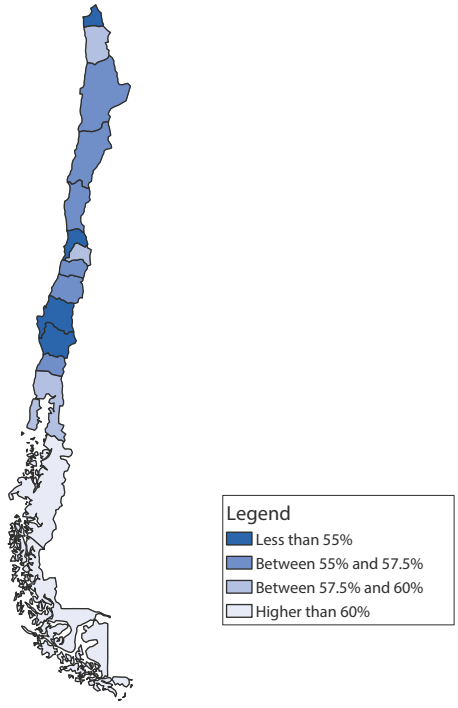
Source: OECD calculations based on data from Nueva Encuesta Nacional de Empleo [New National Survey of Employment], INE.

StatLink http://dx.doi.org/10.1787/888933424466

Table 12.1. **Places with the highest increase in skills supply and/or demand, Chilean regions, 2010-15**

Increase in supply	Increase in supply and demand	Increase in demand
• Antofagasta • Magallanes y Antártica	• Los Lagos	• Maule • O'Higgins

Figure 12.4. **Employment rate (population 15 and over), Chilean regions, 2015**

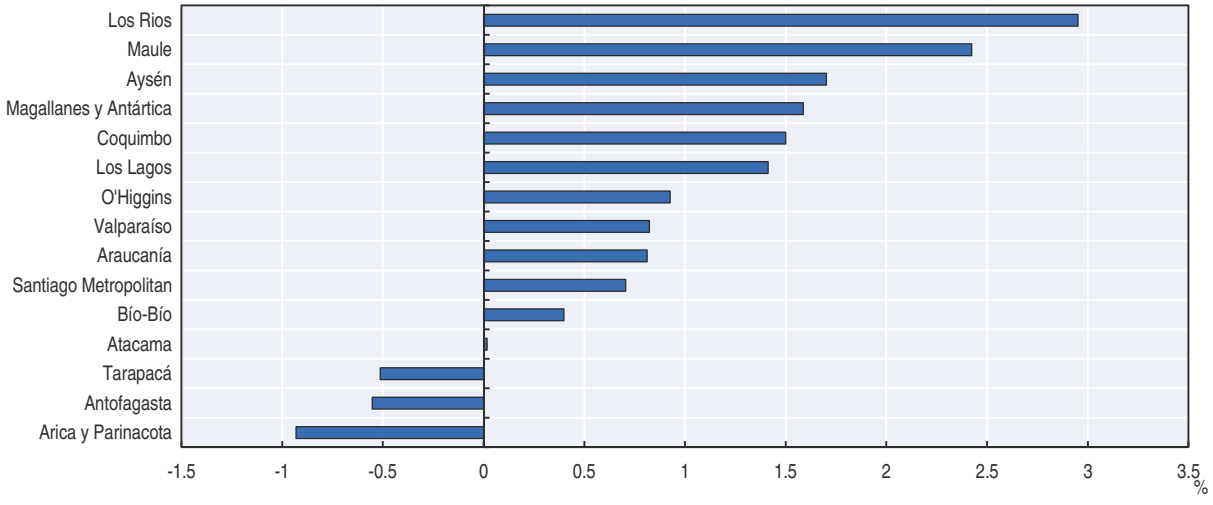


Source: OECD calculations based on data from Nueva Encuesta Nacional de Empleo [New National Survey of Employment], INE.

StatLink http://dx.doi.org/10.1787/888933424474

Figure 12.5. **Employment rate change over time, Chilean regions, 2010-15**

Average annual change (%)



Source: OECD calculations based on data from Nueva Encuesta Nacional de Empleo [New National Survey of Employment], INE.

StatLink http://dx.doi.org/10.1787/888933424484

Note

1. The number of people employed may be impacted by the fact that Chile saw an increase in part-time employment over this time period.

Czech Republic

This profile examines the health of local labour markets in the Czech Republic. It analyses data at the sub-regional level, which corresponds to the country's 13 regions (kraje) as well as the capital city (hlavní město).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In the Czech Republic, the number of people employed grew by an average annual rate of 0.5% between 2005 and 2013.[1] Figure 13.1 and 13.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.6% in Central Bohemia to a decline of 0.4% in Liberec.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 13.3 shows that in 2013, 6 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Six sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining two sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 13.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2000 and 2013.

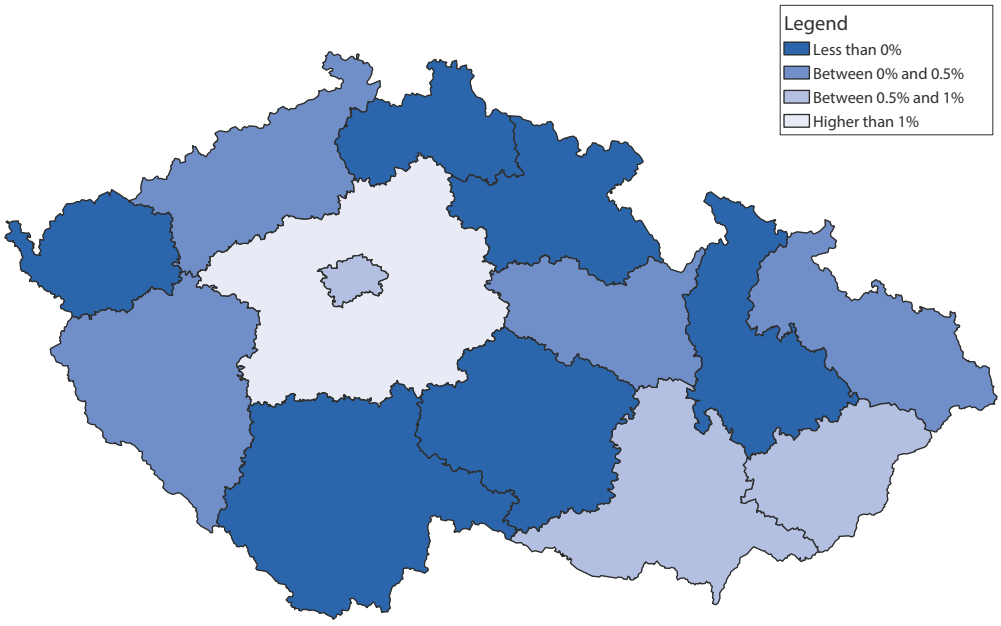
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-64 in 2015 are shown in Figure 13.4. Prague had the highest employment rate at 60.2% while Usti and Labem had the lowest employment rate at 52.8%. To highlight those places making the most progress over time, Figure 13.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In the Czech Republic, only one region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[2] This region is Plzen.

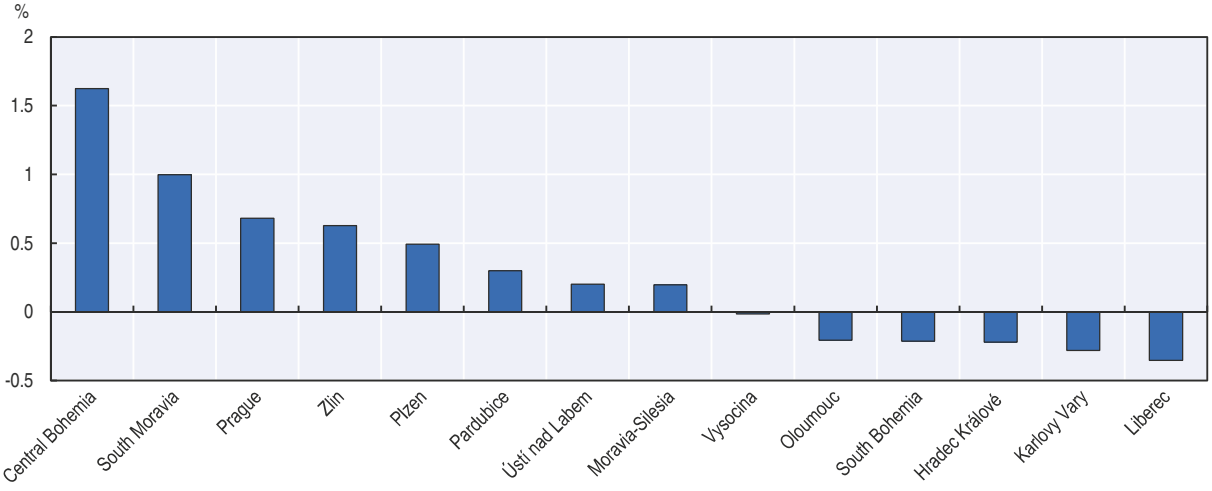
Figure 13.1. **Local employment growth over time, Czech sub-regions, 2005-13**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424490

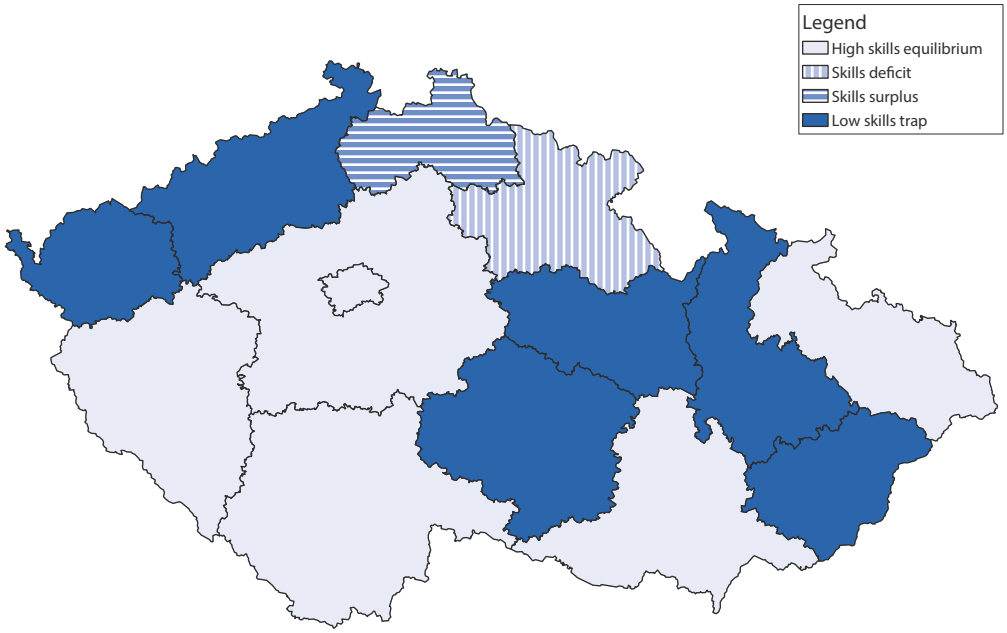
Figure 13.2. **Local employment growth over time: Ranking of Czech sub-regions, 2005-13**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424508

Figure 13.3. **Skills supply and demand, Czech sub-regions, 2013**



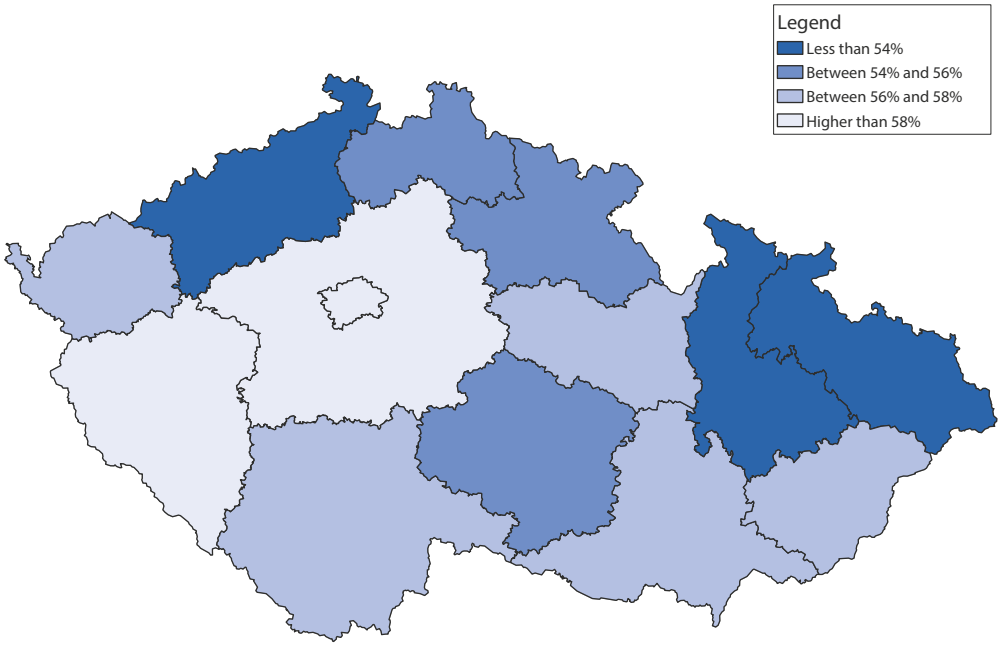
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts from the Czech Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424519

Table 13.1. **Places with the highest increase in skills supply and/or demand, Czech sub-regions, 2000-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Central Bohemia		• Prague
• Liberec		• South Moravia
• South Bohemia		• Vysocina

Figure 13.4. **Employment rate (population 15-64), Czech sub-regions, 2015**

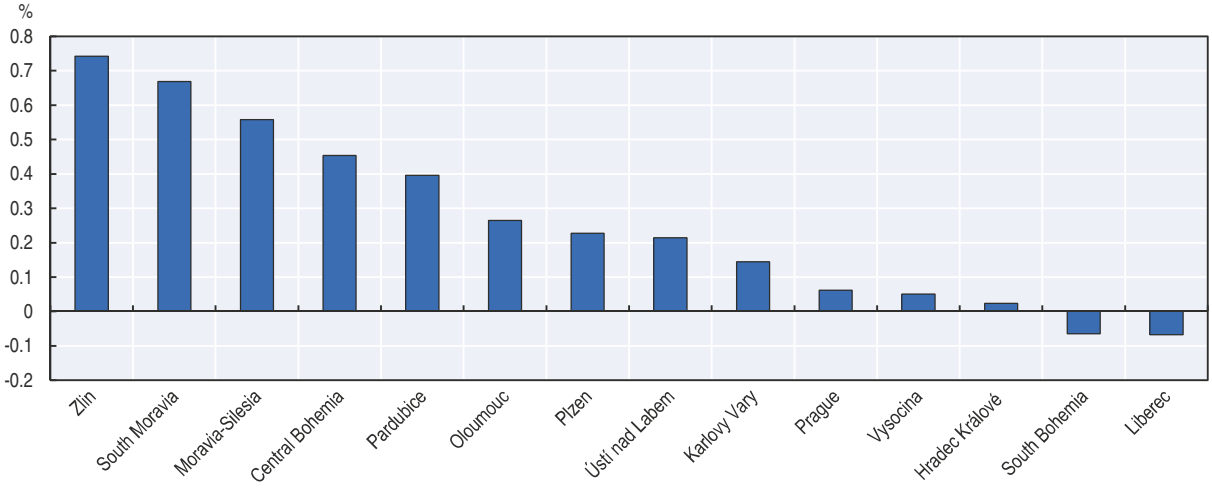


Source: OECD calculations based on data from the Labour Force Survey, Czech Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424525

Figure 13.5. **Employment rate change over time, Czech sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Czech Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424537

Notes

1. The number of people employed may be impacted by the fact that the Czech Republic saw an increase in part-time employment over this time period.
2. Employment growth: 2005-13; skills supply and demand: 2000-13; employment rate: 2005-15.

Denmark

This profile examines the health of local labour markets in Denmark. It analyses data at the regional level, which corresponds to the country's five regions (regioner).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Denmark, the number of people employed decreased by an average annual rate of 1.0% between 2008 and 2014. While the number of people employed has not yet recovered to 2008 levels, it has been increasing since 2012. Figures 14.1 and 14.2 show the average annual employment growth rate across regions during this time period. It ranges from a decrease of 0.3% in the Danish Capital Region to a decrease of 1.6% in Southern Denmark and Zealand.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GDP per worker) can provide further insights into the potential for future growth. Figure 14.3 shows that in 2014, 3 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Two regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. In Denmark there were no regions in a position of imbalance. Table 14.1 lists the regions with the highest increase in skills supply and/or demand between 2008 and 2014.

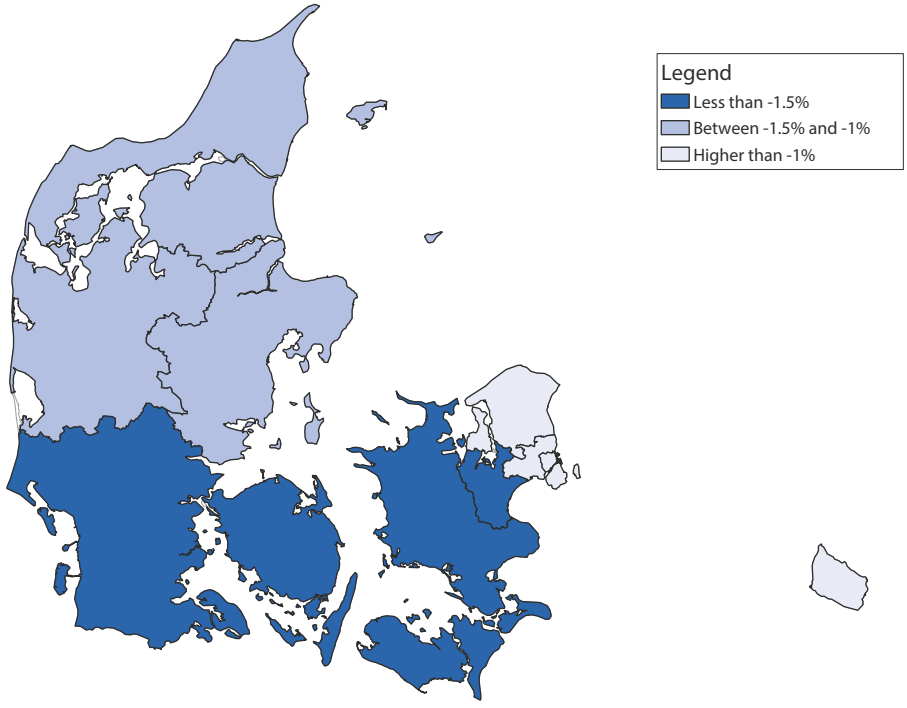
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2014 are shown in Figure 14.4. The Danish Capital Region had the highest employment rate at 72.5% while Northern Jutland had the lowest employment rate at 70.3%. To highlight those places making the most progress over time, Figure 14.5 shows the average annual change in the employment rate at the regional level between 2008 and 2014. All Danish regions show negative values reflecting the fact that the overall employment rate in Denmark decreased during this time period. However, it should be noted that since 2012, the employment rate has been increasing.

Places to watch: Moving towards more productive and inclusive economies

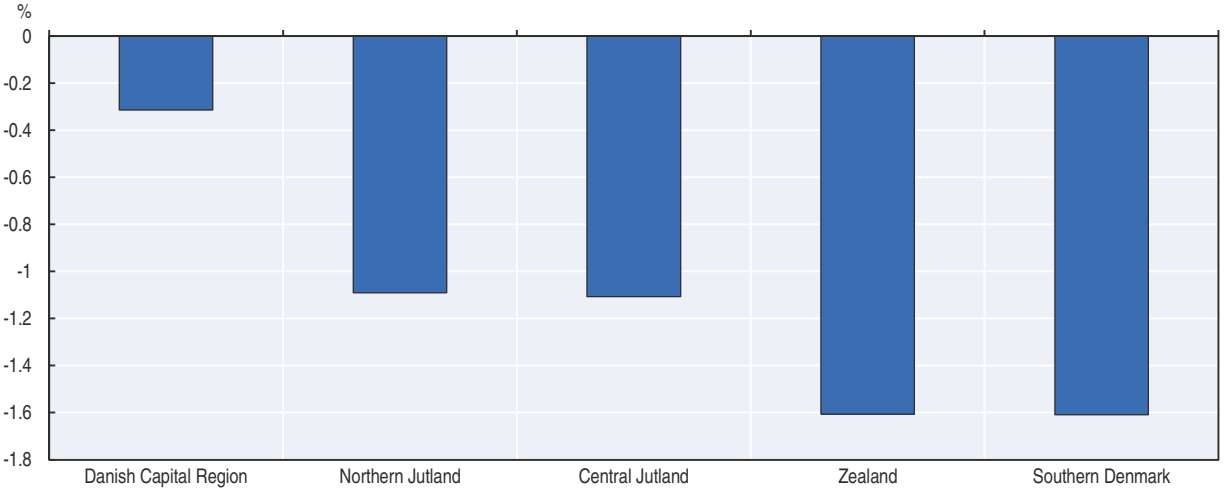
Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Denmark, only one region consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and changes in the employment rate between 2008 and 2014. This region is the Danish Capital Region.

Figure 14.1. **Local employment growth over time, Danish regions, 2008-14**
Average annual change (%)



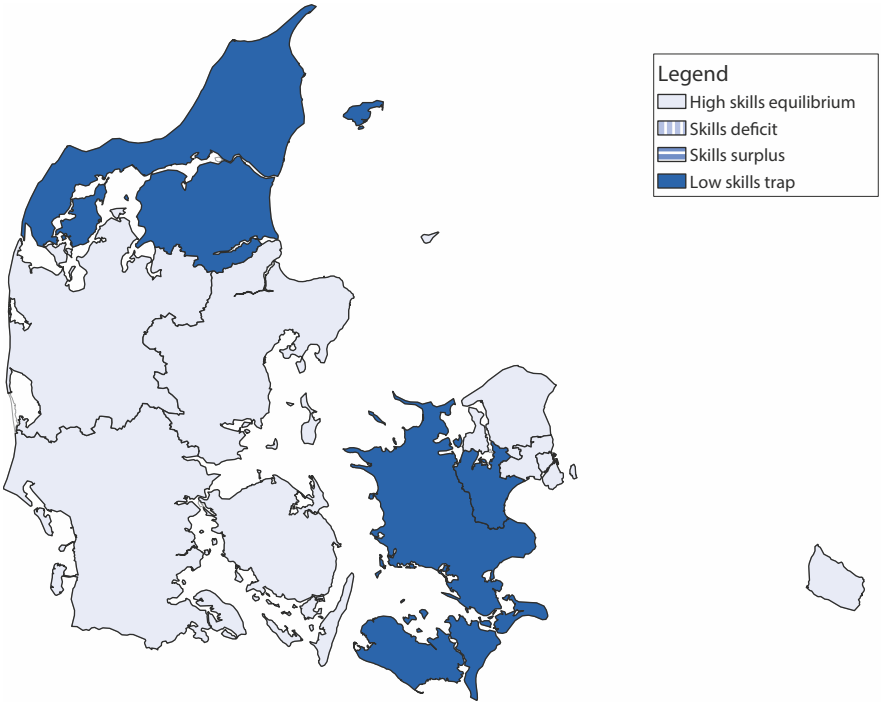
Source: OECD calculations based on data from Labour Force Survey, Statistics Denmark.
StatLink http://dx.doi.org/10.1787/888933424548

Figure 14.2. **Local employment growth over time: Ranking of Danish regions, 2008-14**
Average annual change (%)



Source: OECD calculations based on data from Labour Force Survey, Statistics Denmark.
StatLink http://dx.doi.org/10.1787/888933424558

Figure 14.3. **Skills supply and demand, Danish regions, 2014**



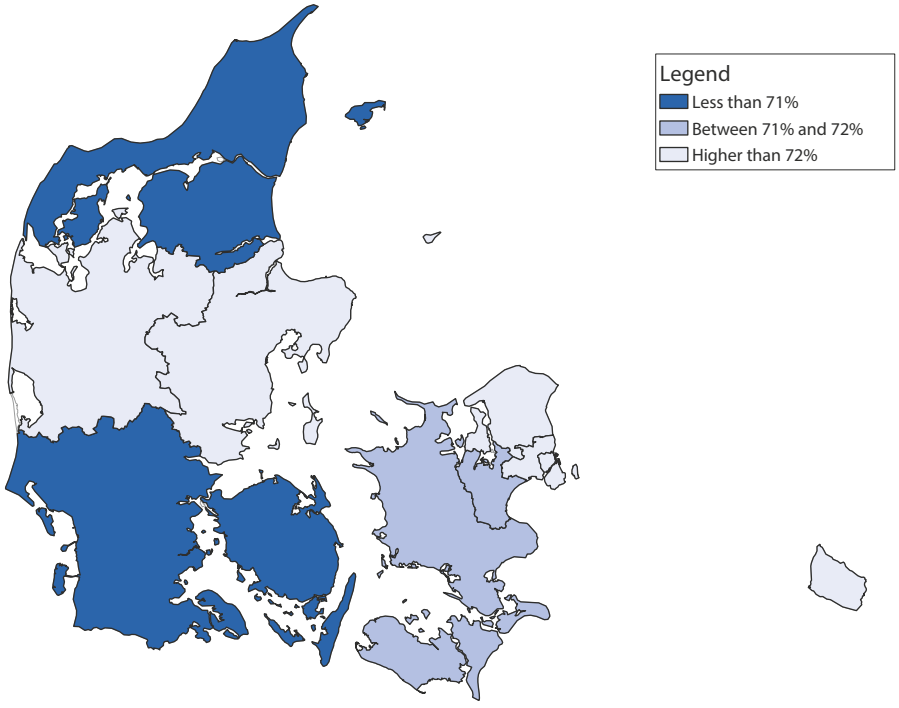
Source: OECD calculations based on data from Labour Force Survey and Regional Accounts, Statistics Denmark.

StatLink http://dx.doi.org/10.1787/888933424566

Table 14.1. **Places with the highest increase in skills supply and/or demand, Danish regions, 2008-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Central Jutland		• Danish Capital Region

Figure 14.4. **Employment rate (population 15-64), Danish regions, 2014**

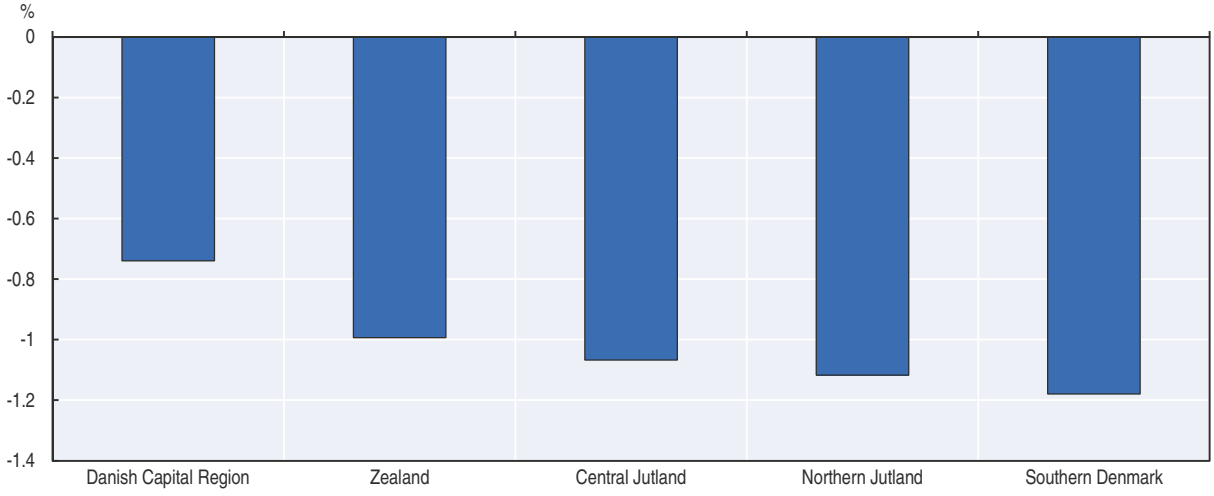


Source: Labour Force Survey, Statistics Denmark.

StatLink http://dx.doi.org/10.1787/888933424574

Figure 14.5. **Employment rate change over time, Danish regions, 2008-14**

Average annual change (%)



Source: Labour Force Survey, Statistics Denmark.

StatLink http://dx.doi.org/10.1787/888933424587

Estonia

This profile examines the health of local labour markets in Estonia. It analyses data at the sub-regional level, which corresponds to the country's counties (maakond) aggregated into five sub-regions.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Estonia, the number of people employed grew by an average annual rate of 0.4% between 2004 and 2014. Figures 15.1 and 15.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.2% in North Estonia to a decline of 1% in Northeast Estonia.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 15.3 shows that in 2013, 2 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. West Estonia was the only sub-region in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; this sub-region may find it hard to move to higher-skilled, higher value-added production and services. The remaining two sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 15.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2007 and 2013.

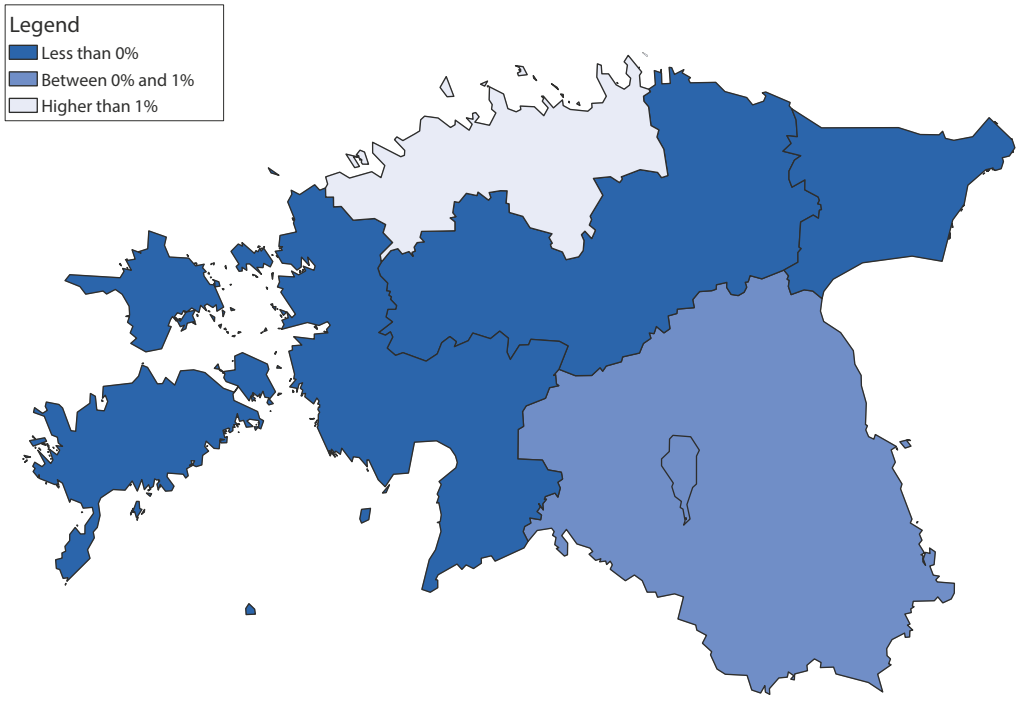
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-74 in 2014 are shown in Figure 15.4. North Estonia had the highest employment rate at 68.6% while Northeast Estonia had the lowest employment rate at 52.1%. To highlight those places making the most progress over time, Figure 15.5 shows the average annual change in the employment rate at the sub-regional level between 2004 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Estonia, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

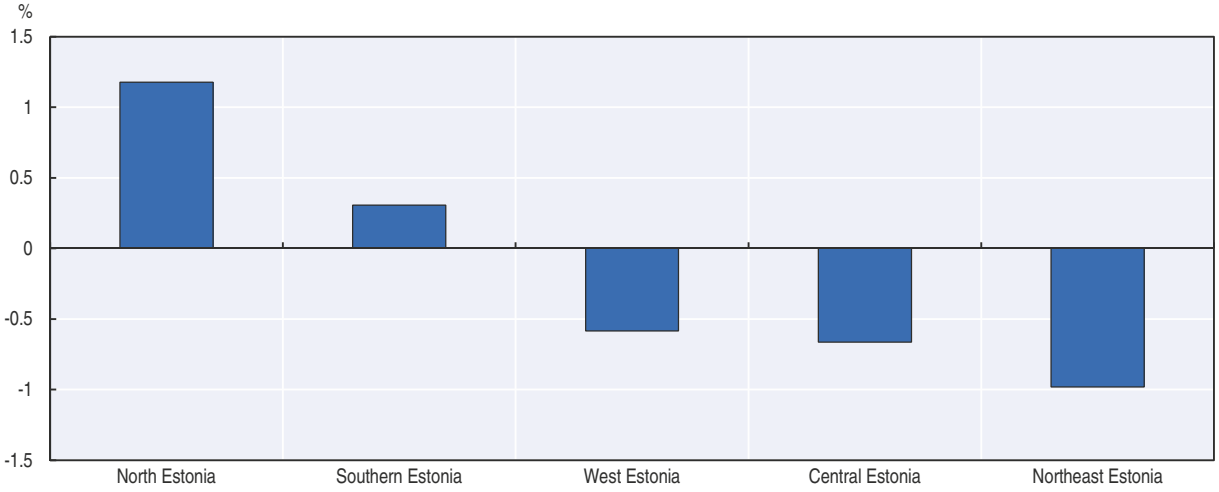
Figure 15.1. **Local employment growth over time, Estonian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424595

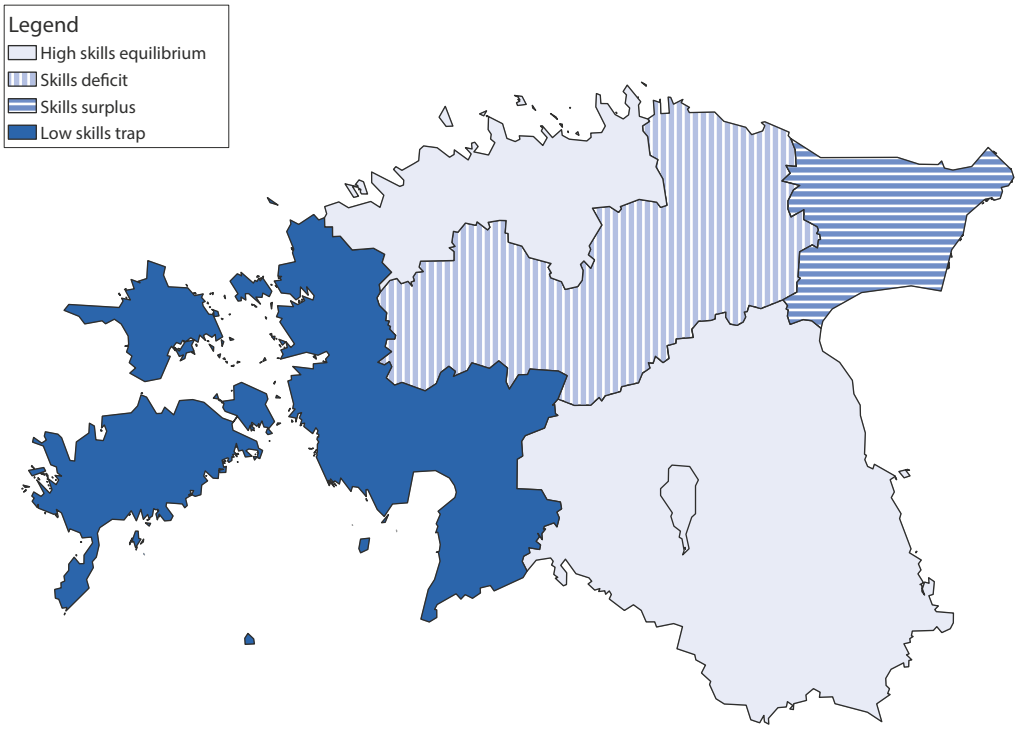
Figure 15.2. **Local employment growth over time: Ranking of Estonian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424600

Figure 15.3. **Skills supply and demand, Estonian sub-regions, 2013**



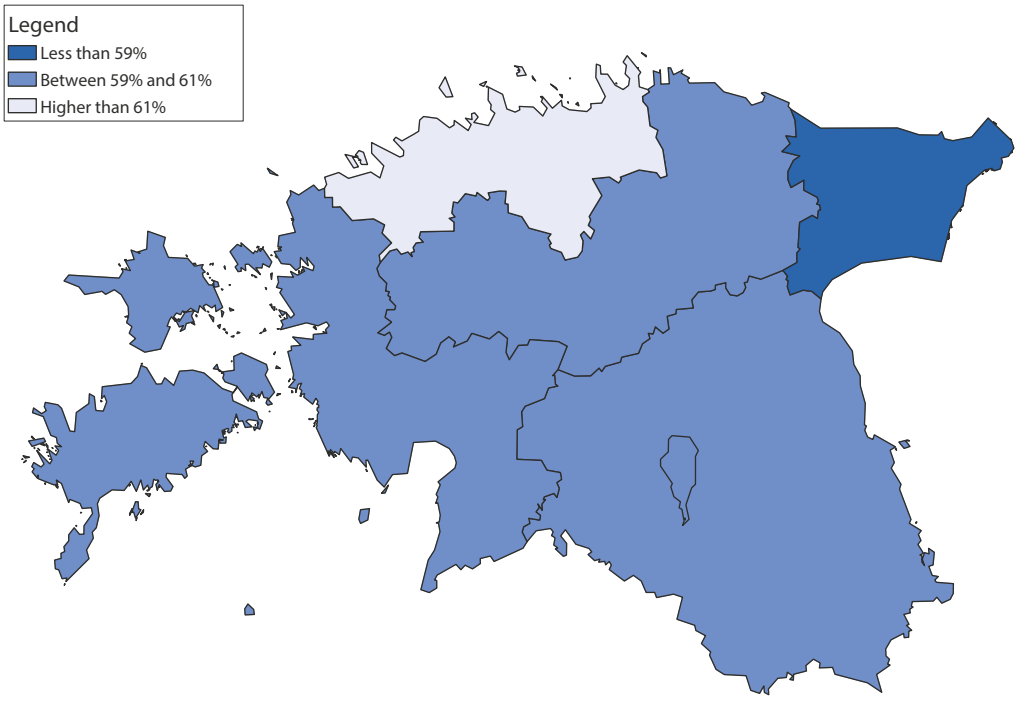
Source: OECD calculations based on data from Labour Force Survey and Regional Accounts, Statistics Estonia.

StatLink http://dx.doi.org/10.1787/888933424615

Table 15.1. **Places with the highest increase in skills supply and/or demand, Estonian sub-regions, 2007-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Central Estonia		• West Estonia

Figure 15.4. **Employment rate (population 15-74), Estonian sub-regions, 2014**

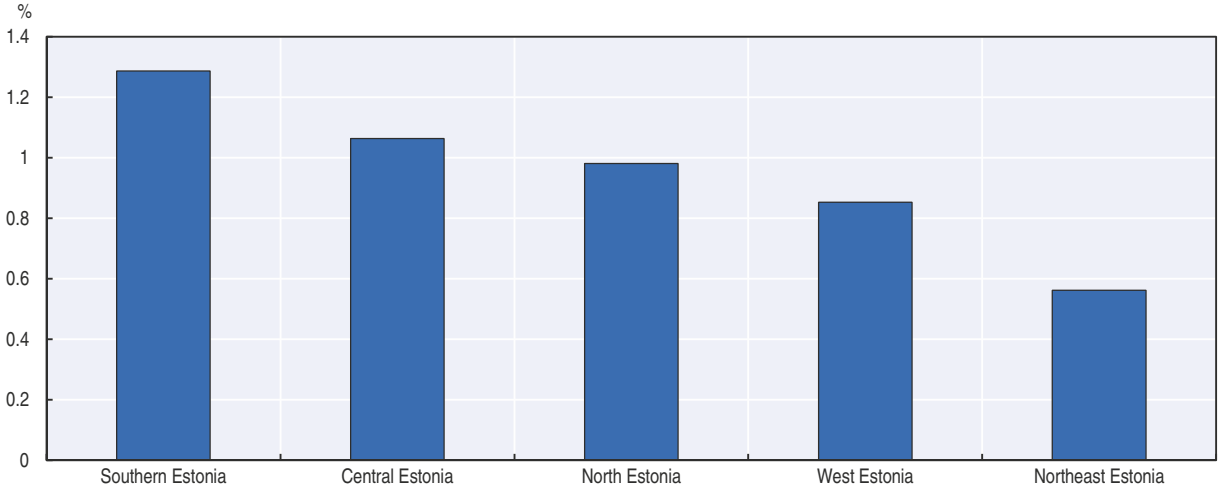


Source: OECD calculations based on data from the Labour Force Survey, Statistics Estonia.

StatLink http://dx.doi.org/10.1787/888933424622

Figure 15.5. **Employment rate change over time, Estonian sub-regions, 2004-14**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Estonia.

StatLink http://dx.doi.org/10.1787/888933424632

Finland

This profile examines the health of local labour markets in Finland. It analyses data at the sub-regional level, which corresponds to the country's 19 regions (maakunta).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Finland, the number of people employed grew by an average annual rate of 0.3% between 2004 and 2014. Figures 16.1 and 16.2 show the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 1.2% in Åland to a decline of 1.1% in Kymenlaakso. While Åland registered the highest employment growth rate, Helsinki-Uusimaa contributed more to national employment growth due to its larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 16.3 shows that in 2013, 6 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Seven sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining six sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 16.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2000 and 2013.

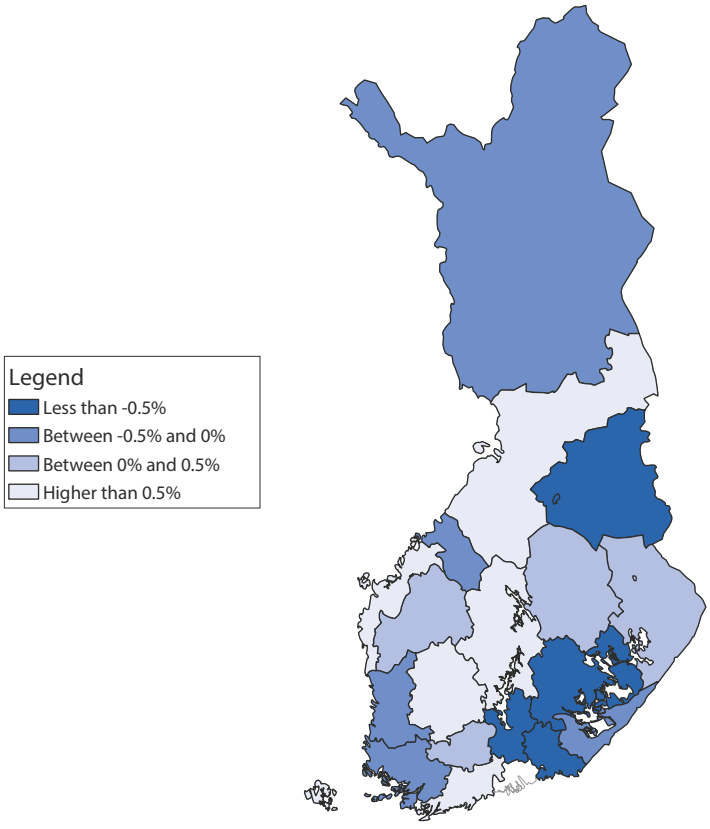
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 16.4 shows the sub-regional employment rate for the population 15-64 in 2015. Åland had the highest employment rate at 81.8% while Kainuu had the lowest employment rate at 60.2%. To highlight those places making the most progress over time, Figure 16.5 shows the 2005-15 average annual change in the employment rate at the sub-regional level. A number of regions show negative values, as the overall employment rate in Finland only grew slightly during this time.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. Table 16.2 shows the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

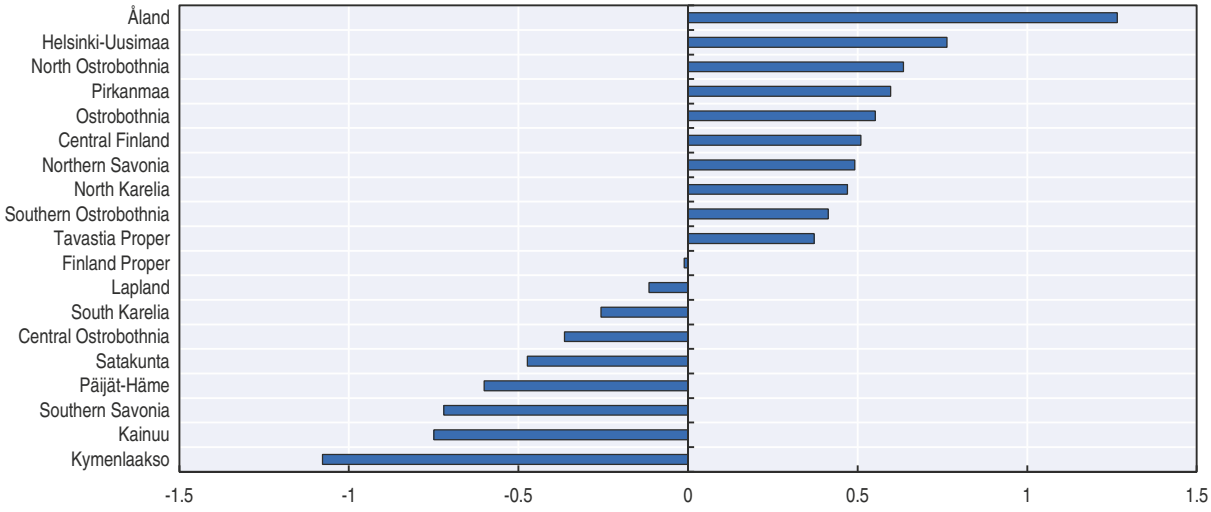
Figure 16.1. **Local employment growth over time, Finnish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424649

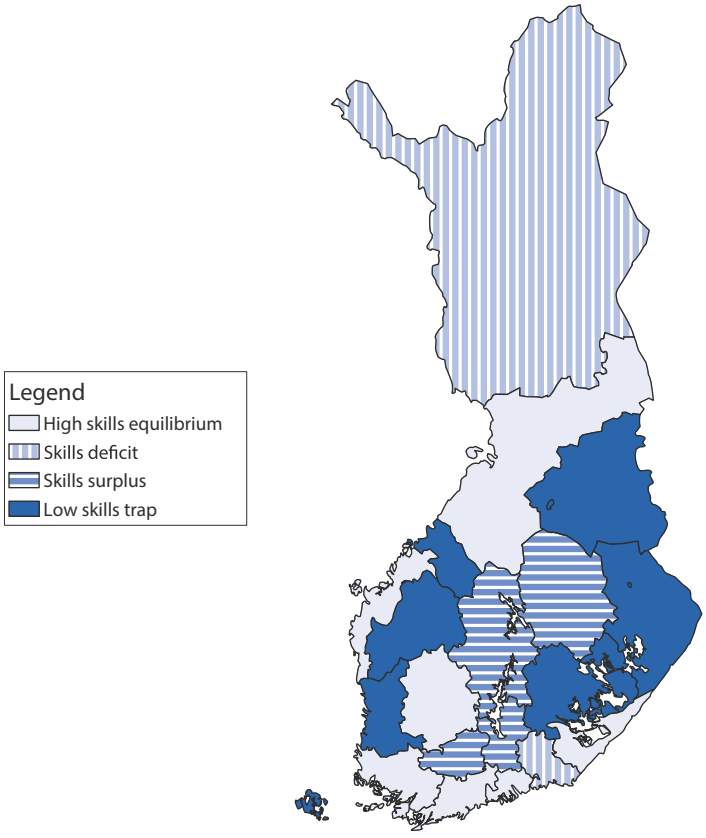
Figure 16.2. **Local employment growth over time: Ranking of Finnish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424651

Figure 16.3. **Skills supply and demand, Finnish sub-regions, 2013**



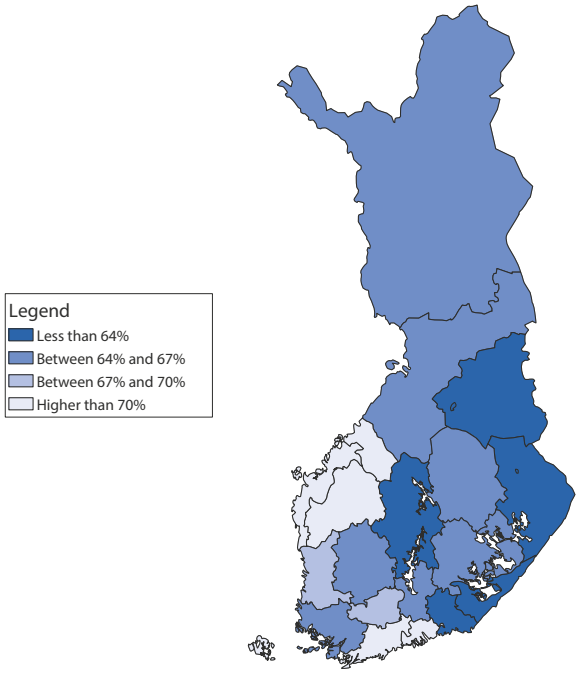
Source: OECD calculations based on data from the Register of Completed Education and Degrees, Employment statistics and Regional Accounts, Statistics Finland.

StatLink http://dx.doi.org/10.1787/888933424666

Table 16.1. **Places with the highest increase in skills supply and/or demand, Finnish sub-regions, 2000-13**

Increase in supply	Increase in supply and demand	Increase in demand
• North Karelia	• Central Ostrobothnia	• Southern Savonia
• South Karelia	• Southern Ostrobothnia	• Tavastia Proper

Figure 16.4. **Employment rate (population 15-64), Finnish sub-regions, 2015**

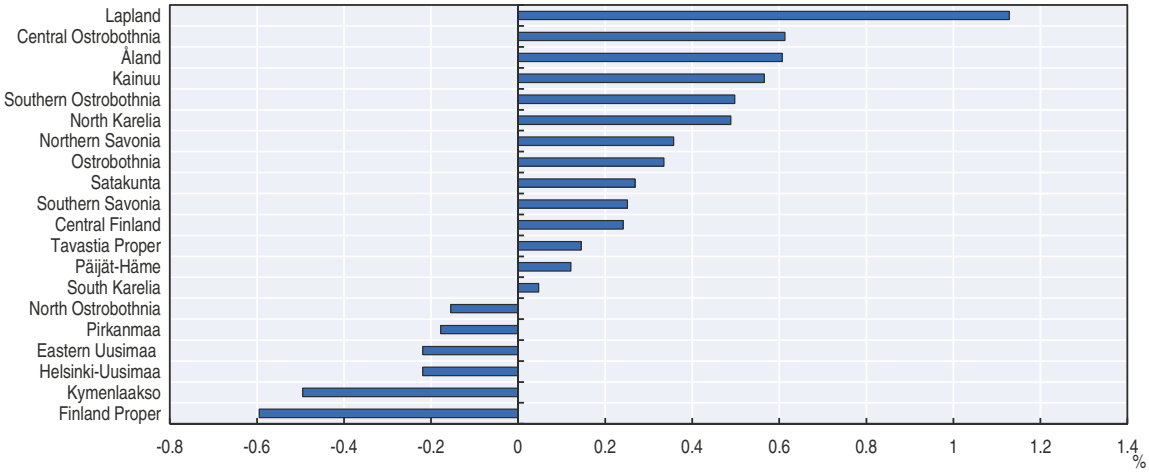


Source: OECD calculations based on data from the Labour Force Survey, Statistics Finland.

StatLink http://dx.doi.org/10.1787/888933424678

Figure 16.5. **Employment rate change over time, Finnish sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Finland.

StatLink http://dx.doi.org/10.1787/888933424687

Table 16.2. **Places to watch: Finnish sub-regions making progress across indicators**

- Ostrobothnia
- Pirkanmaa
- Southern Ostrobothnia

Note: Finnish sub-regions improving more than the median across employment growth (2004-14), skills supply and demand (2000-13), and employment rate (2005-15).

France

This profile examines the health of local labour markets in France. It analyses data at the sub-regional level, which corresponds to the 96 départments in metropolitan France.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In France, the number of people employed grew by an average annual rate of 0.5% between 2004 and 2014. Figure 17.1 shows the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 1.7% in Hérault to a decline of 1.6% in Haute-Corse. Figure 17.2 highlights the 20 sub-regions with the highest average annual employment growth rate.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 17.3 shows that in 2012, 37 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Thirty-six sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 23 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 17.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2006 and 2012.

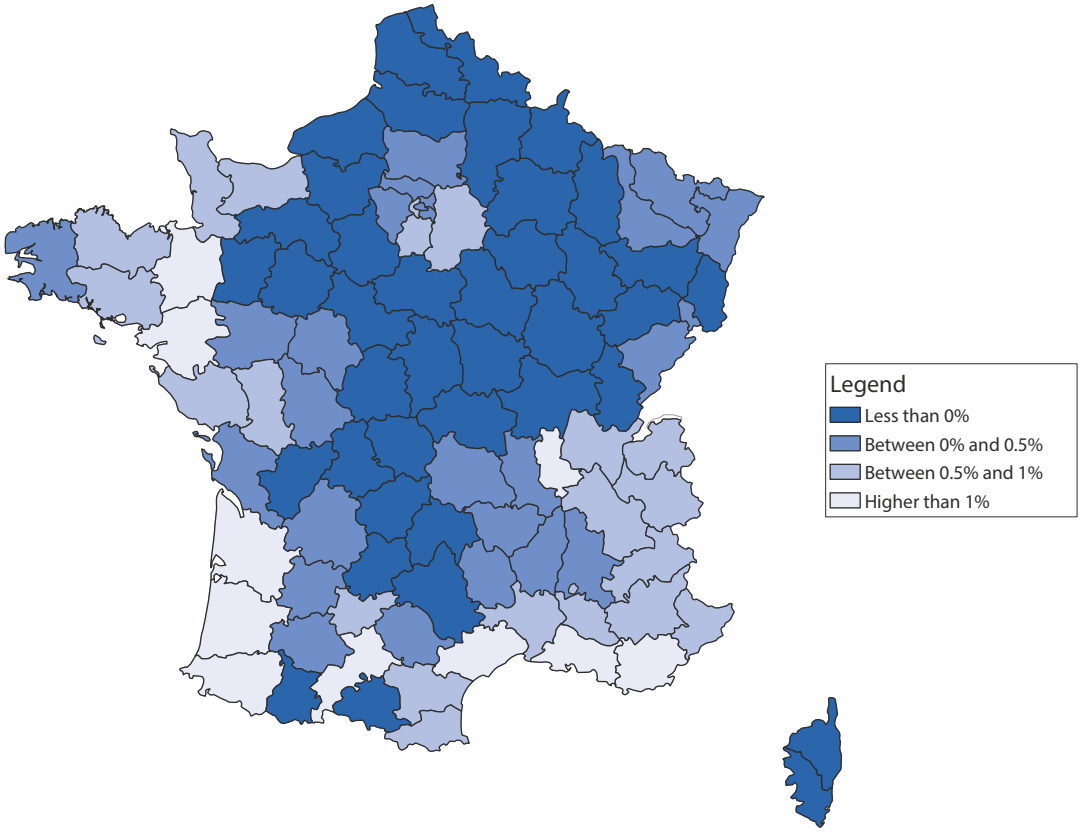
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 17.4 shows the sub-regional employment rate for the population 15 and over in 2014. Essonne had the highest employment rate at 56.4% while Haute-Corse had the lowest employment rate at 22.4%. To highlight those places making the most progress over time, Figure 17.5 shows the 20 sub-regions that had the highest average annual change in their employment rate between 2004 and 2014. All the other sub-regions show negative values, reflecting the fact that the overall employment rate in France slightly decreased during this time period.

Places to watch: Moving towards more productive and inclusive economies

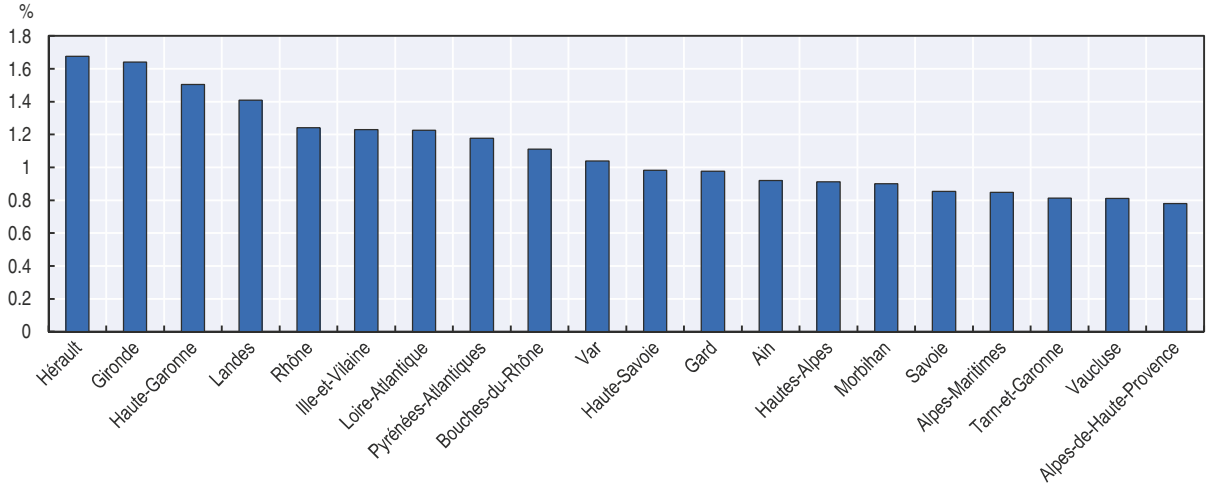
Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. Table 17.2 shows the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 17.1. **Local employment growth over time, French sub-regions, 2004-14**
Average annual change (%)



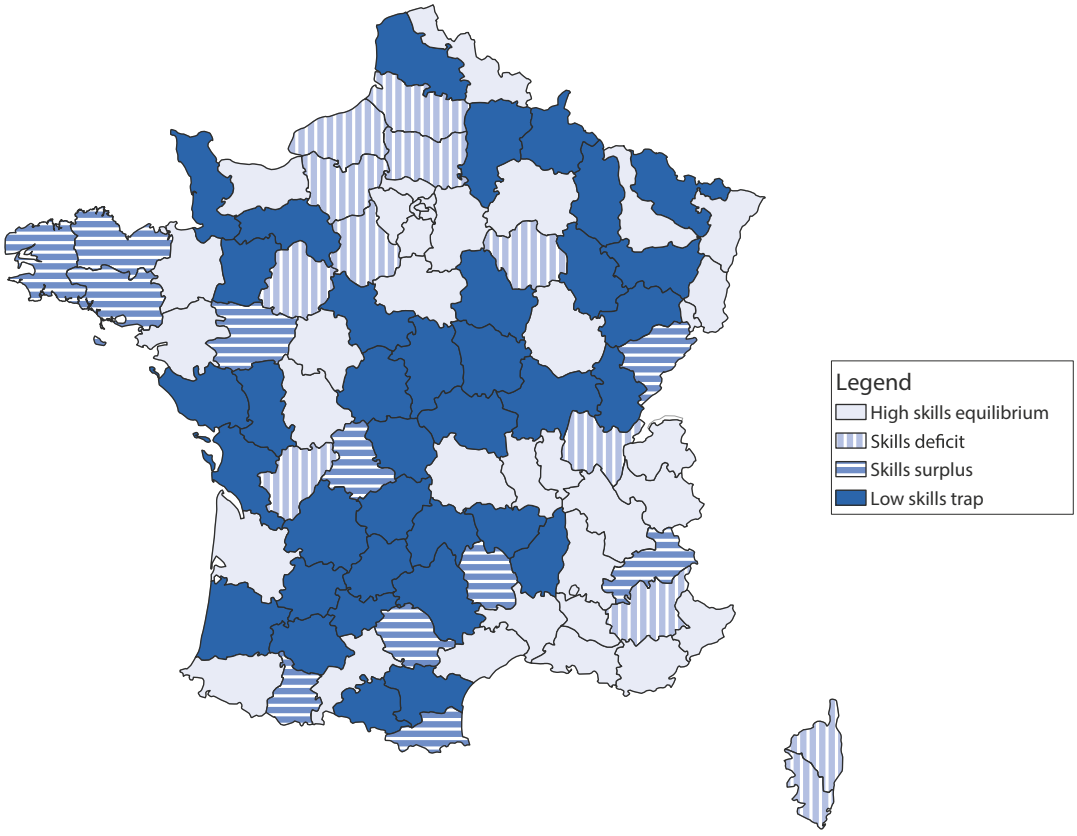
Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en.*
StatLink http://dx.doi.org/10.1787/888933424690

Figure 17.2. **Local employment growth over time: Best performing French sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en.*
StatLink http://dx.doi.org/10.1787/888933424709

Figure 17.3. **Skills supply and demand, French sub-regions, 2012**



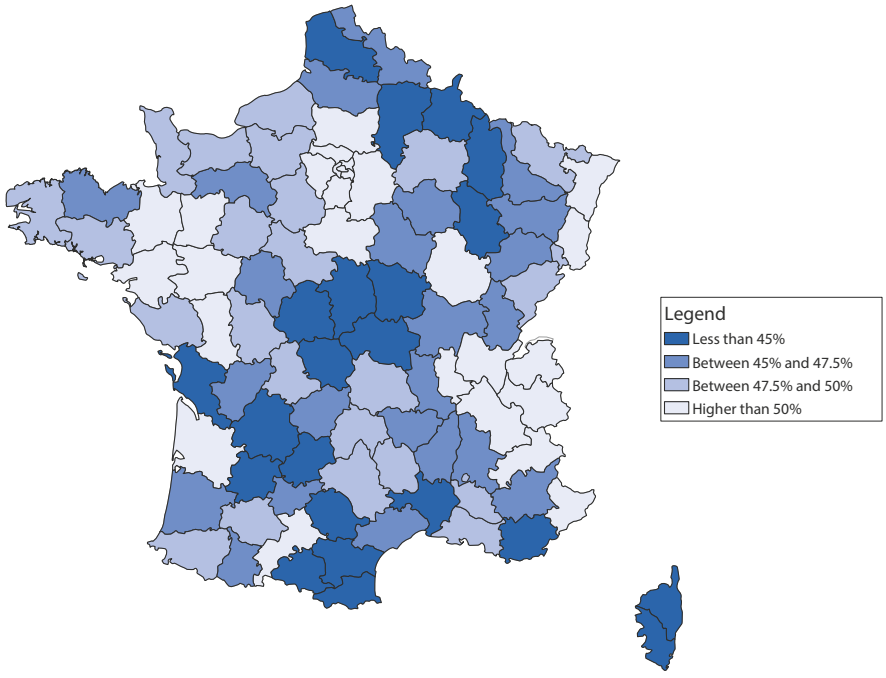
Source: OECD calculations based on data from the Population census, Insee and the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424719

Table 17.1. **Places with the highest increase in skills supply and/or demand, French sub-regions, 2006-12**

Increase in supply		Increase in supply and demand	Increase in demand	
• Ardèche	• Indre	• Gers	• Bas Rhin	• Seine et Marne Seine Saint Denis
• Aube	• Landes	• Mayenne	• Calvados	• Somme
• Charente	• Loire Atlantique		• Essonne	• Territoire de Belfort
• Creuse	• Lot		• Hauts de Seine	• Val de Marne
• Deux Sèvres	• Manche		• Hérault	• Val d'Oise
• Drôme	• Nièvre		• Loire	• Vienne
• Haute Loire	• Saône et Loire		• Paris	• Yvelines
• Haute Marne	• Vendée		• Rhône	
• Haute Vienne			• Sarthe	

Figure 17.4. **Employment rate (population 15 and over), French sub-regions, 2014**

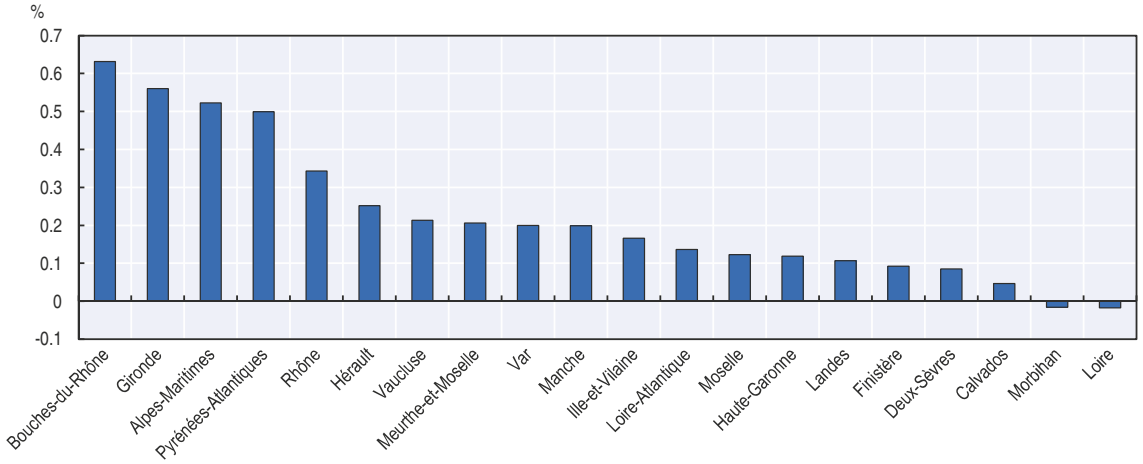


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424720

Figure 17.5. **Employment rate change over time: Best performing French sub-regions, 2004-14**

Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424734

Table 17.2. **Places to watch: French sub-regions making progress across indicators**

• Calvados	• Loire
• Dordogne	• Loire Atlantique
• Gironde	• Vaucluse
• Ille et Vilaine	• Vienne

Note: French sub-regions improving more than the median across employment growth (2004-14), skills supply and demand (2006-12), and employment rate (2004-14).

Germany

This profile examines the health of local labour markets in Germany. It analyses data at the regional level, which corresponds to the country's 16 länder.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Germany, the number of people employed grew by an average annual rate of 1.3% between 2004 and 2014.[1] Figures 18.1 and 18.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 1.8% in Bremen to an increase of 0.3% in Thüringen.

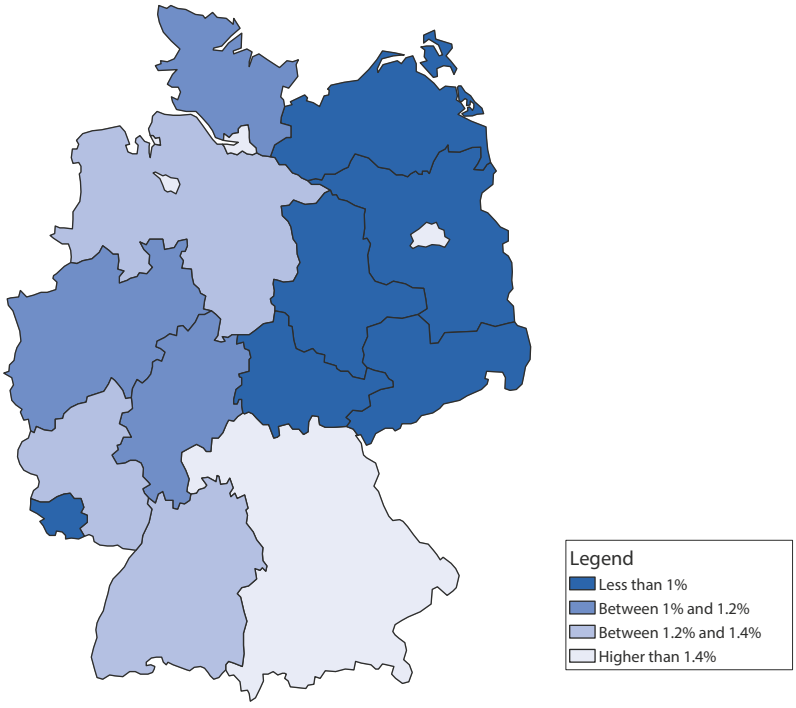
Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 18.3 shows that in 2011, 6 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Seven regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining three regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Trend data were not available for these indicators in Germany.

Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 18.4. Bavaria had the highest employment rate at 77.7% while Bremen had the lowest employment rate at 67.9%. To highlight those places making the most progress over time, Figure 18.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015.

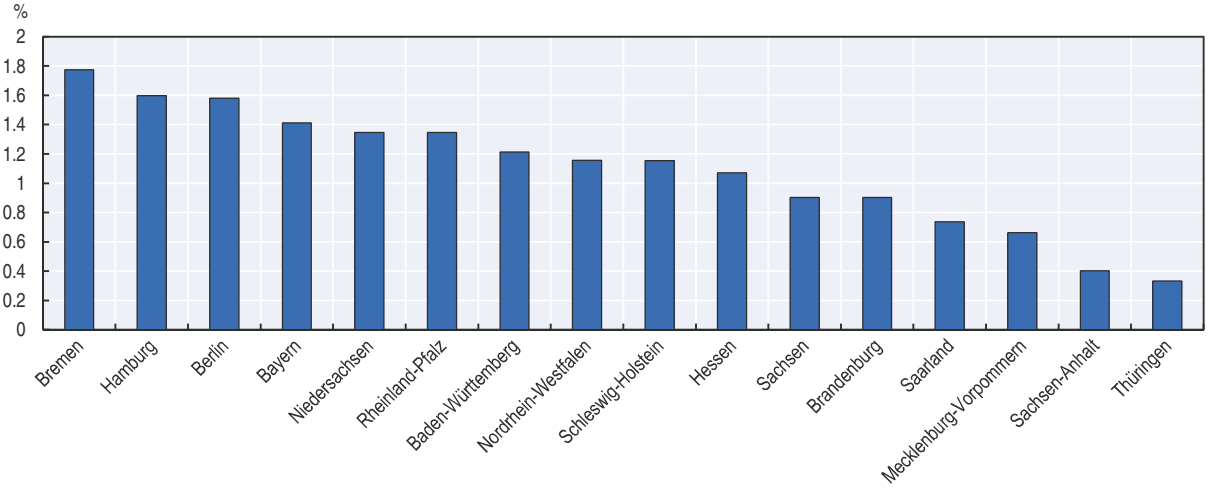
Figure 18.1. **Local employment growth over time, German regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424744

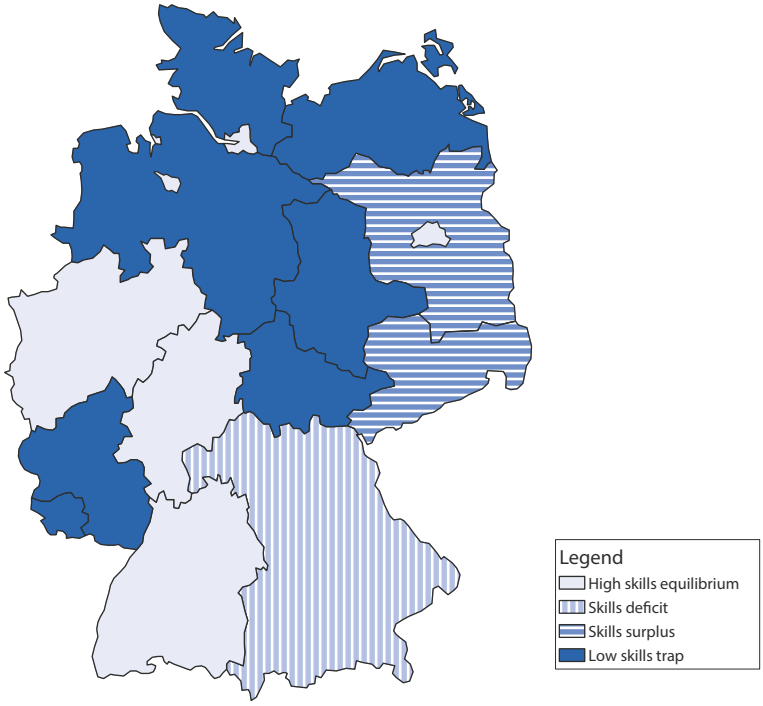
Figure 18.2. **Local employment growth over time: Ranking of German regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424751

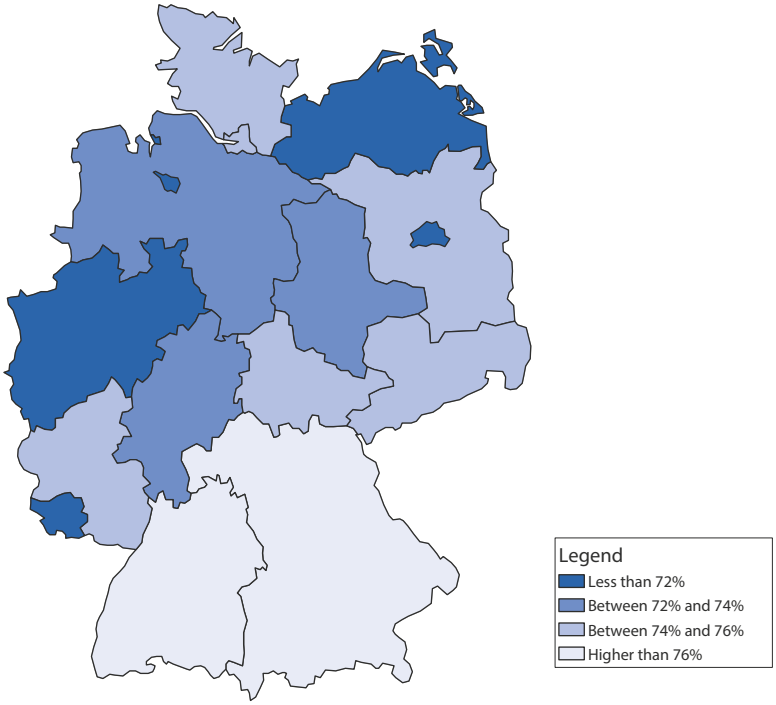
Figure 18.3. **Skills supply and demand, German regions, 2011**



Source: OECD calculations based on data from the Population Census and national accounts, German Statistical Offices of the Länder and the German Federal Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424760

Figure 18.4. **Employment rate (population 15-64), German regions, 2015**

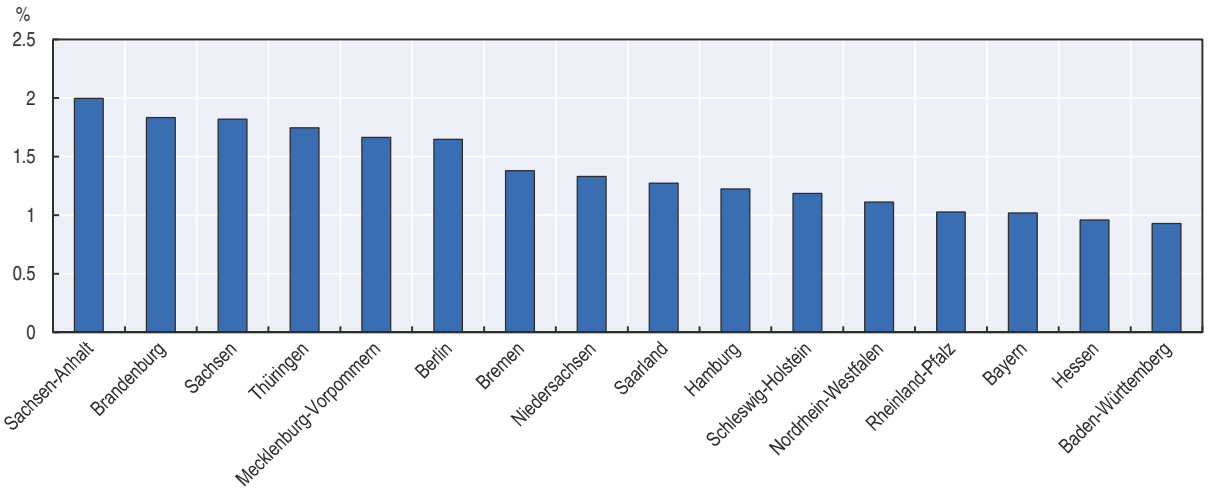


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933424775

Figure 18.5. **Employment rate change over time, German regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933424782

Note

1. The number of people employed may be impacted by the fact that Germany has a relatively high rate of part-time employment.

Greece

This profile examines the health of local labour markets in Greece. It analyses data at the sub-regional level, which corresponds to the country's 13 administrative regions (Perifereies).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Greece, the number of people employed decreased by an average annual rate of 2.2% between 2004 and 2014.[1] While the number of people employed has not yet recovered to 2008 levels, it has been increasing since 2013. Figures 19.1 and 19.2 show the average annual employment growth rate across sub-regions over this time. It ranges from a decrease of 0.6% in the South Aegean sub-region to a decrease of 2.7% in Thessaly.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 19.3 shows that in 2014, 2 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Two sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining nine sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 19.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2002 and 2014.

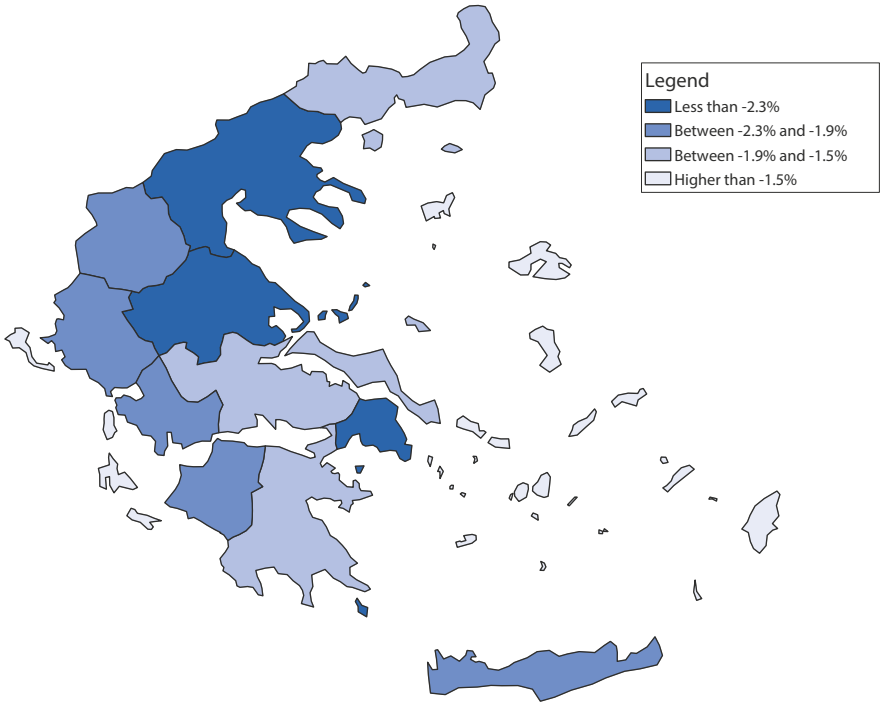
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 19.4 shows the sub-regional employment rate for the population 15-64 in 2015. The South Aegean sub-region had the highest employment rate at 57.9% while West Macedonia had the lowest employment rate at 45.7%. To show those places making the most progress over time, Figure 19.5 lists the average annual change in the employment rate between 2005 and 2015. All sub-regions show negative values, reflecting the fact that the overall employment rate in Greece decreased during this time period. However, the employment rate has been increasing since 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Greece, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods.

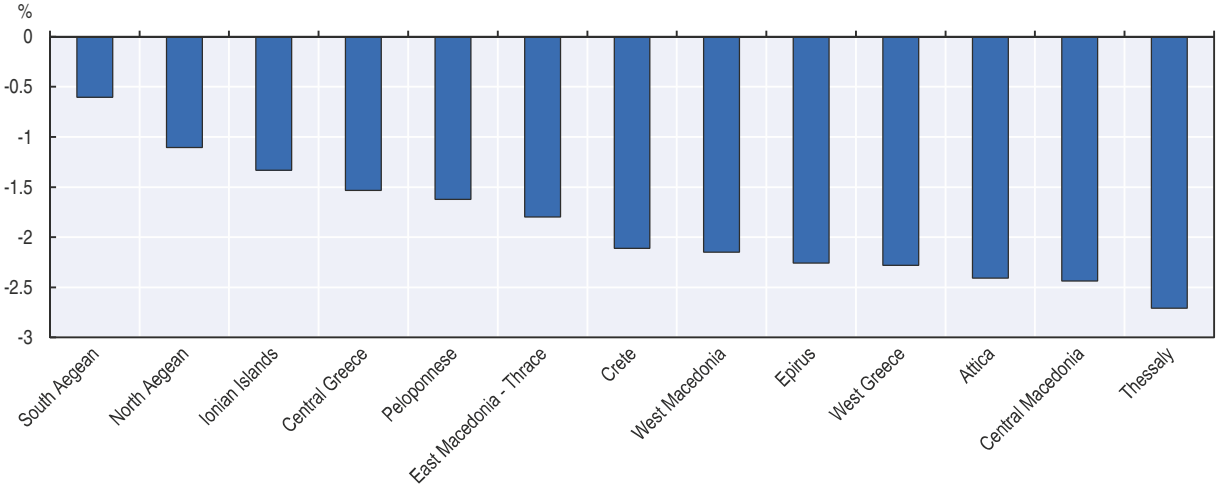
Figure 19.1. **Local employment growth over time, Greek sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424796

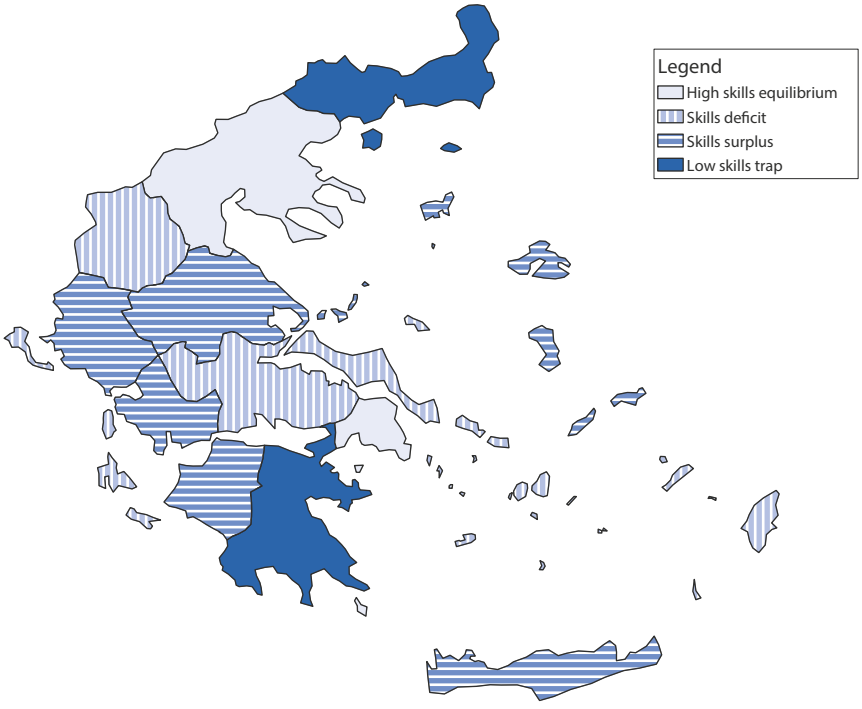
Figure 19.2. **Local employment growth over time: Ranking of Greek sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424801

Figure 19.3. **Skills supply and demand, Greek sub-regions, 2014**



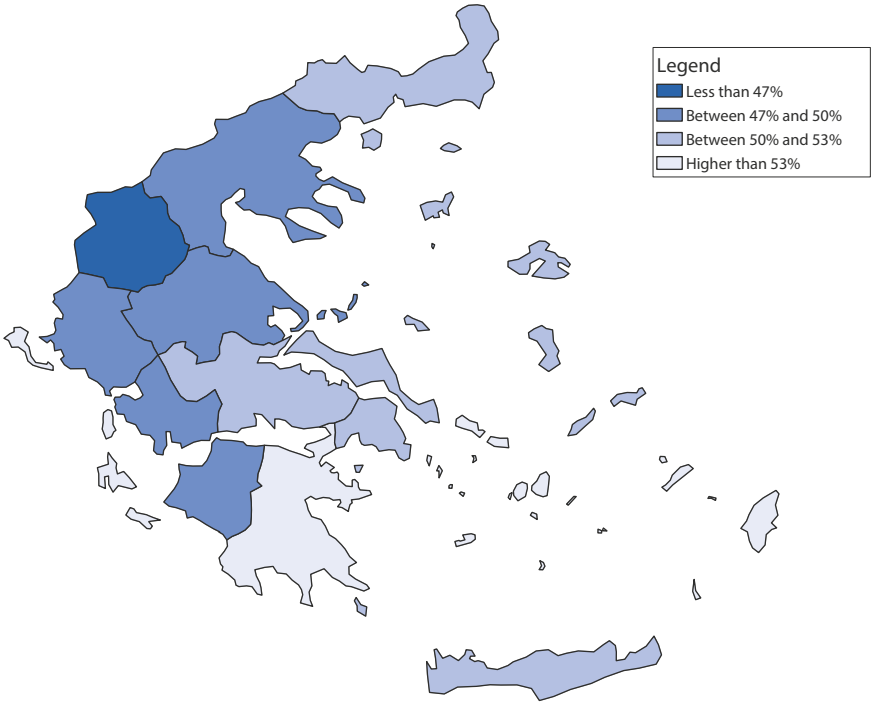
Source: OECD calculations based on data from the Labour Force Survey, Hellenic Statistical Authority and Eurostat.

StatLink http://dx.doi.org/10.1787/888933424817

Table 19.1. **Places with the highest increase in skills supply and/or demand, Greek sub-regions, 2002-14**

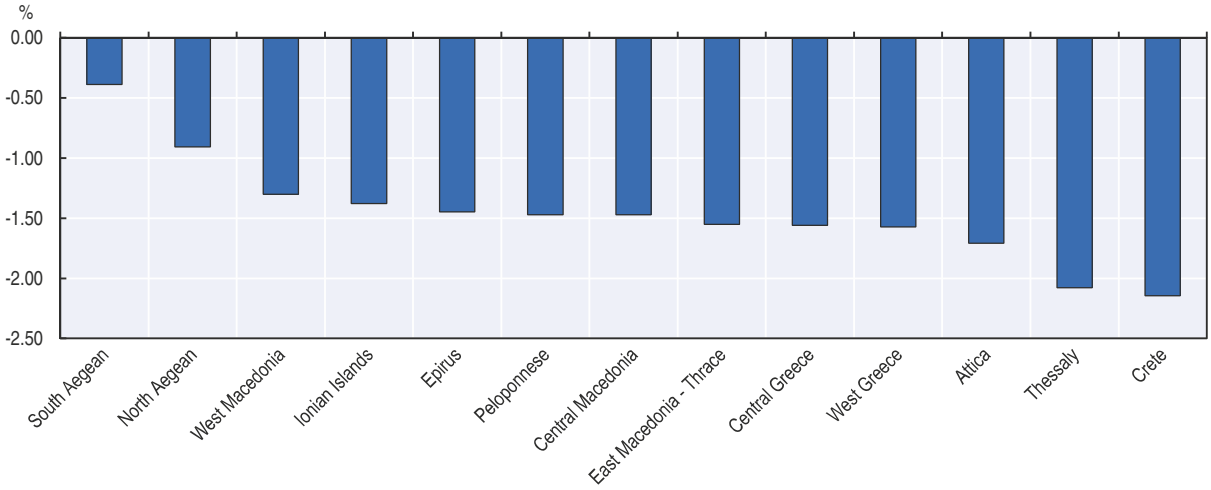
Increase in supply	Increase in supply and demand	Increase in demand
• Central Greece • North Aegean	• West Greece	• Attica • West Macedonia

Figure 19.4. **Employment rate (population 15-64), Greek sub-regions, 2015**



Source: Eurostat (2016), *Regional Labour Market Statistics* (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*
StatLink http://dx.doi.org/10.1787/888933424823

Figure 19.5. **Employment rate change over time, Greek sub-regions, 2005-15**
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*
StatLink http://dx.doi.org/10.1787/888933424835

Note

1. The number of people employed may be impacted by the fact that Greece saw an increase in part-time employment over this time period.

Hungary

This profile examines the health of local labour markets in Hungary. It analyses data at the sub-regional level, which corresponds to the country's 19 counties (megyék) and the capital city (főváros) of Budapest.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Hungary, the number of people employed grew by an average annual rate of 0.5% between 2004 and 2014. Figures 20.1 and 20.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.5% in Szabolcs-Szatmár-Bereg to a decrease of 0.7% in Zala. While the Szabolcs-Szatmár-Bereg sub-region registered the highest employment growth rate, Pest contributed more to national employment growth due to its larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 20.3 shows that in 2013, 7 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Six sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining seven sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 20.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2003 and 2013.

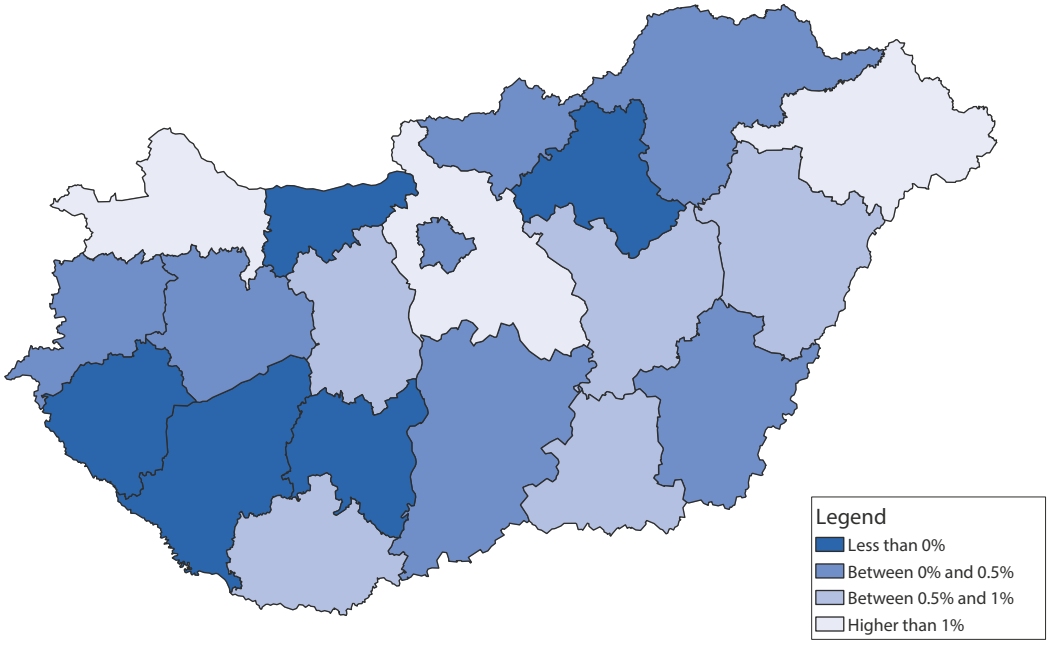
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-74 in 2015 are shown in Figure 20.4. Vas had the highest employment rate at 60.6% while Somogy had the lowest employment rate at 49.6%. To highlight those places making the most progress over time, Figure 20.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Hungary, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

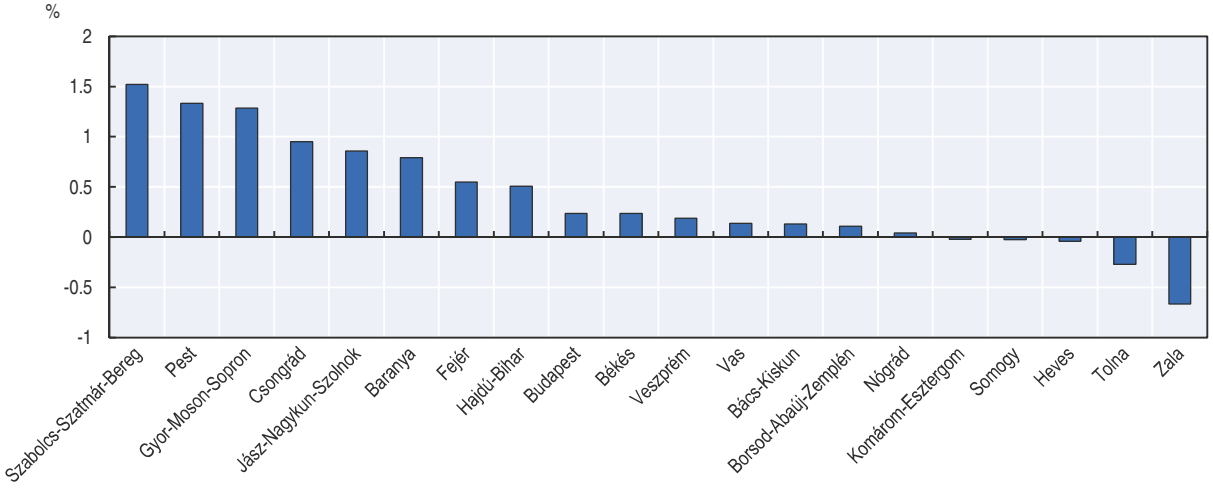
Figure 20.1. **Local employment growth over time, Hungarian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424841

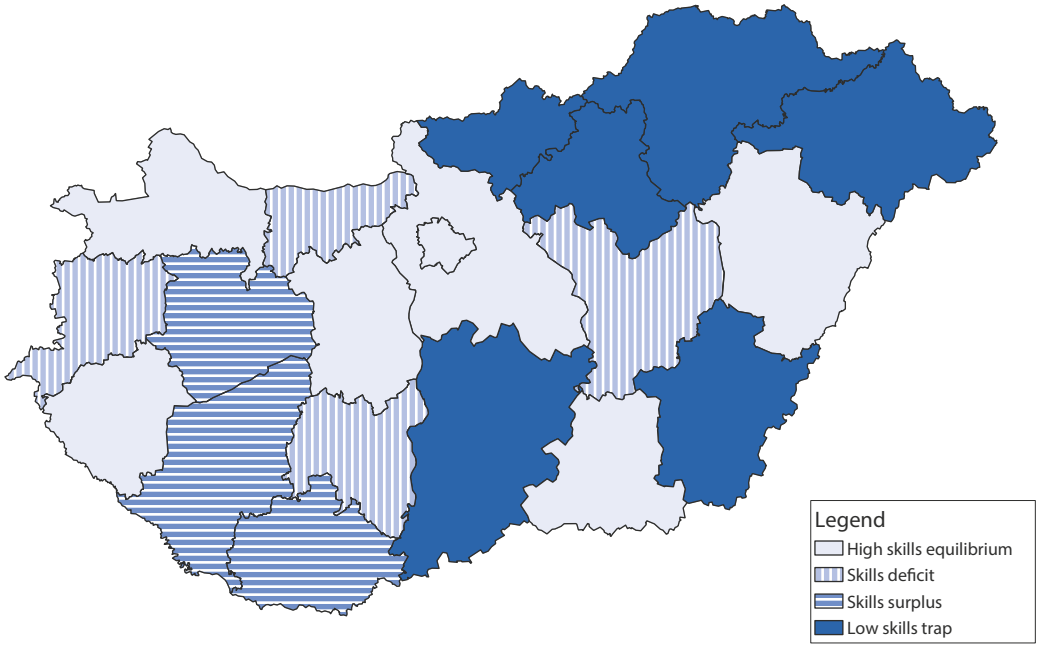
Figure 20.2. **Local employment growth over time: Ranking of Hungarian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424853

Figure 20.3. **Skills supply and demand, Hungarian sub-regions, 2013**



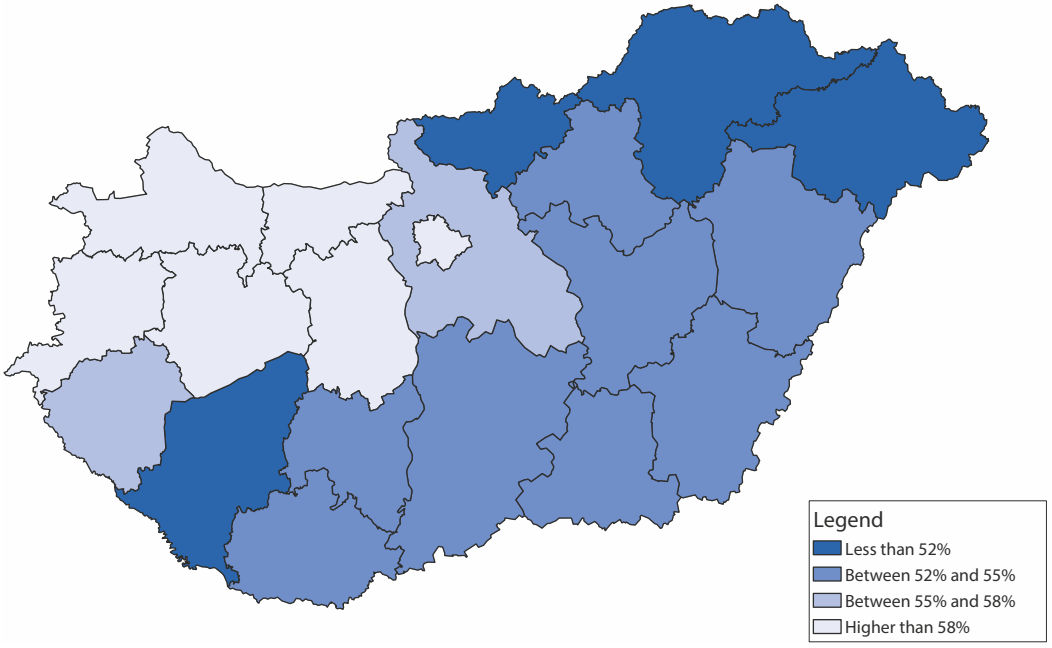
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Hungarian Central Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424866

Table 20.1. **Places with the highest increase in skills supply and/or demand, Hungarian sub-regions, 2003-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Bekes		• Budaepst
• Csongrad		• Fejer
• Nograd		• Jasz-Nagykun-Szolnok
• Pest		• Tolna

Figure 20.4. **Employment rate (population 15-74), Hungarian sub-regions, 2015**

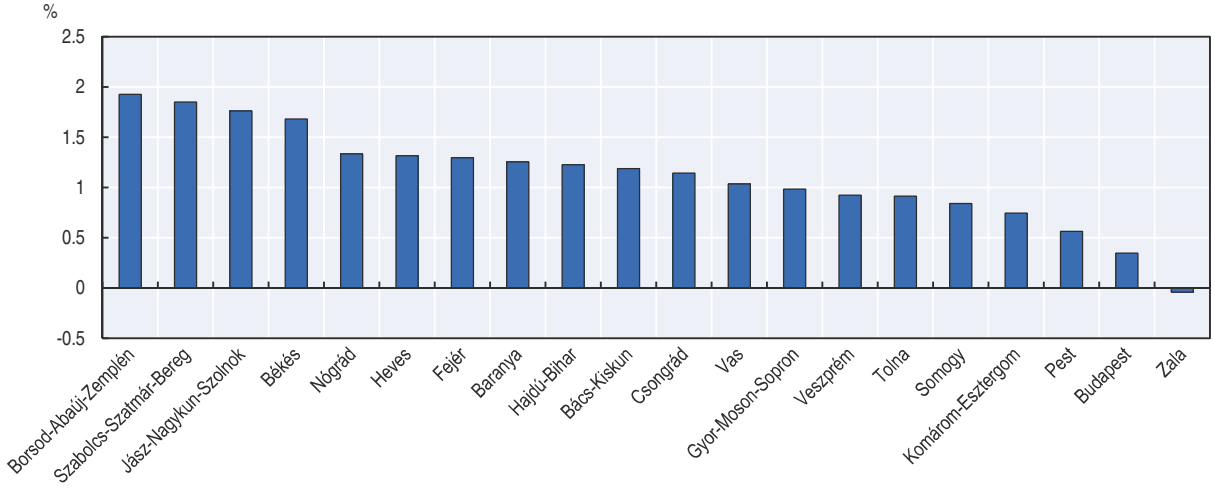


Source: Labour Force Survey, Hungarian Central Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424872

Figure 20.5. **Employment rate change over time, Hungarian sub-regions, 2005-15**

Average annual change (%)



Source: Labour Force Survey, Hungarian Central Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424889

Ireland

This profile examines the health of local labour markets in Ireland. It analyses data at the sub-regional level, which corresponds to the eight NUTS3 statistical regions defined by Eurostat.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Ireland, the number of people employed grew by an average annual rate of 0.2% between 2004 and 2014.[1] Figures 21.1 and 21.2 show the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 0.9% in the Mid-East to a decline of 0.6% in the Mid-West. While the Mid-East and Midlands sub-regions registered the highest employment growth rates, Dublin contributed more to national employment growth due to its larger population size.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 21.3 shows that in 2014, 3 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 2 sub-regions were in a position of imbalance (skills surplus or deficit). Table 21.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2010 and 2014.

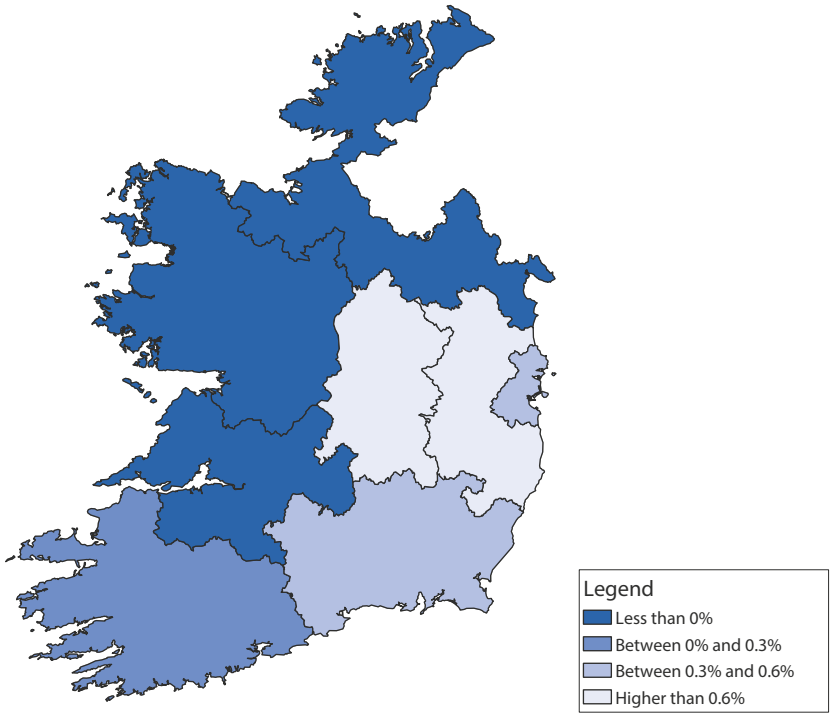
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about labour market inclusiveness. Figure 21.4 shows the 2015 sub-regional employment rate for the population 15 and over. Dublin had the highest employment rate (58.1%) while the Border region had the lowest (50.7%). Figure 21.5 shows the average annual change in the employment rate at the sub-regional level between 2006 and 2015. All sub-regions show negative values, reflecting the fact the overall employment rate in Ireland decreased during this time period. However, it should be noted that since 2013, the employment rate has been increasing.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In Ireland, two sub-regions consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[2] These sub-regions were Dublin and the South-East.

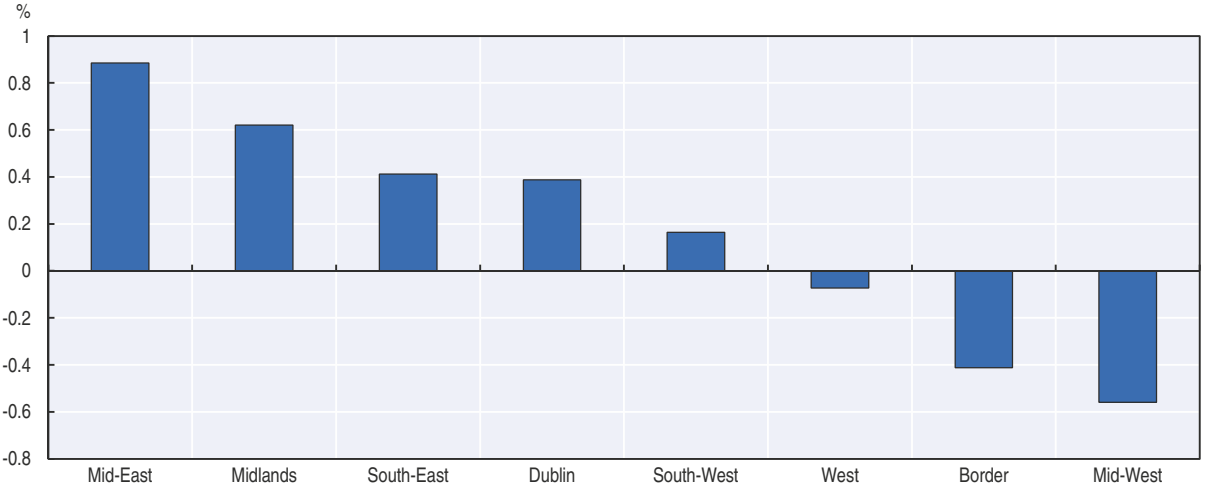
Figure 21.1. **Local employment growth over time, Irish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424890

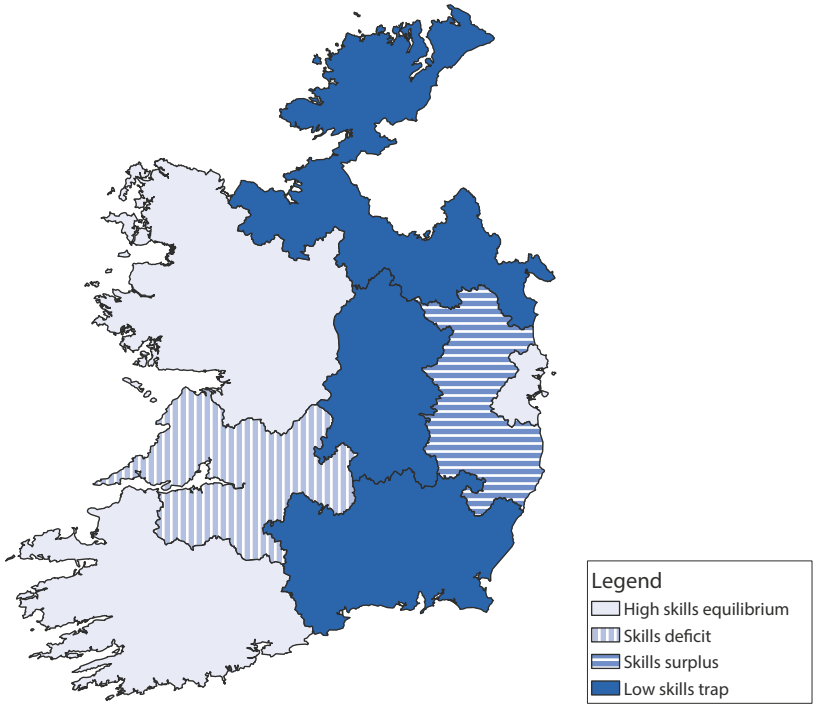
Figure 21.2. **Local employment growth over time: Ranking of Irish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424900

Figure 21.3. **Skills supply and demand, Irish sub-regions, 2014**



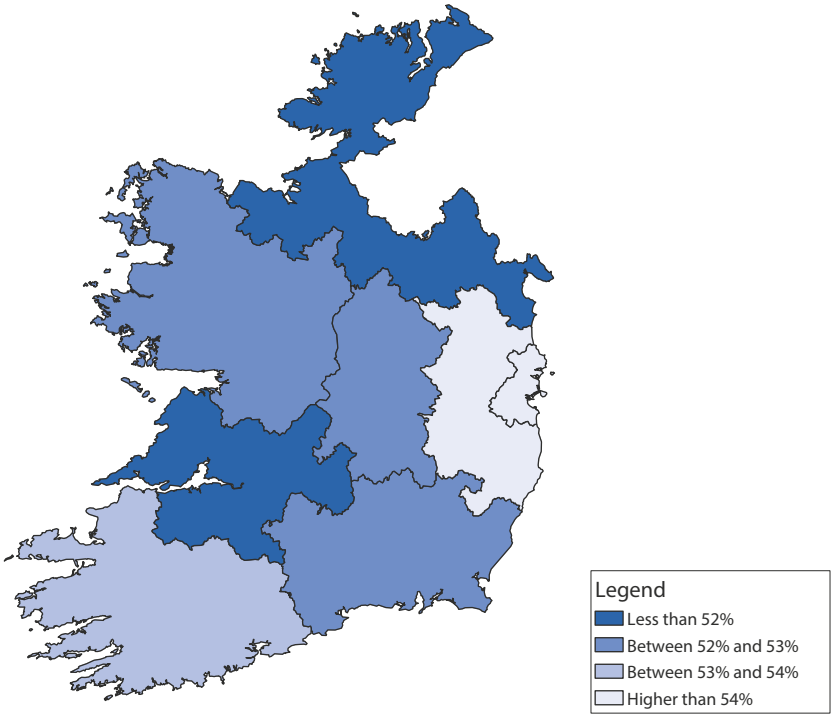
Source: OECD calculations based on data from the Quarterly National Household Survey (QNHS) and Regional Accounts, Central Statistics Office.

StatLink http://dx.doi.org/10.1787/888933424911

Table 21.1. **Places with the highest increase in skills supply and/or demand, Irish sub-regions, 2010-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Dublin • Mid-West		• Border • South-East

Figure 21.4. **Employment rate (population 15 and over), Irish sub-regions, 2015**

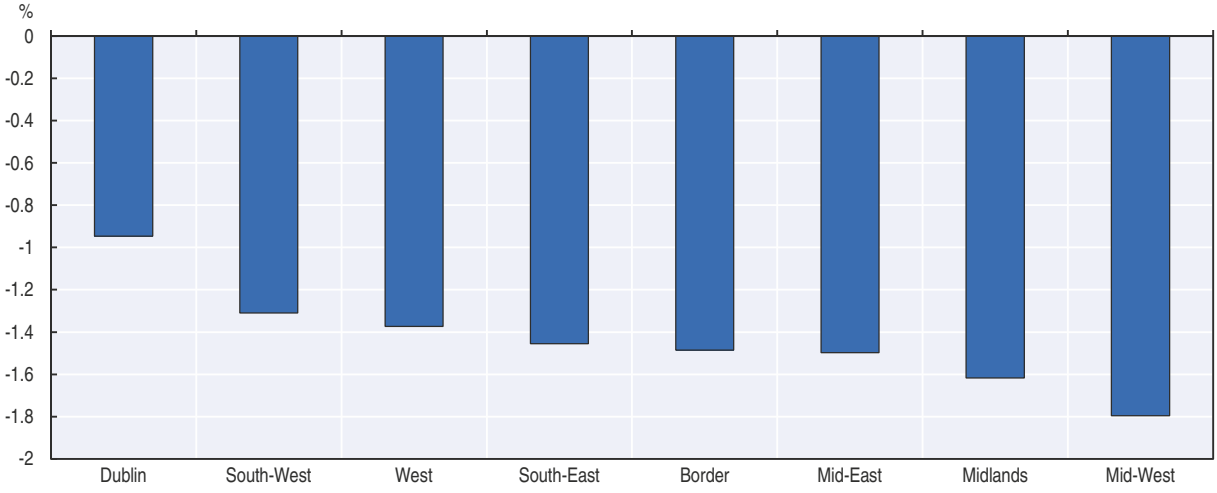


Source: OECD calculations based on data from Eurostat and the Central Statistical Office.

StatLink http://dx.doi.org/10.1787/888933424920

Figure 21.5. **Employment rate change over time, Irish sub-regions, 2006-15**

Average annual change (%)



Source: OECD calculations based on data from Eurostat and the Central Statistical Office, Ireland.

StatLink http://dx.doi.org/10.1787/888933424939

Notes

1. The number of people employed may be impacted by the fact that Ireland has a relatively high rate of part-time employment.
2. Employment growth: 2004-14; skills supply and demand: 2010-14; employment rate: 2006-15

Israel

This profile examines the health of local labour markets in Israel.[1] *It analyses data at the sub-regional level, which corresponds to the country's 14 sub-districts (mehozot). Data for the Golan sub-district was not available for the indicators included in the analysis. Trend data were not available due to a change in the Labour Force Survey methodology in 2012.*[2]

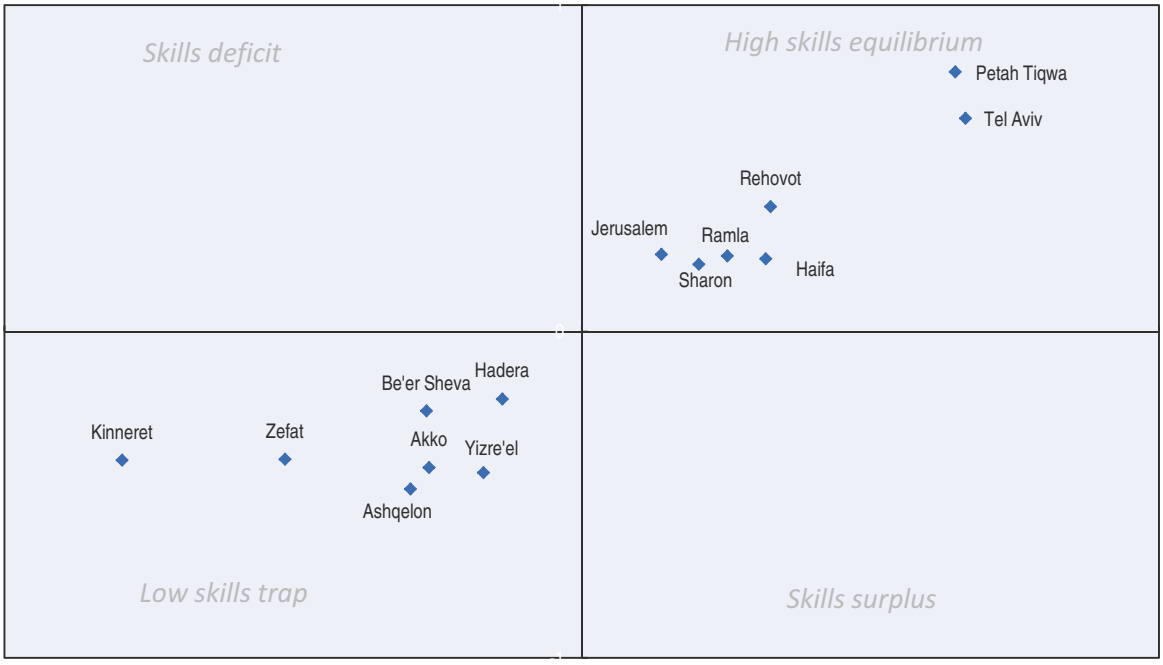
Skills supply and demand

The level of skills supply (as measured by the percentage of the labour force with tertiary education, see Figure 22.2) and demand (as measured by the percentage of medium- and high-skilled occupations, see Figure 22.3) can provide further insights into the quality of local job creation and the potential for future growth. Figure 22.1 shows that in 2013, 7 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Seven sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. In Israel there were no sub-regions in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit).

Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15 and over in 2013 are shown in Figure 22.4. Ramla had the highest employment rate at 64.5% while Jerusalem had the lowest employment rate at 45.9%.

Figure 22.1. **Skills supply and demand, Israeli sub-regions, 2013**

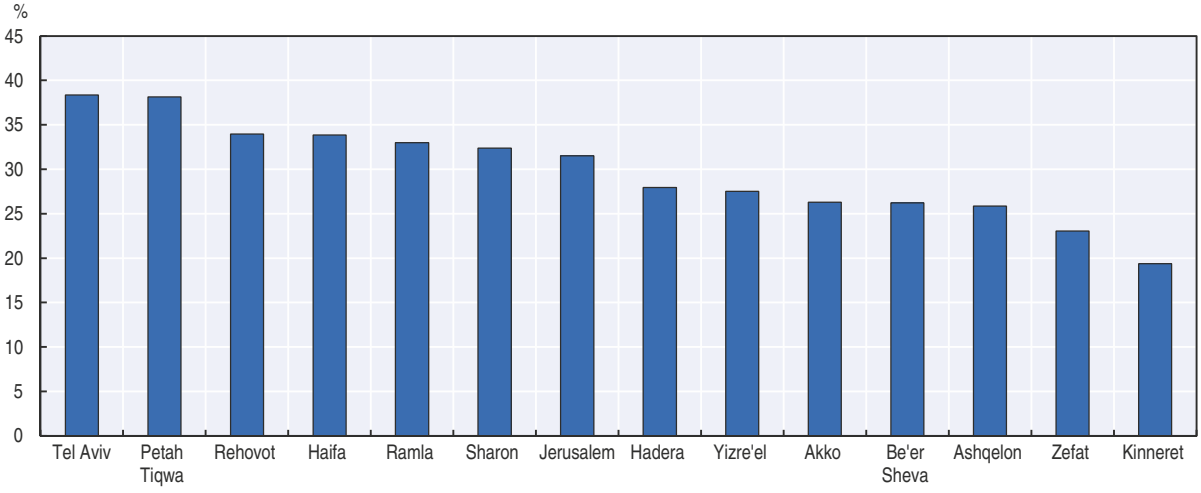


Source: OECD calculations based on Labour Force Survey, Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424943

Figure 22.2. **Skills supply, Israeli sub-regions, 2013**

Share of the labour force with an academic degree

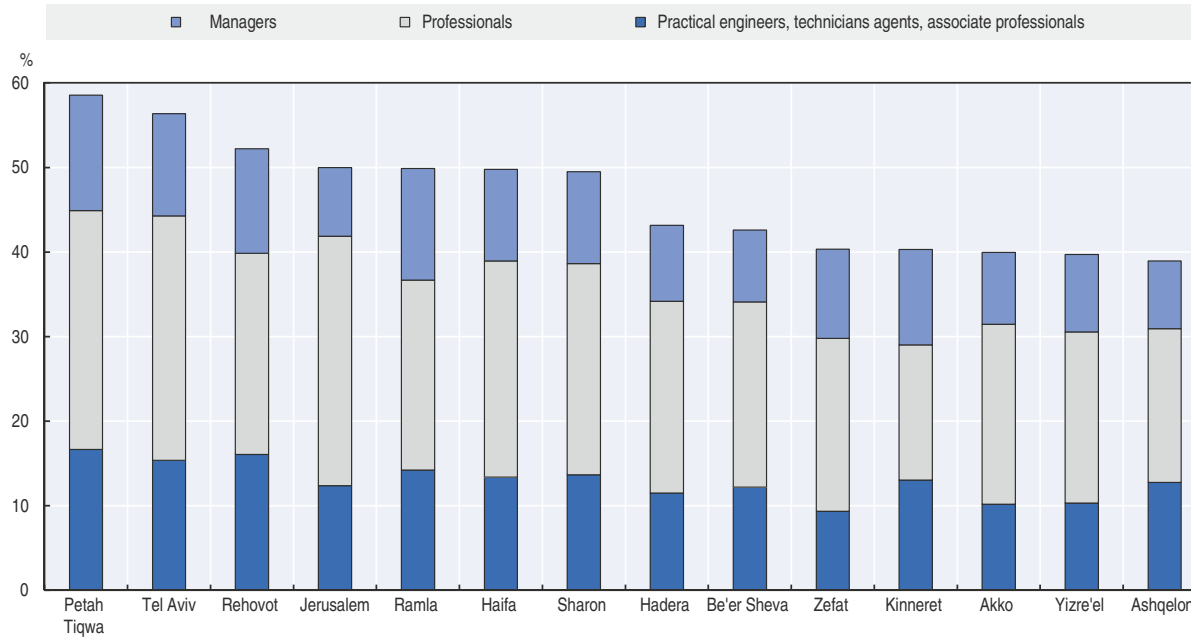


Source: OECD calculations based on Labour Force Survey, Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424958

Figure 22.3. **Skills demand, Israeli sub-regions, 2013**

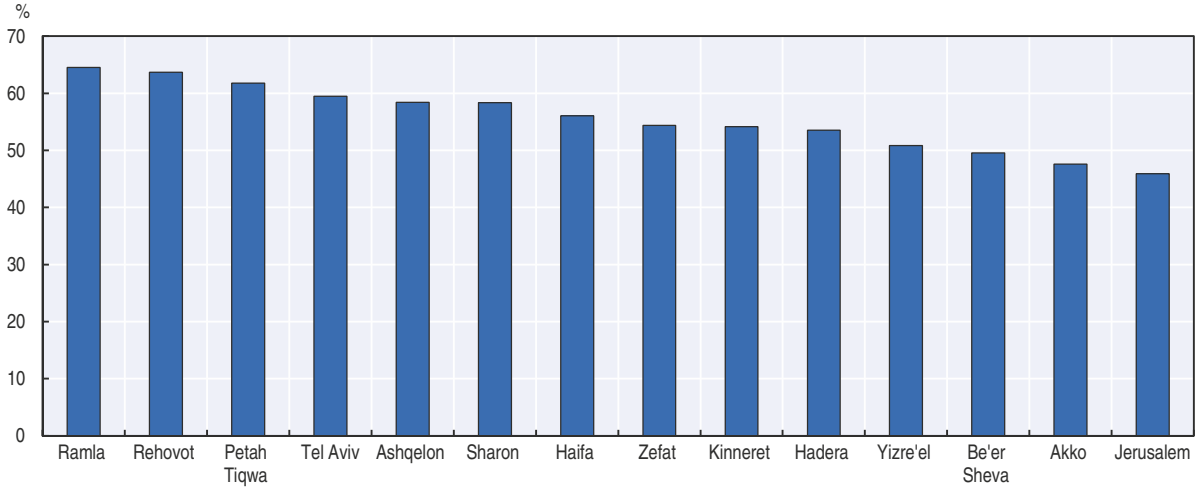
Share of medium- and high-skilled occupations



Source: OECD calculations based on Labour Force Survey, Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424968

Figure 22.4. **Employment rate (population 15 and over), Israeli sub-regions, 2013**



Source: OECD calculations based on Labour Force Survey, Central Bureau of Statistics.

StatLink http://dx.doi.org/10.1787/888933424970

Notes

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

Italy

This profile examines the health of local labour markets in Italy. It analyses data at the sub-regional level, which corresponds to the country's 103 provinces (provincie).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Italy, the number of people employed decreased by an average annual rate of 0.04% between 2004 and 2014. While the number of people employed has not yet recovered to 2008 levels, it has been increasing since 2013. Figures 23.1 and 23.2 show the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 1.3% in Rome to a decline of 2.4% in Benevento.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 23.3 shows that in 2012, 29 sub-regions were in a "high skills equilibrium", with a relatively high supply of and demand for skills. Twenty-seven sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 47 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 23.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2001 and 2012.

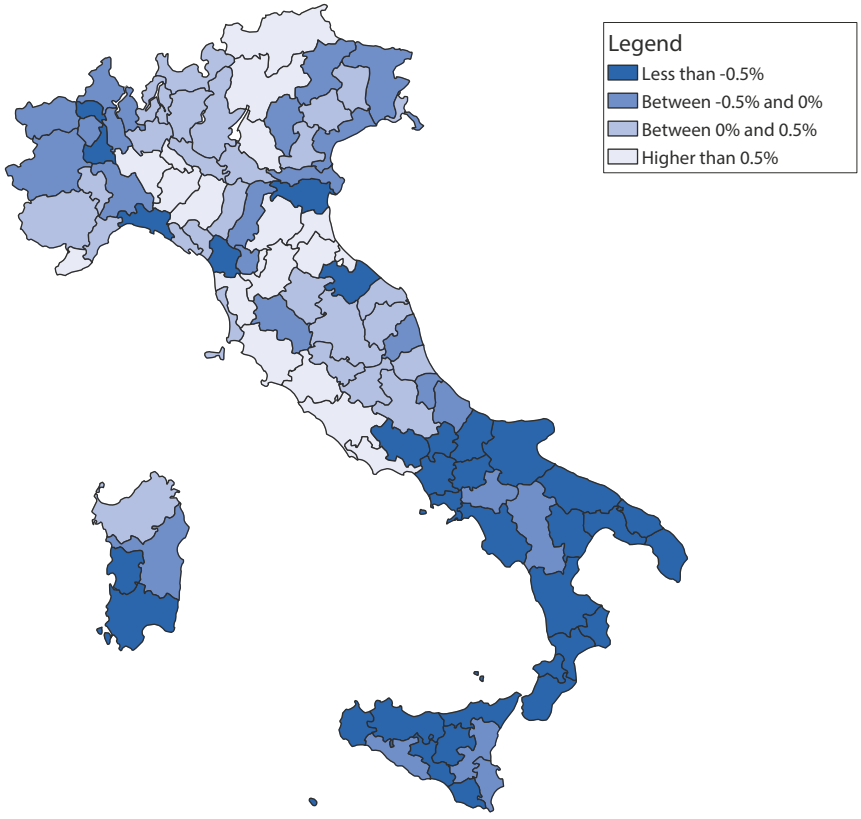
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 23.4 shows the sub-regional employment rate for the population 15-64 in 2015. Bolzano had the highest employment rate at 71.4% while Vibo-Valentia had the lowest employment rate at 35.8%. To show those places making the most progress over time, Figure 23.5 shows the twenty sub-regions that registered the highest average annual increase in their employment rate between 2005 and 2015. While the overall employment rate in Italy slightly decreased by 0.2% during this time period, it should be noted that the employment rate has been increasing since 2013.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. Table 23.2 shows the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

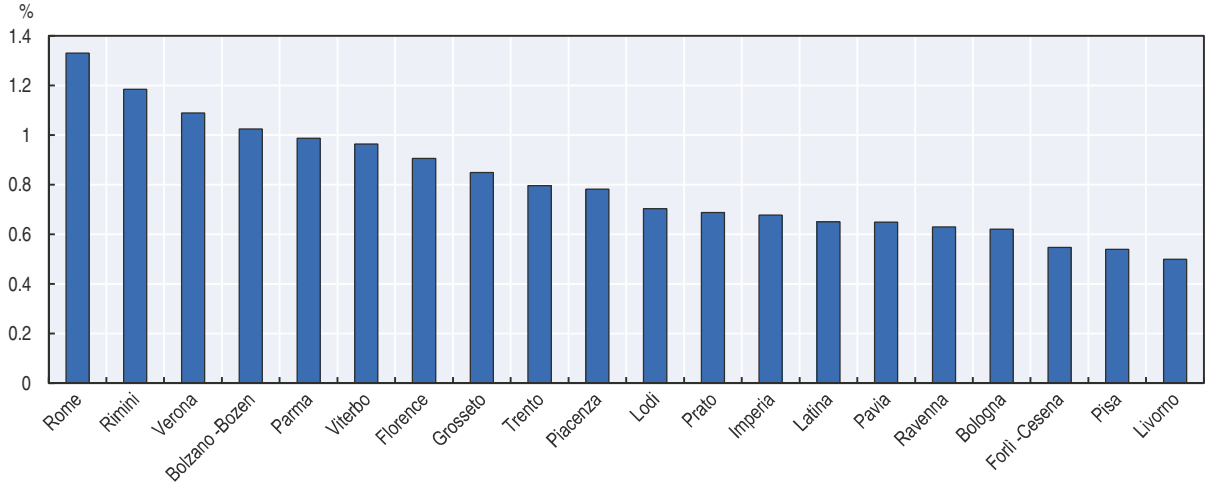
Figure 23.1. **Local employment growth over time, Italian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424986

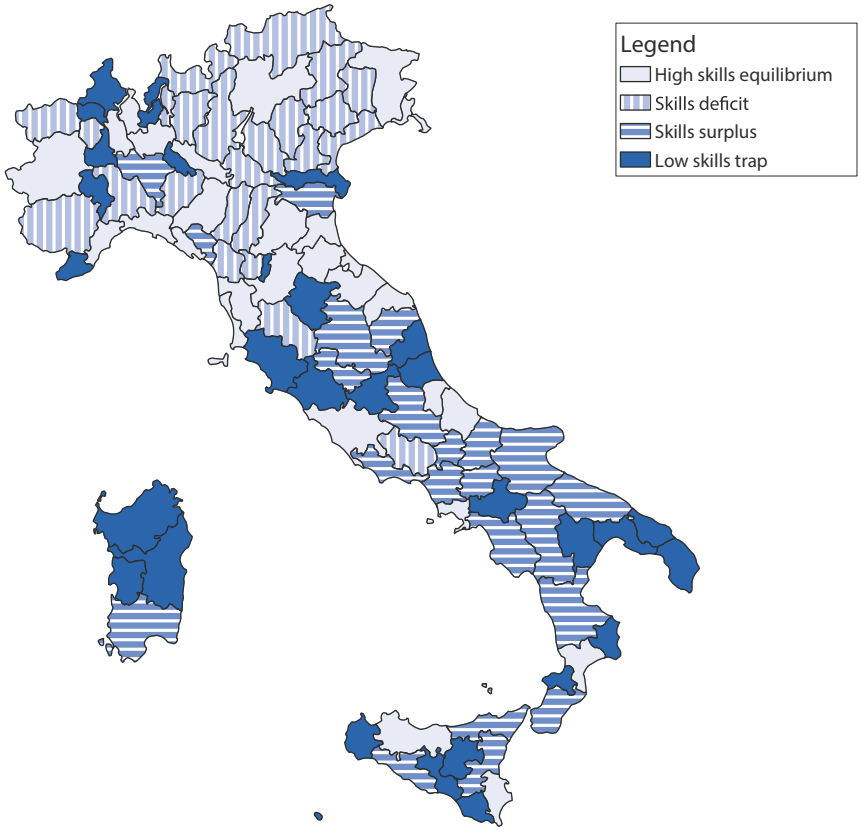
Figure 23.2. **Local employment growth over time: Best performing Italian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933424993

Figure 23.3. **Skills supply and demand, Italian sub-regions, 2012**



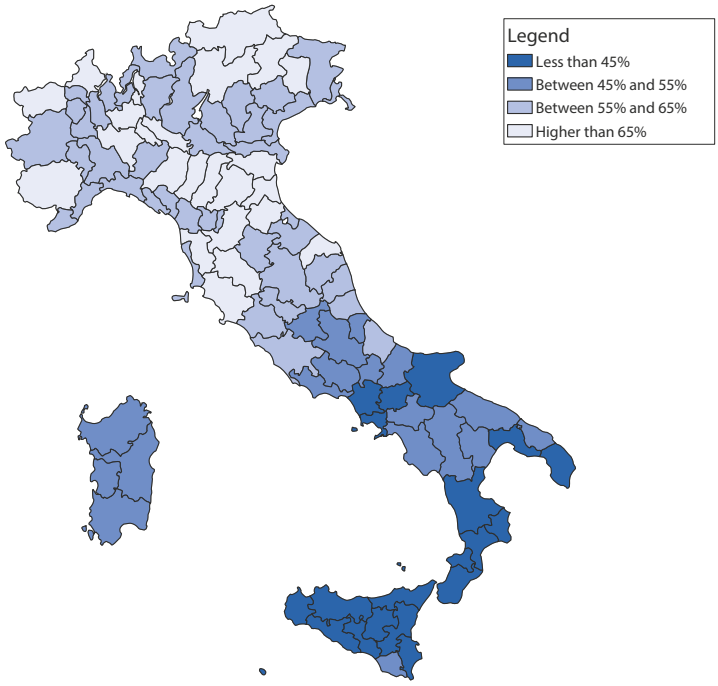
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Italian National Institute of Statistics.

StatLink http://dx.doi.org/10.1787/888933425002

Table 23.1. **Places with the highest increase in skills supply and/or demand, Italian sub-regions, 2001-12**

Increase in supply		Increase in supply and demand	Increase in demand	
• Agrigento	• Latina	• Benevento	• Biella	• Gorizia
• Brindisi	• Matera	• La Spezia	• Bologna	• Macerata
• Cagliari	• Napoli	• Lucca	• Bolzano	• Milano
• Caserta	• Pescara	• Potenza	• Campobasso	• Rimini
• Catania	• Prato	• Salerno	• Catanzaro	• Siracusa
• Enna	• Rieti	• Trieste	• Chieti	• Udine
• Foggia	• Viterbo		• Firenze	• Valle d'Aosta
• Frosinone			• Forli-Cesena	

Figure 23.4. **Employment rate (population 15-64), Italian sub-regions, 2015**

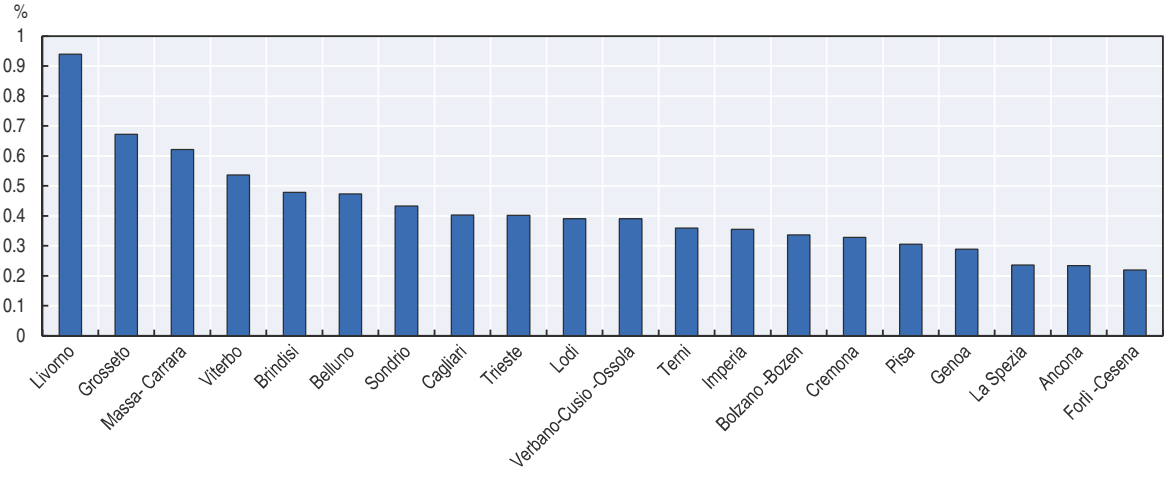


Source: Labour Force Survey, Italian National Institute of Statistics.

StatLink http://dx.doi.org/10.1787/888933425010

Figure 23.5. **Employment rate change over time: Best performing Italian sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Italian National Institute of Statistics.

StatLink http://dx.doi.org/10.1787/888933425021

Table 23.2. **Places to watch: Italian sub-regions making progress across indicators**

- Chieti
- La Spezia
- Livorno
- Trieste

Note: Italian sub-regions improving more than the median across employment growth (2004-2014), skills supply and demand (2001-2012), and employment rate (2005-2015).

Japan

This profile examines the health of local labour markets in Japan. It analyses data at the sub-regional level, which corresponds to the country's 47 prefectures (to-dō-fu-ken).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Japan, the number of people employed stayed relatively stable when comparing 2004 and 2014.[1] However, this includes a period of decline up to 2012, and a subsequent rebound. Figure 24.1 shows the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.4% in Tokyo to a decline of 1.1% in Shimane. Figure 24.4 shows the 20 sub-regions with the highest average annual employment growth rate.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 24.3 shows that in 2012, 17 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Sixteen sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 14 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 24.1 lists the sub-regions with the highest increase in skills supply and/or demand in 2000-12.

Employment rate

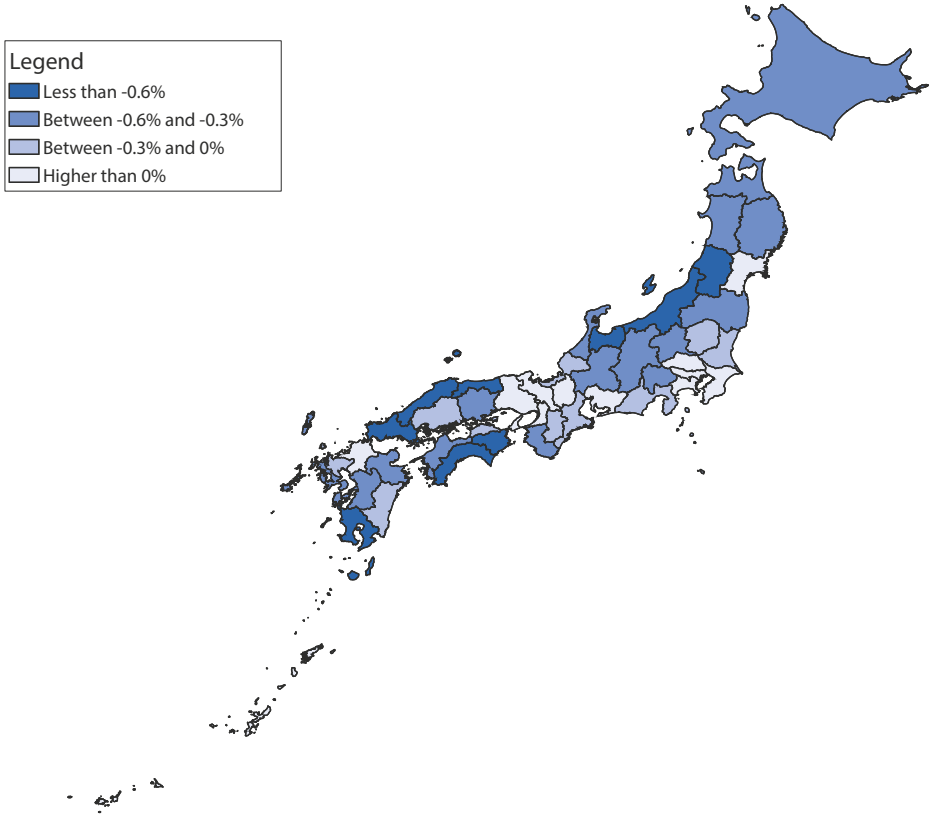
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 24.4 shows the 2014 sub-regional employment rate for the population 15 and over. Tokyo had the highest employment rate (61.6%) while Kagoshima had the lowest (52.3%). Figure 24.5 shows the 20 sub-regions with the highest average annual change in employment rate between 2005 and 2014. A number of sub-regions show negative values, reflecting the fact that the overall employment rate in Japan slightly declined during this time period. However, the employment rate has been increasing since 2013.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In Japan, only one sub-region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods.[2] This sub-region is Aichi.

Figure 24.1. **Local employment growth over time, Japanese sub-regions, 2004-14**

Average annual change (%)

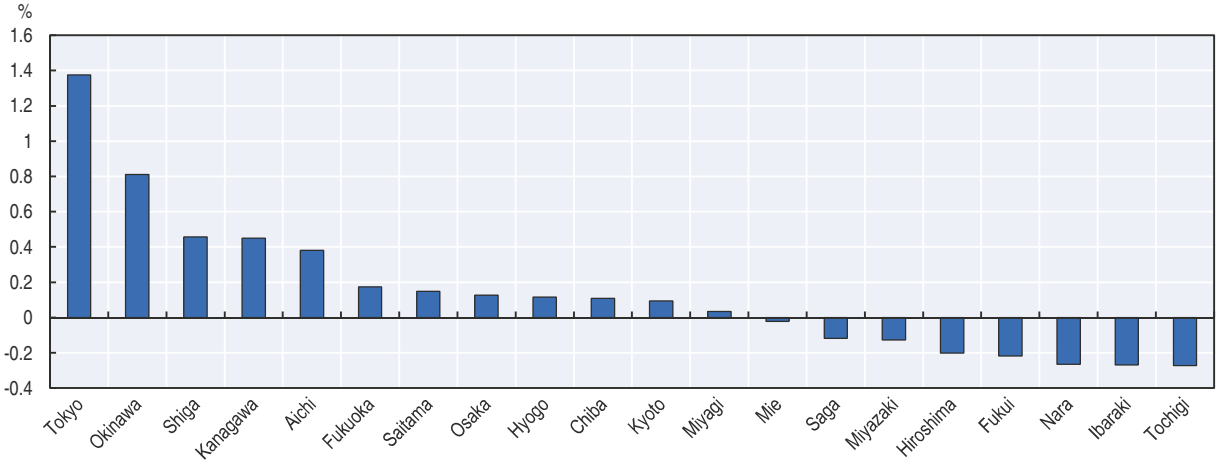


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425034

Figure 24.2. **Local employment growth over time: Best performing Japanese sub-regions, 2004-14**

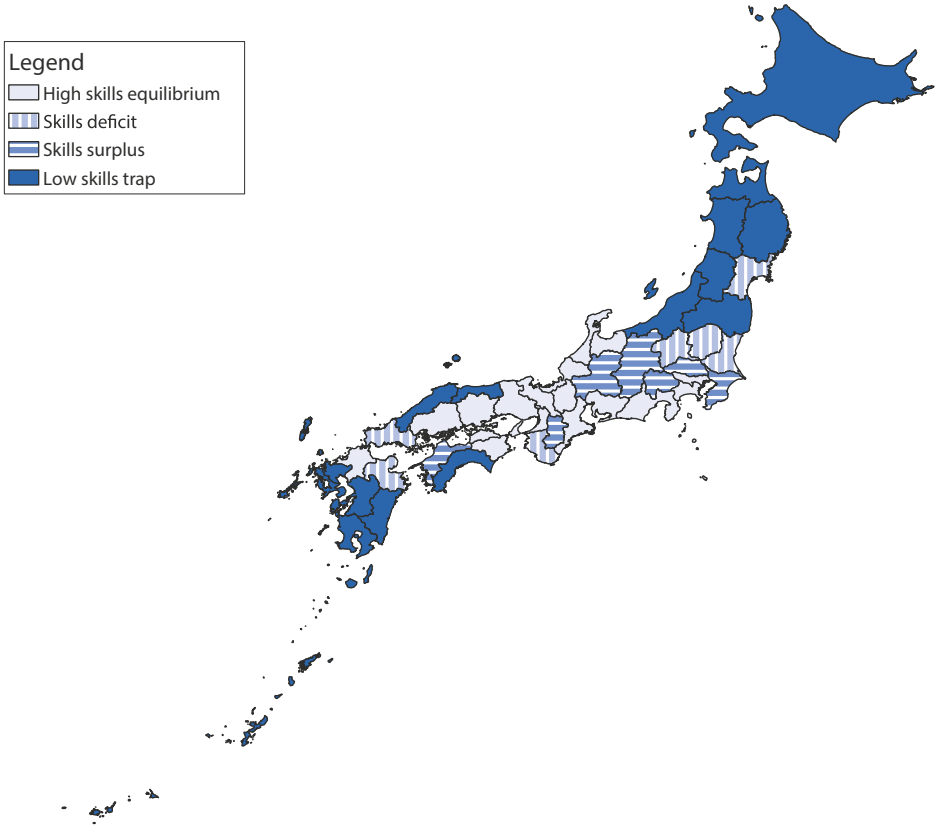
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425042

Figure 24.3. **Skills supply and demand, Japanese sub-regions, 2012**



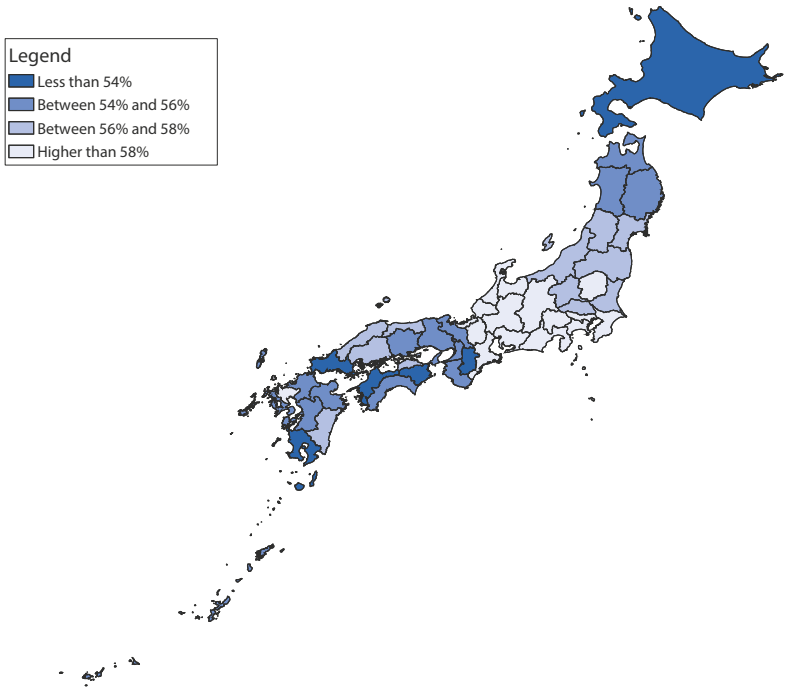
Source: OECD calculations based on data from Employment status survey, Statistics Bureau of Japan and and *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en.*

StatLink http://dx.doi.org/10.1787/888933425051

Table 24.1. **Places with the highest increase in skills supply and/or demand, Japanese sub-regions, 2000-12**

Increase in supply	Increase in supply and demand	Increase in demand
• Fukui	• Mie	• Aomori
• Gifu	• Tokushima	• Gumma
• Kagawa	• Wakayama	• Ibaraki
• Kochi		• Iwate
• Shiga		• Nagasaki
• Shimane		• Yamaguchi

Figure 24.4. **Employment rate (population 15 and over), Japanese sub-regions, 2014**

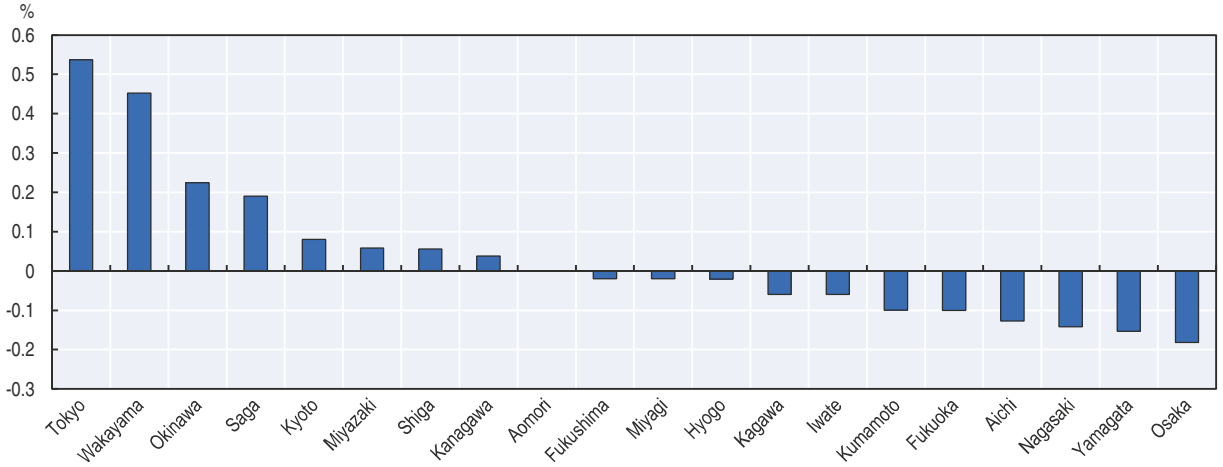


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425069

Figure 24.5. **Employment rate change over time: Best performing Japanese sub-regions, 2005-14**

Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425070

Notes

1. The number of people employed may be impacted by the fact that Japan has a relatively high rate of part-time employment.
2. Employment growth: 2004-14; skills supply and demand: 2000-12; employment rate: 2005-14.

Korea

This profile examines the health of local labour markets in Korea. It analyses data at the sub-regional level, which corresponds to the country's nine provinces, six metropolitan areas and the capital city of Seoul.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Korea, the number of people employed grew by an average annual rate of 1.3% between 2004 and 2014. Figures 25.1 and 25.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 2.5% in Gyeonggi-do to a decline of 0.2% in Jeollanam-do.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 25.3 shows that in 2013, 3 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Two sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 11 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 25.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2000 and 2013.

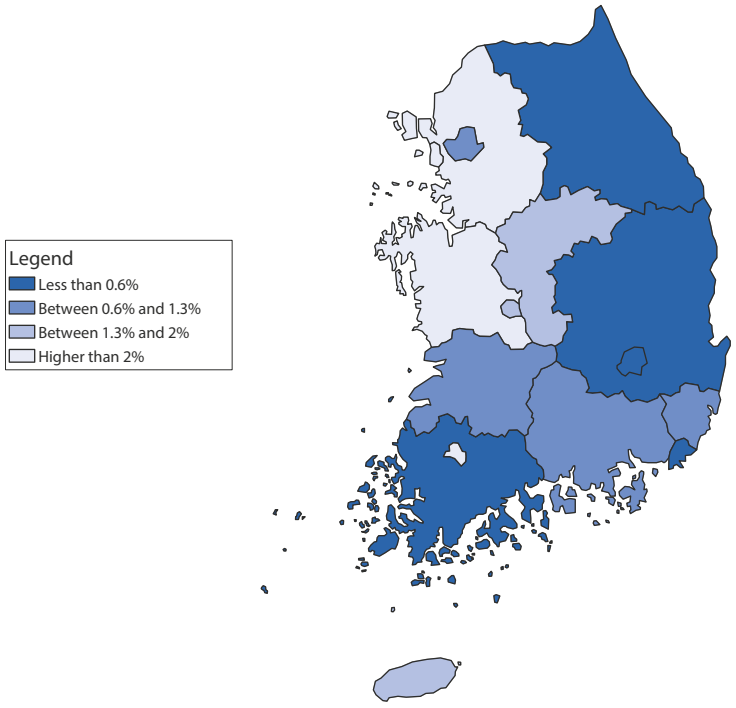
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-64 in 2015 are shown in Figure 25.4. Jeju-do had the highest employment rate at 72.2% while Ulsan had the lowest employment rate at 62.2%. To highlight those places making the most progress over time, Figure 25.4 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In Korea, only one sub-region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[1] This sub-region is Chungcheongbuk-do.

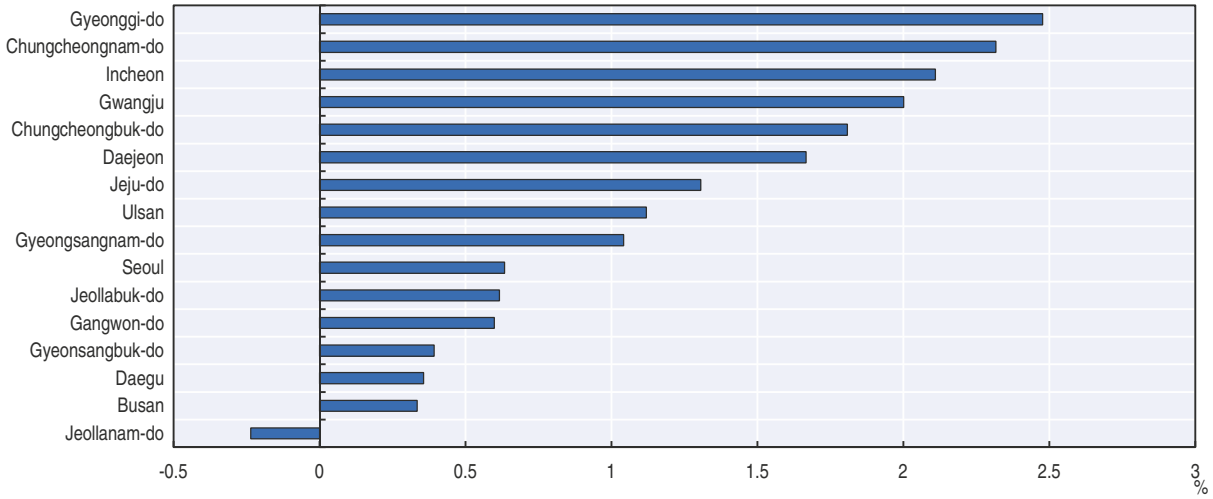
Figure 25.1. **Local employment growth over time, Korean sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425086

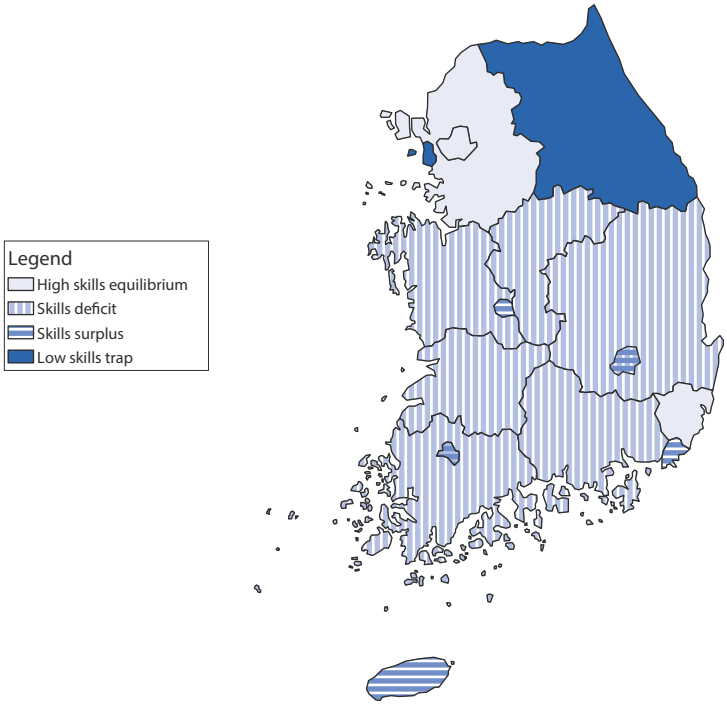
Figure 25.2. **Local employment growth over time: Ranking of Korean sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425095

Figure 25.3. **Skills supply and demand, Korean sub-regions, 2013**



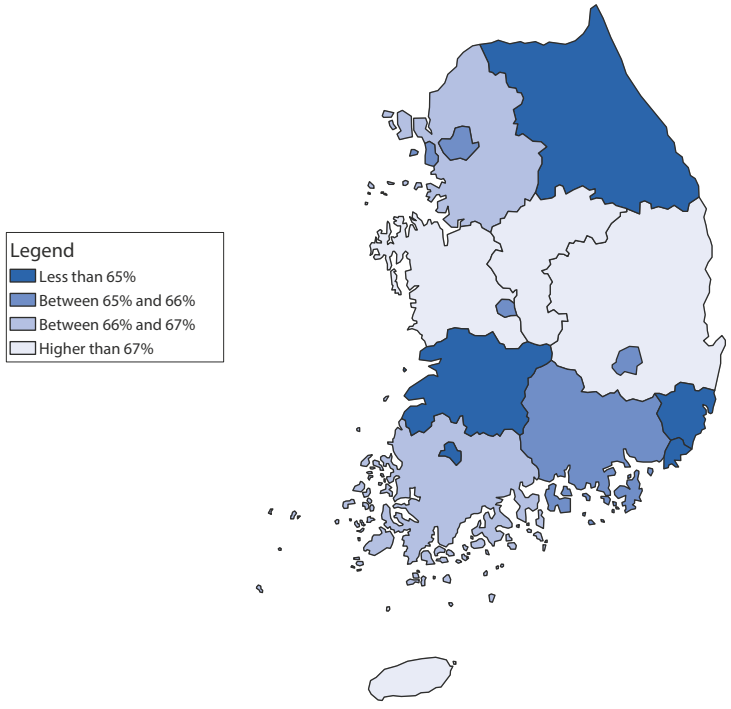
Source: OECD calculations based on Local Area Labour Force Survey and Regional Accounts, Statistics Korea.

StatLink http://dx.doi.org/10.1787/888933425109

Table 25.1. **Places with the highest increase in skills supply and/or demand, Korean sub-regions, 2000-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Gyeongsangbuk-do	• Chungcheongnam-do • Jeollanam-do	• Jeju-do

Figure 25.4. **Employment rate (population 15-64), Korean sub-regions, 2015**

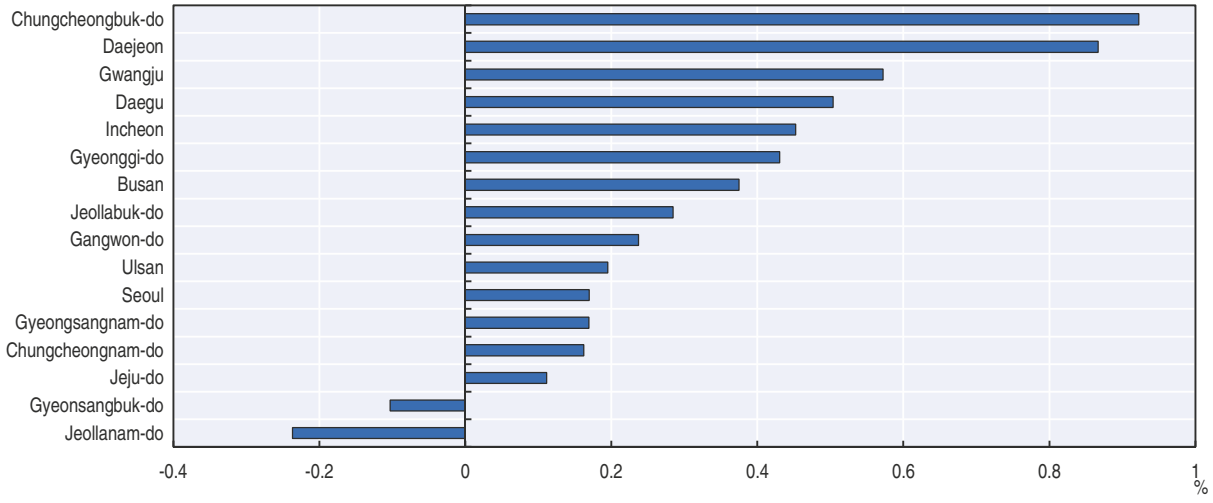


Source: Local Area Labour Force Survey, Statistics Korea.

StatLink http://dx.doi.org/10.1787/888933425119

Figure 25.5. **Employment rate change over time, Korean sub-regions, 2005-15**

Average annual change (%)



Source: Local Area Labour Force Survey, Statistics Korea.

StatLink http://dx.doi.org/10.1787/888933425127

Note

1. Employment growth: 2004-14; skills supply and demand: 2000-13; employment rate: 2005-15.

Latvia

This profile examines the health of local labour markets in Latvia. It analyses data at the sub-regional level, which corresponds to the country's six statistical regions (statistiskie reģioni).[1]

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Latvia, the number of people employed decreased by an average annual rate of 0.8% between 2005 and 2015. While the number of people employed has not yet recovered to 2008 levels, it has been increasing since 2014. Figure 26.1 and 26.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 0.5% in Pieriga to a decline of 1.8% in Vidzeme.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 26.3 shows that in 2013, 2 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Two sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining two sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 26.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2007 and 2013.

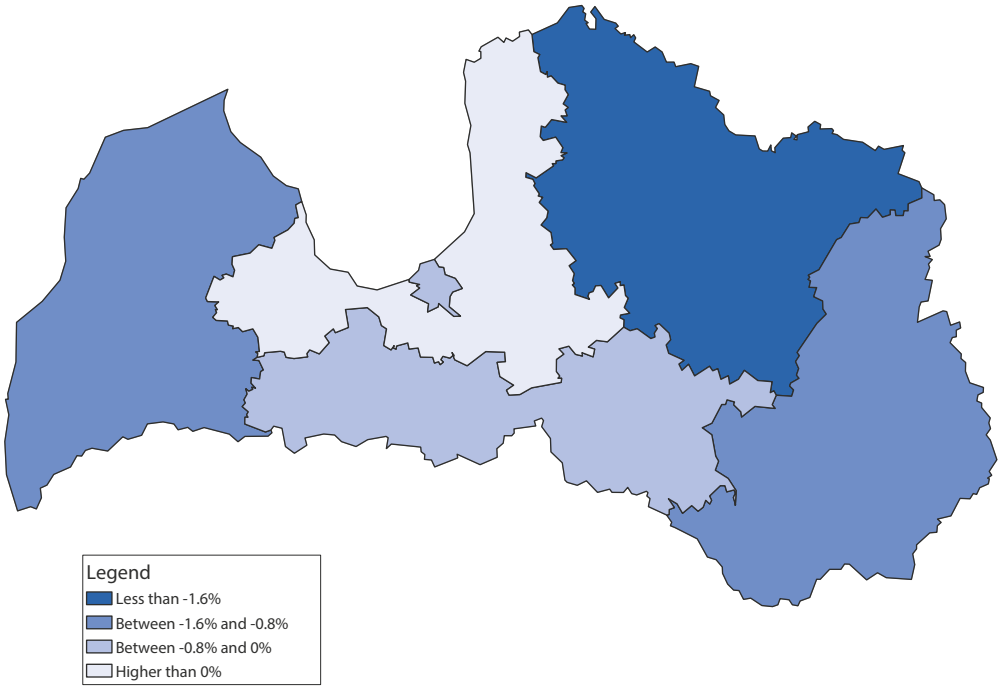
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-64 in 2015 are shown in Figure 26.4. Riga had the highest employment rate at 73.5% while Latgale had the lowest employment rate at 58.2%. To highlight those places making the most progress over time, Figure 26.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

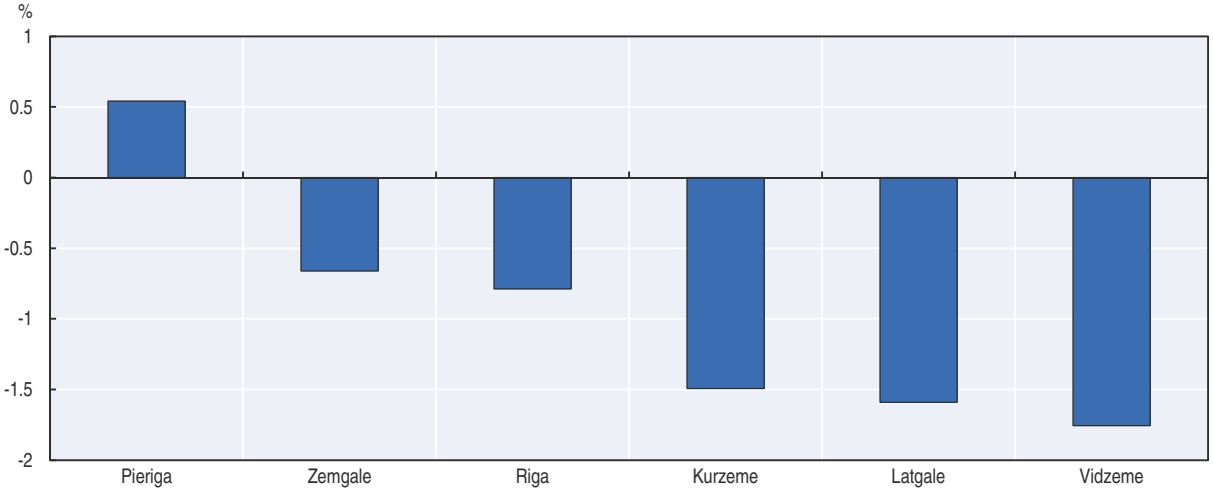
Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Latvia, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 26.1. **Local employment growth over time, Latvian sub-regions, 2005-15**
Average annual change (%)



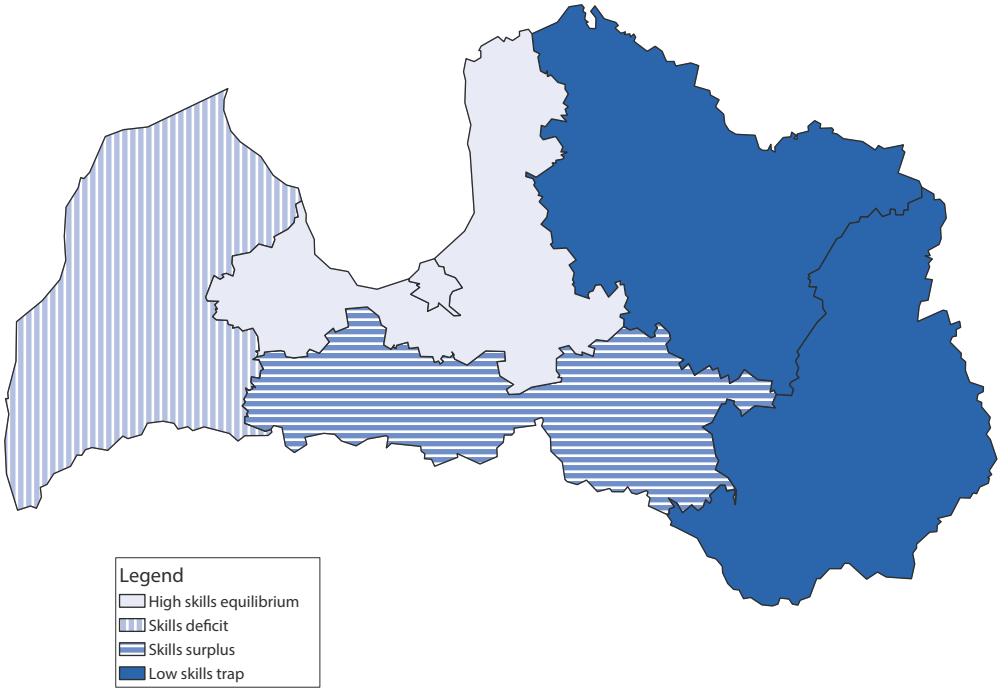
Source: OECD calculations based on data from the Labour Force Survey, Central Statistics Bureau of Latvia.
StatLink http://dx.doi.org/10.1787/888933425136

Figure 26.2. **Local employment growth over time: Ranking of Latvian sub-regions, 2005-15**
Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Central Statistics Bureau of Latvia.
StatLink http://dx.doi.org/10.1787/888933425145

Figure 26.3. **Skills supply and demand, Latvian sub-regions, 2013**



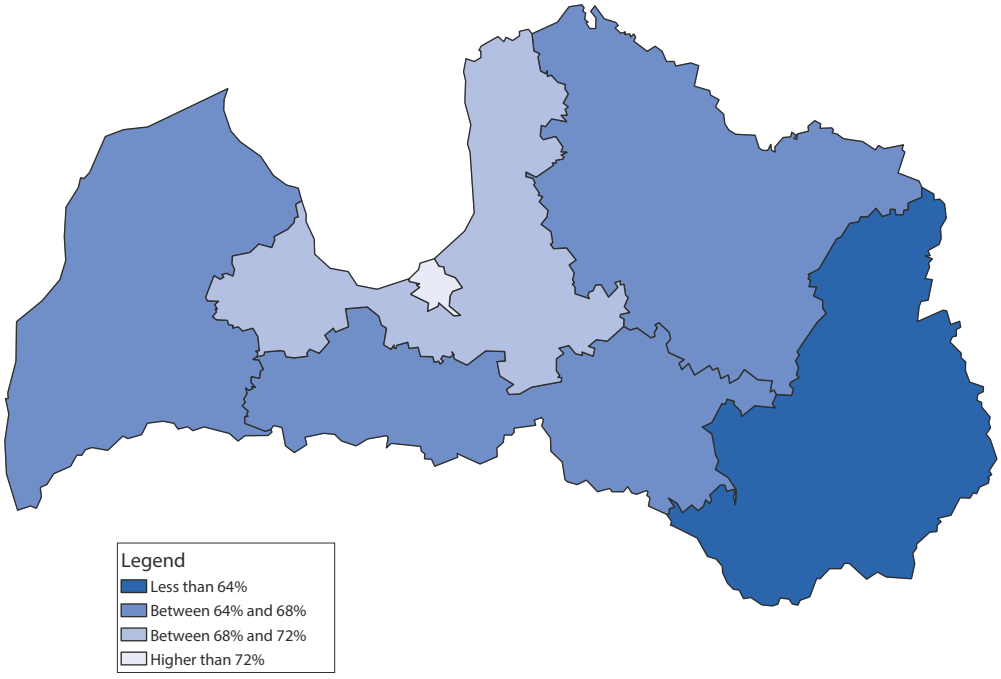
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Central Statistical Bureau of Latvia.

StatLink http://dx.doi.org/10.1787/888933425150

Table 26.1. **Places with the highest increase in skills supply and/or demand, Latvian sub-regions, 2007-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Vidzeme region	• Pierīga region	• Latgale region

Figure 26.4. **Employment rate (population 15-64), Latvian sub-regions, 2015**

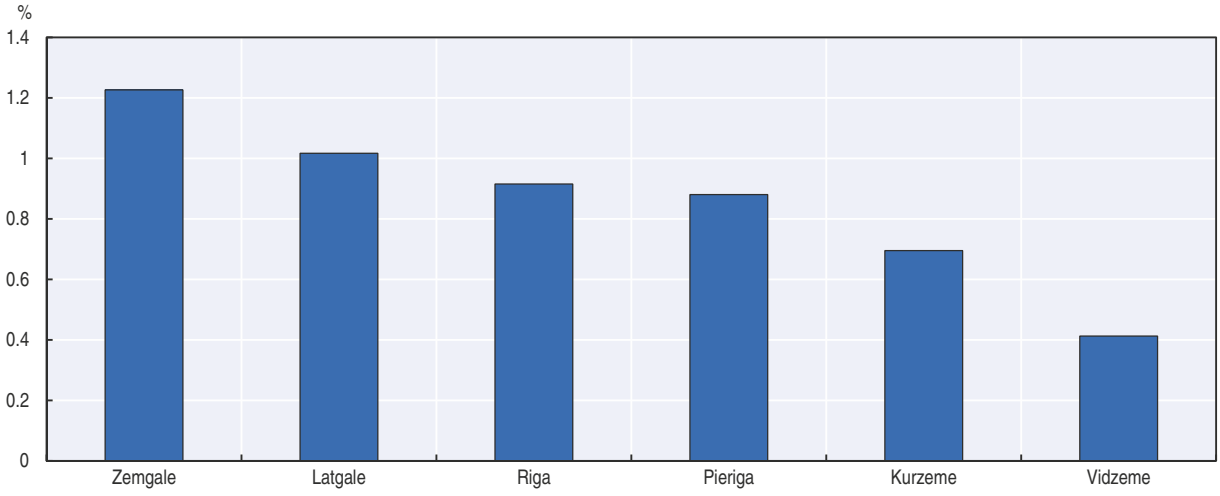


Source: Labour Force Survey, Central Statistical Bureau of Latvia.

StatLink http://dx.doi.org/10.1787/888933425165

Figure 26.5. **Employment rate change over time, Latvian sub-regions, 2005-15**

Average annual change (%)



Source: Labour Force Survey, Central Statistical Bureau of Latvia.

StatLink http://dx.doi.org/10.1787/888933425170

Notes

1. While Latvia has been a member of the LEED Directing Committee for a number of years, it was not an OECD member at the time of preparation of this publication. Accordingly, Latvia does not appear in the list of OECD members and is not included in the zone aggregates.

Lithuania

This profile examines the health of local labour markets in Lithuania. It analyses data at the sub-regional level, which corresponds to the country's ten counties (Apskritys).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Lithuania, the number of people employed decreased by an average annual rate of 0.7% between 2005 and 2015. While the number of people employed has not yet recovered to 2007 levels, it has been increasing since 2010. Figures 27.1 and 27.2 show the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 0.2% in Klaipeda county to a decline of 2.6% in Šiauliai county. While the Klaipeda and Vilnius counties were the only two sub-regions that had positive employment growth rates, the latter contributed significantly more to national employment growth due to its larger population size.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 27.3 shows that in 2014, 3 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Four sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining three sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 27.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2011 and 2014.

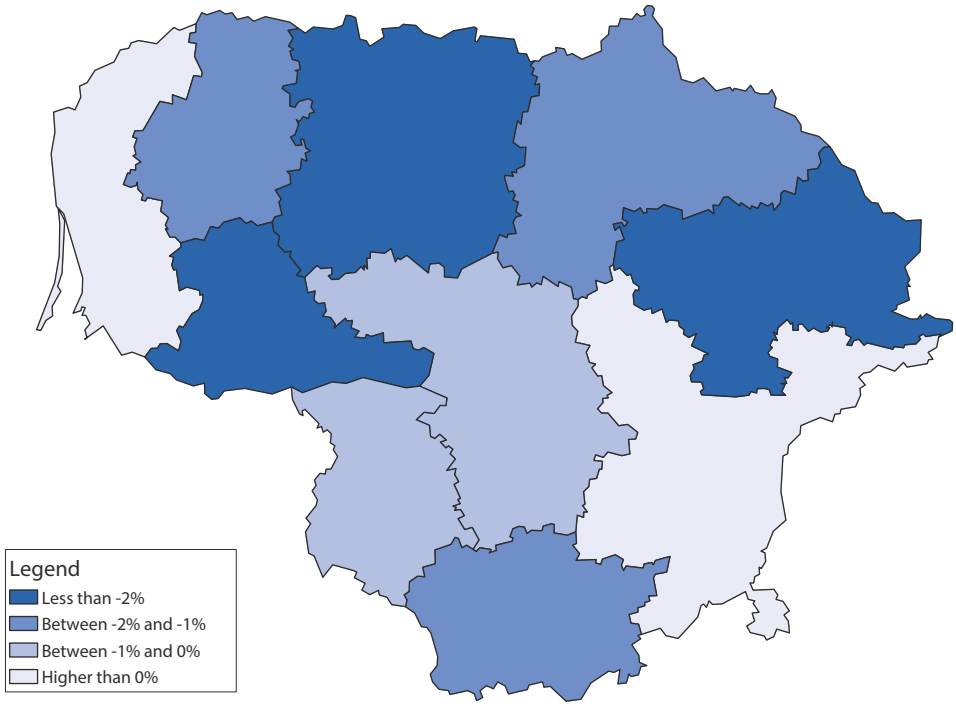
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 27.4 shows the 2015 sub-regional employment rate for the population 15-64. Klaipeda and Vilnius counties had the highest employment rate (70.9%) while Šiauliai county had the lowest (61.3%). Figure 27.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For Lithuania, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

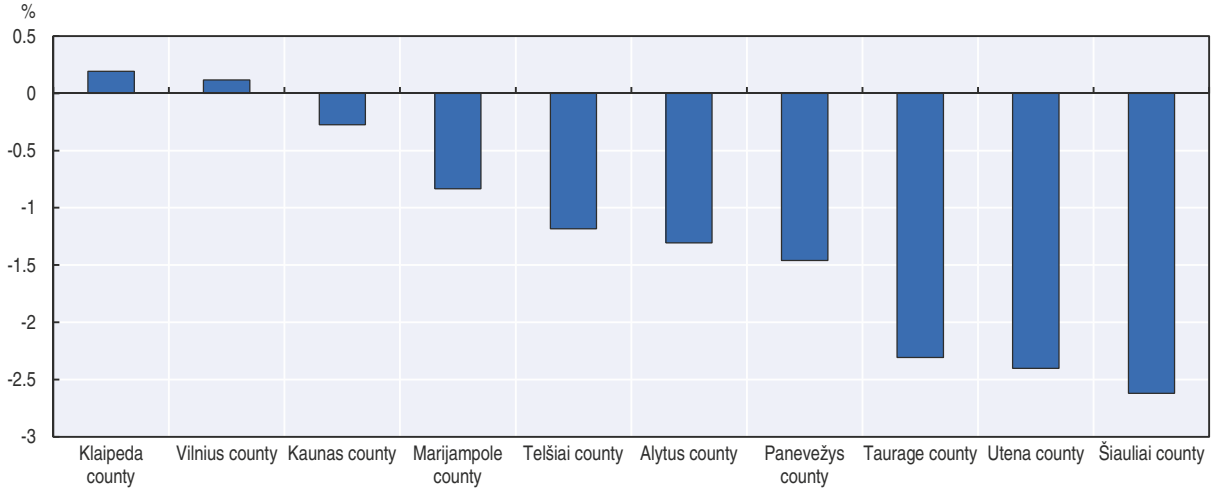
Figure 27.1. **Local employment growth over time, Lithuanian sub-regions, 2005-15**
Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Lithuania.

StatLink http://dx.doi.org/10.1787/888933425189

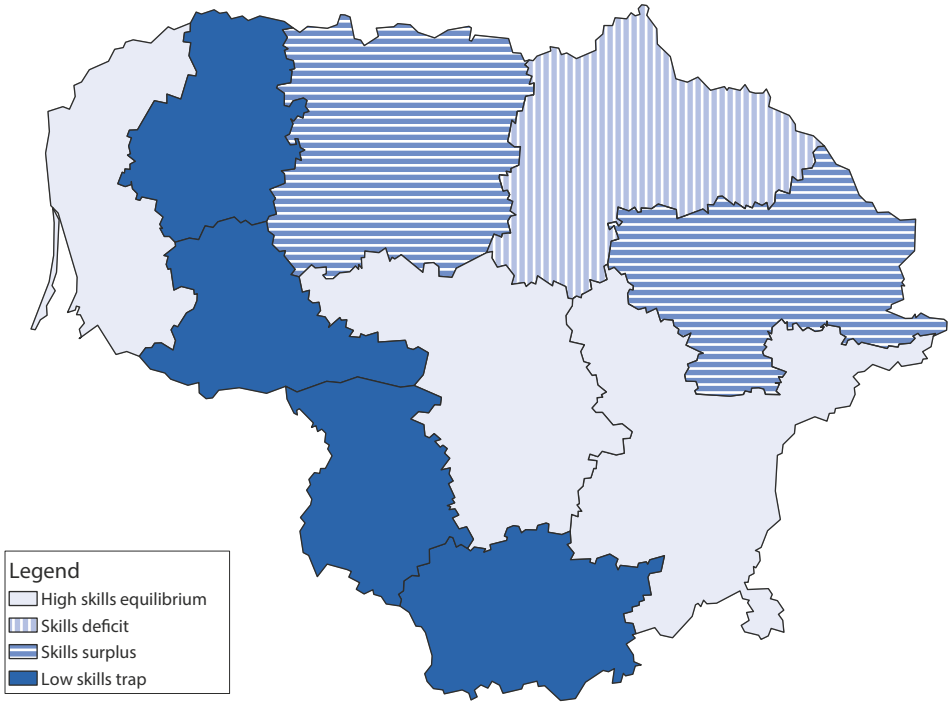
Figure 27.2. **Local employment growth over time: Ranking of Lithuanian sub-regions, 2005-15**
Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Lithuania.

StatLink http://dx.doi.org/10.1787/888933425190

Figure 27.3. **Skills supply and demand, Lithuanian sub-regions, 2014**



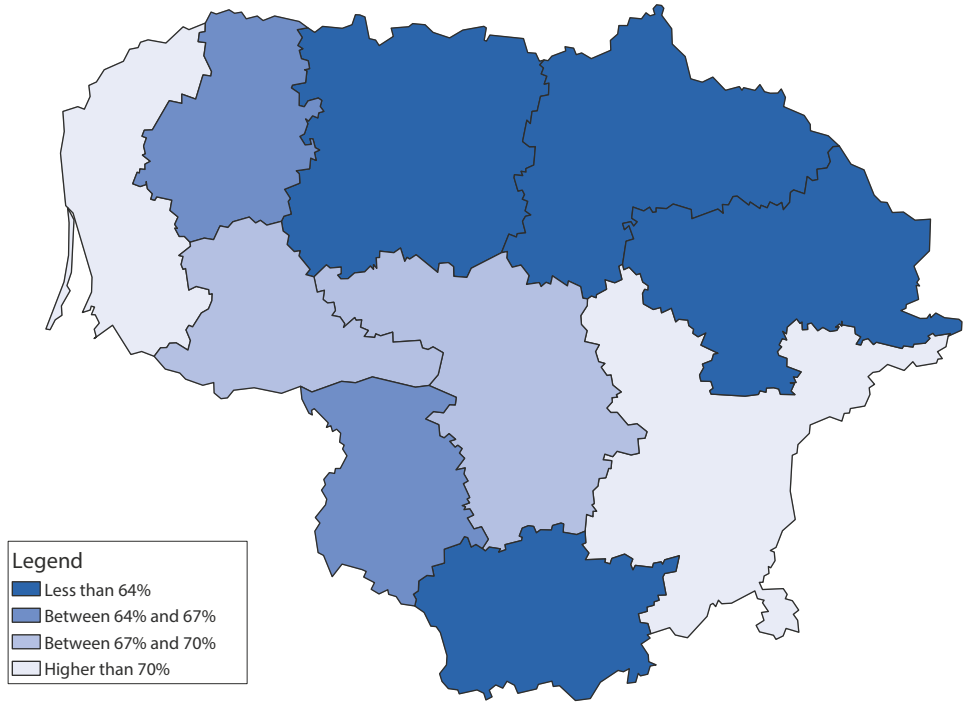
Source: OECD calculations based on the Labour Force Survey and Regional Accounts, Statistics Lithuania.

StatLink http://dx.doi.org/10.1787/888933425207

Table 27.1. **Places with the highest increase in skills supply and/or demand, Lithuanian sub-regions, 2011-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Marijampolė county		• Alytus county
• Šiauliai county		• Tauragė county

Figure 27.4. **Employment rate (population 15-64), Lithuanian sub-regions, 2015**

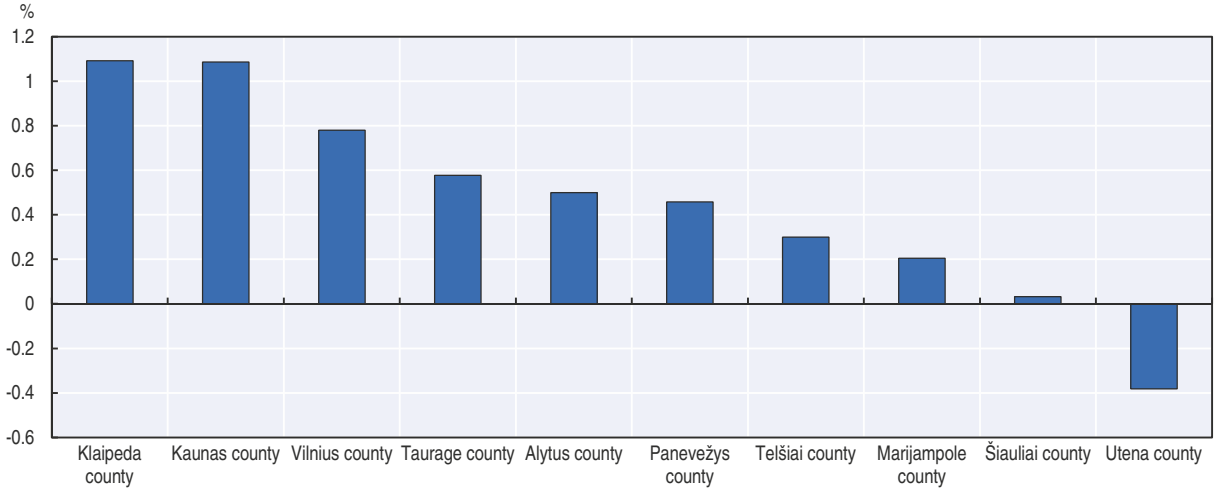


Source: Labour Force Survey, Statistics Lithuania.

StatLink http://dx.doi.org/10.1787/888933425216

Figure 27.5. **Employment rate change over time, Lithuanian sub-regions, 2005-15**

Average annual change (%)



Source: Labour Force Survey, Statistics Lithuania.

StatLink http://dx.doi.org/10.1787/888933425227

Mexico

This profile examines the health of local labour markets in Mexico. It analyses data at the regional level, which corresponds to the country's 32 states (estados).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Mexico, the number of people employed grew by an average annual rate of 1.9% between 2005 and 2015. Figure 28.1 shows the average annual employment growth rate across regions during this time period. It ranges from an increase of 4.4% in Baja California Sur to an increase of 0.6% in the Federal District. Figure 28.2 shows the 20 regions with the highest average annual employment growth rate. While Baja California Sur and Quintana Roo had the highest growth rates, Mexico and Jalisco contributed more to national employment growth due to their larger population sizes.

Skills supply and demand

The level of skills supply (percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and wages)[1] can provide further insights into the quality of local job creation and the potential for future growth. Figure 28.3 shows that in 2015, 16 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Fifteen regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. Quintana Roo was the only with a relatively high demand for skills and low supply of skills (skills deficit). Table 28.1 lists the regions with the highest increase in skills supply and/or demand between 2005 and 2015.

Employment rate

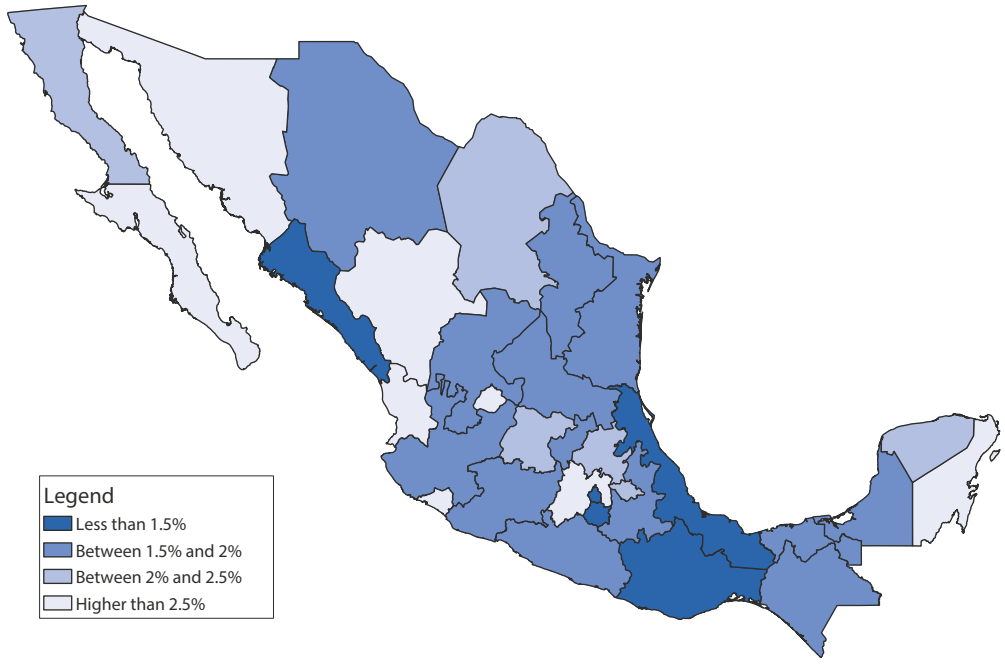
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 28.4 shows the 2014 regional employment rate for the population 15 and over. Quintana Roo had the highest employment rate (64.5%) while Veracruz had the lowest (51.3%). To show those places making the most progress over time, Figure 28.5 shows the 20 regions with the highest average annual change in their employment rate between 2004 and 2014. A number of regions show negative values, reflecting the fact that the overall employment rate in Mexico slightly declined during this time period.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. Table 28.2 highlights the regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 28.1. **Local employment growth over time, Mexican regions, 2005-15**

Average annual change (%)

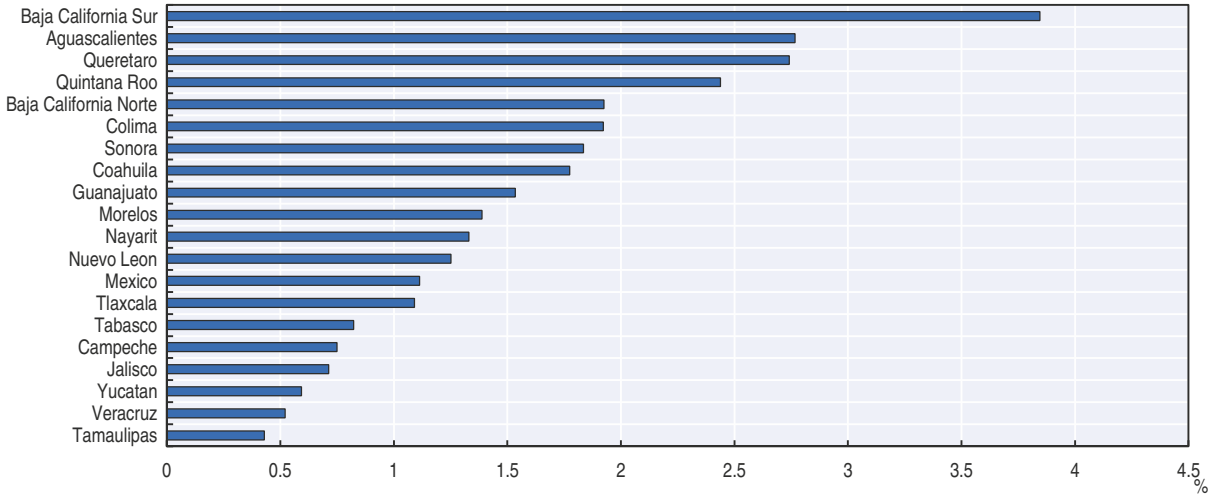


Source: OECD calculations based on data from the Encuesta Nacional de Ocupación y Empleo [National survey on occupation and employment], Inegi.

StatLink http://dx.doi.org/10.1787/888933425232

Figure 28.2. **Local employment growth over time: Best performing Mexican regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Encuesta Nacional de Ocupación y Empleo [National survey on occupation and employment], Inegi.

StatLink http://dx.doi.org/10.1787/888933425245

Figure 28.3. **Skills supply and demand, Mexican regions, 2015**



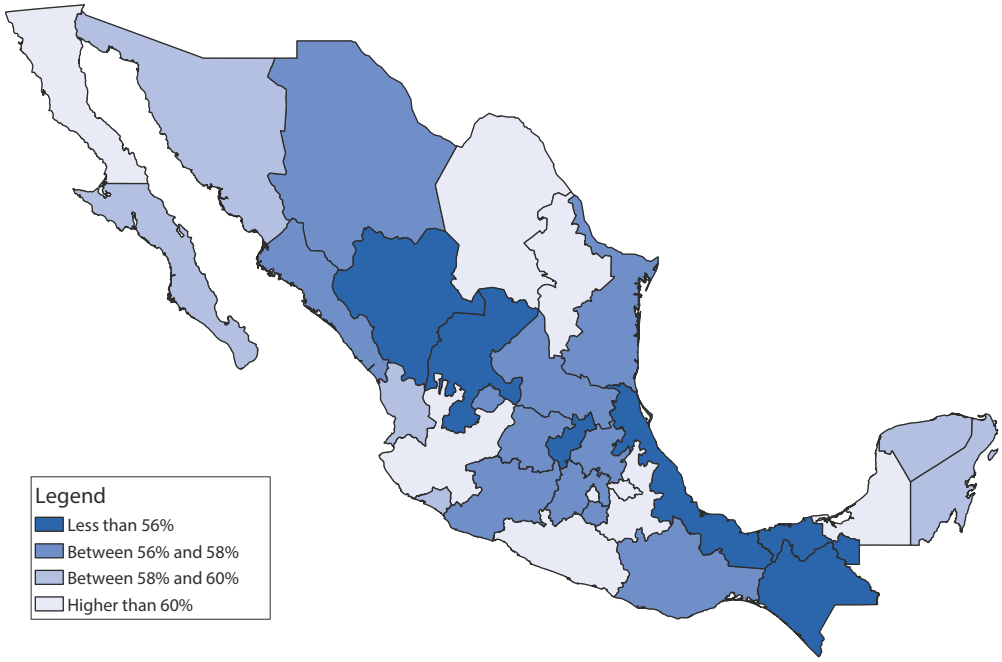
Source: OECD calculations based on data from the Inter-census and the National survey on occupation and employment, Inegi.

StatLink http://dx.doi.org/10.1787/888933425256

Table 28.1. **Places with the highest increase in skills supply and/or demand, Mexican regions, 2005-15**

Increase in supply	Increase in supply and demand	Increase in demand
• Chiapas	• Campeche	• Durango
• Colima	• Tabasco	• Oaxaca
• Quintana Roo	• Zacatecas	• Sinaloa
• Yucatan		• Veracruz

Figure 28.4. **Employment rate (population 15 and over), Mexican regions, 2014**

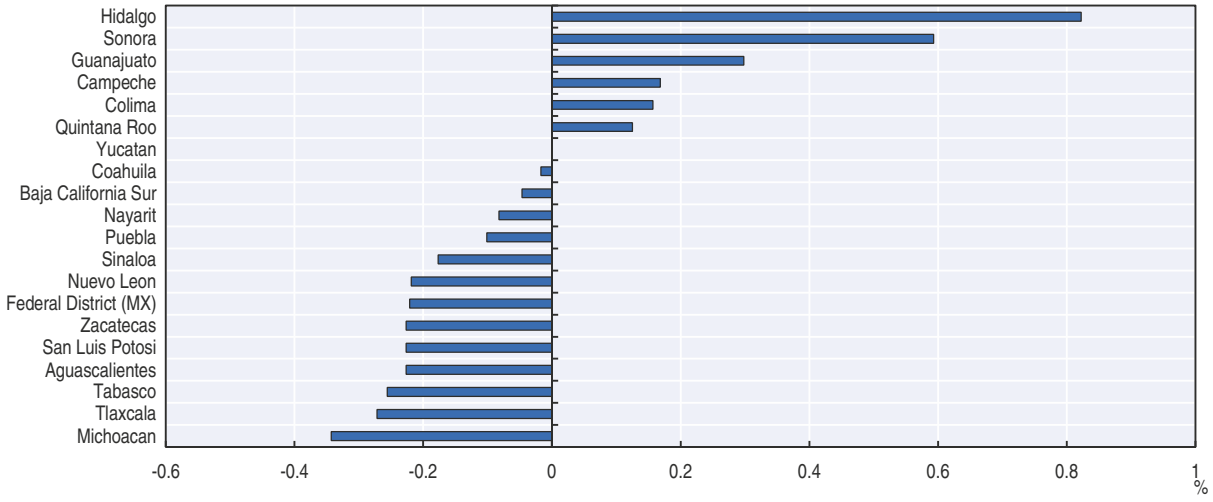


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425265

Figure 28.5. **Employment rate change over time: Best performing Mexican regions, 2004-14**

Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425278

Table 28.2. **Places to watch: Mexican regions making progress across indicators**

- Baja California
- Campeche
- Caolima
- Guanajuato
- Hidalgo
- Nayarit
- Yucatán

Note: Mexican regions improving more than the median across employment growth (2005-15), skills supply and demand (2005-15), and employment rate (2004-14).

Note

1. In some regions, high wage values may be driven by the concentration of natural resources.

Netherlands

This profile examines the health of local labour markets in the Netherlands. It analyses data at the regional level, which corresponds to the country's 12 provinces (provincies).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In the Netherlands, the number of people employed grew by an average annual rate of 0.2% between 2004 and 2014.[1] Figures 29.1 and 29.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 0.8% in Flevoland to a decline of 0.5% in Limburg. While the Flevoland and Utrecht regions had the highest growth rates, North Holland and South Holland contributed more to national employment growth due to their larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 29.3 shows that in 2014, 6 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Six regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher skilled, higher value-added production and services. In the Netherlands, there were no regions in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 29.1 lists the regions with the highest increase in skills supply and/or demand between 2003 and 2014.

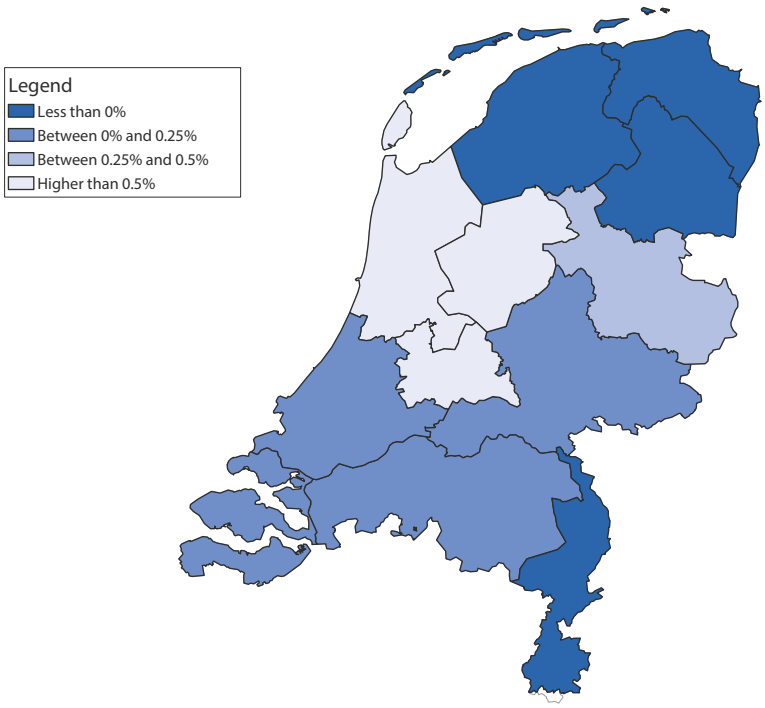
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 29.4. Zeeland had the highest employment rate at 76.7% while Groningen had the lowest employment rate at 69.5%. To highlight those places making the most progress over time, Figure 29.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In the Netherlands, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

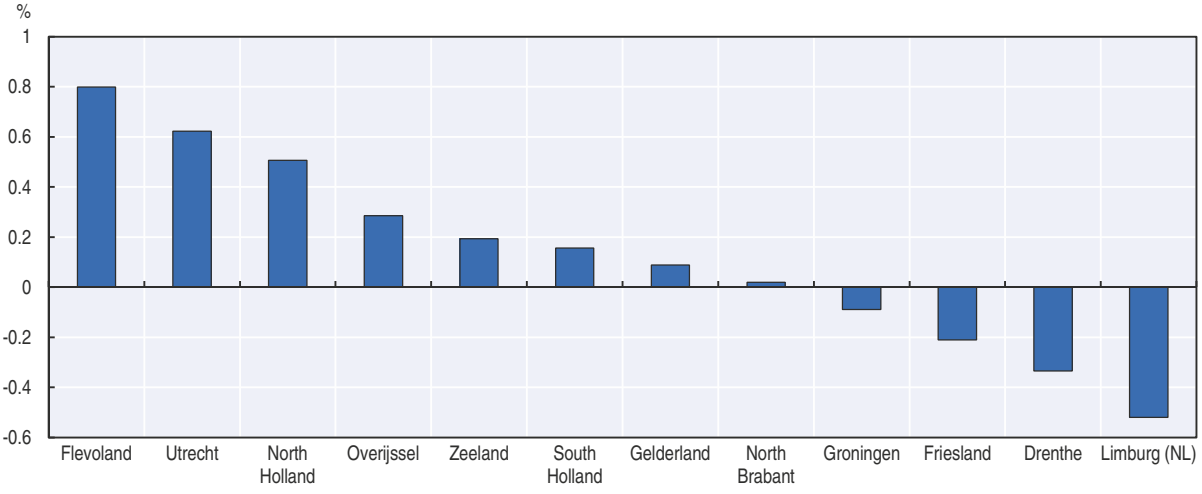
Figure 29.1. **Local employment growth over time, Dutch regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425289

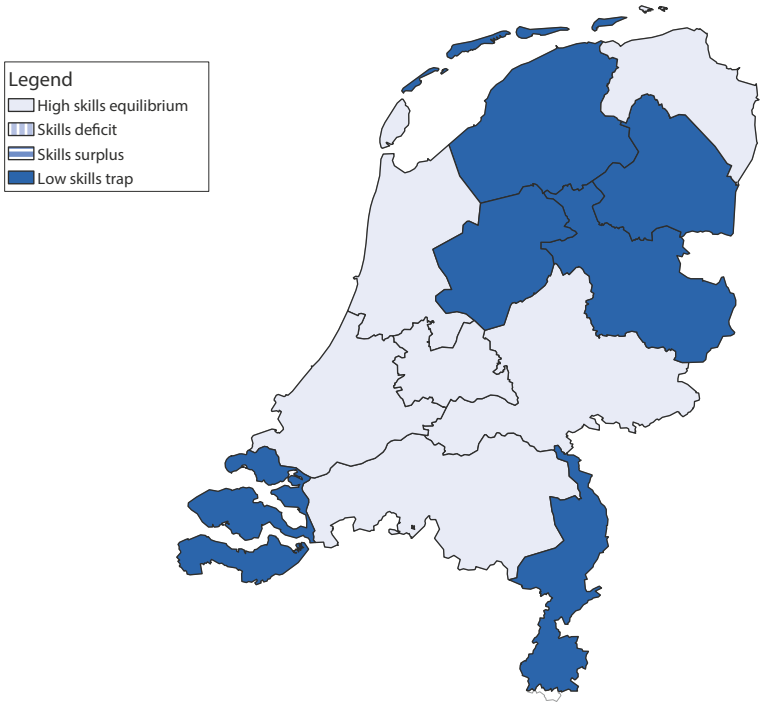
Figure 29.2. **Local employment growth over time: Ranking of Dutch regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425293

Figure 29.3. **Skills supply and demand, Dutch regions, 2014**



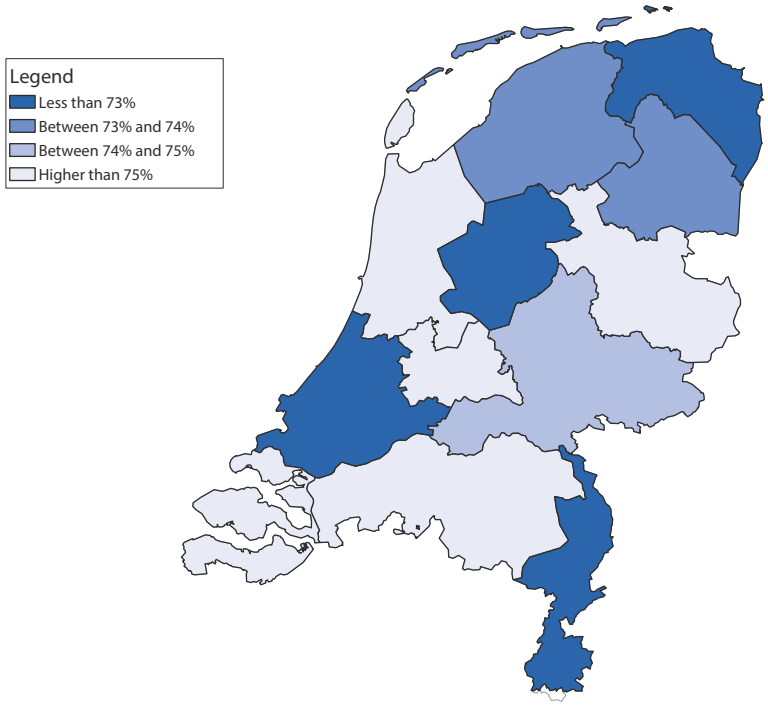
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Central Bureau of Statistics, Netherlands.

StatLink http://dx.doi.org/10.1787/888933425304

Table 29.1. **Places with the highest increase in skills supply and/or demand, Dutch regions, 2003-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Drenthe		• Flevoland
• Gelderland		• Groningen
• Overijssel		• North Holland

Figure 29.4. **Employment rate (population 15-64), Dutch regions, 2015**

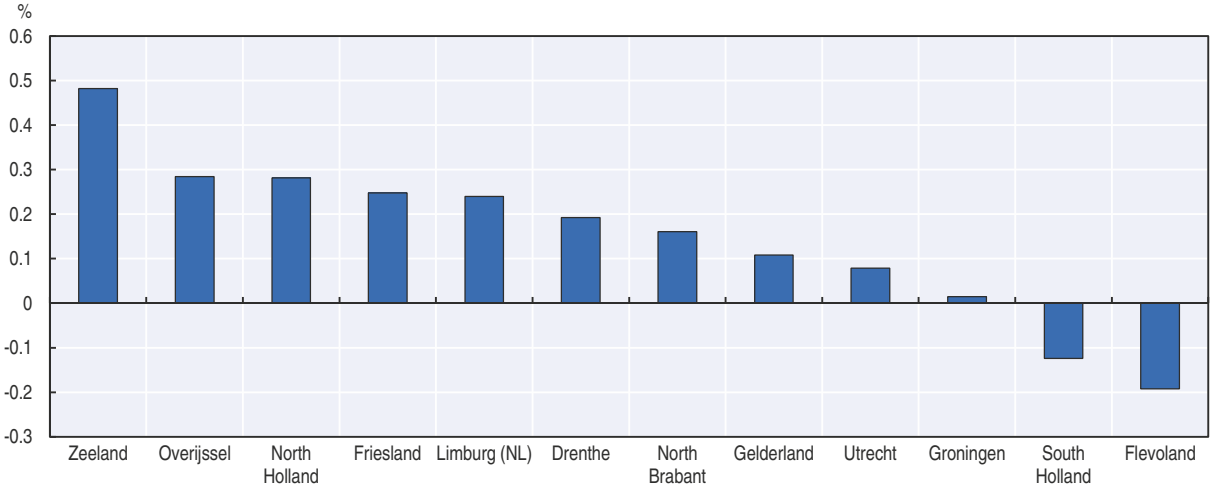


Source: Eurostat (2016), Regional Labour Market Statistics (database) http://ec.europa.eu/eurostat/web/regions/data/database.

StatLink http://dx.doi.org/10.1787/888933425312

Figure 29.5. **Employment rate change over time, Dutch regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933425327

Note

1. The number of people employed may be impacted by the fact that the Netherlands has a relatively high rate of part-time employment.

New Zealand

This profile examines the health of local labour markets in New Zealand. It analyses data at the sub-regional level, which corresponds to the country's 12 Regional Councils.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In New Zealand, the number of people employed grew by an average annual rate of 1.3% between 2004 and 2014.[1] Figures 30.1 and 30.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.7% in the Auckland Region to an increase of 0.3% in the Manawatu-Wanganui Region.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GDP per worker)[2] can provide further insights into the quality of local job creation and the potential for future growth. Figure 30.3 shows that in 2015, 5 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Four sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining three sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 30.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2006 and 2015.

Employment rate

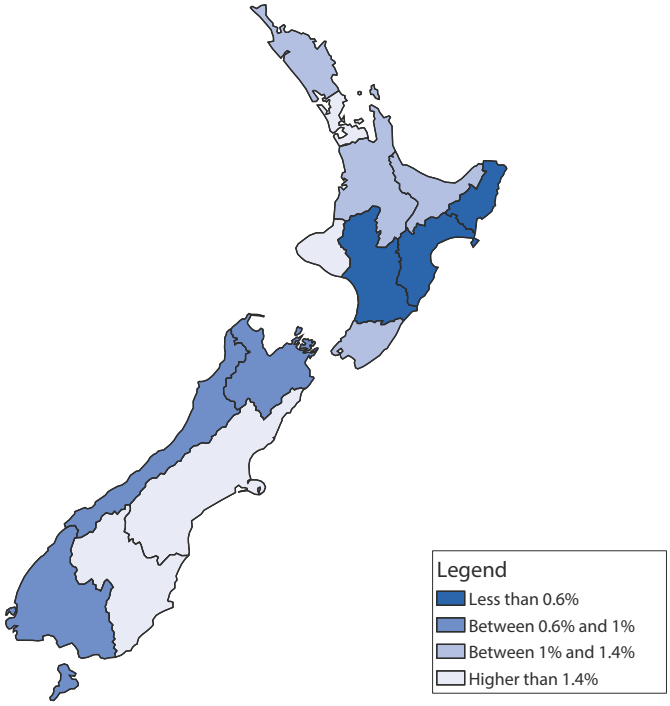
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15 and over in 2015 are shown in Figure 30.4. The Southland Region had the highest employment rate at 70.6% while the Northland Region had the lowest employment rate at 57.2%. To highlight those places making the most progress over time, Figure 30.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In New Zealand, only one sub-region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[3] This sub-region is the Taranaki Region.

Figure 30.1. **Local employment growth over time, New Zealand sub-regions, 2004-14**

Average annual change (%)

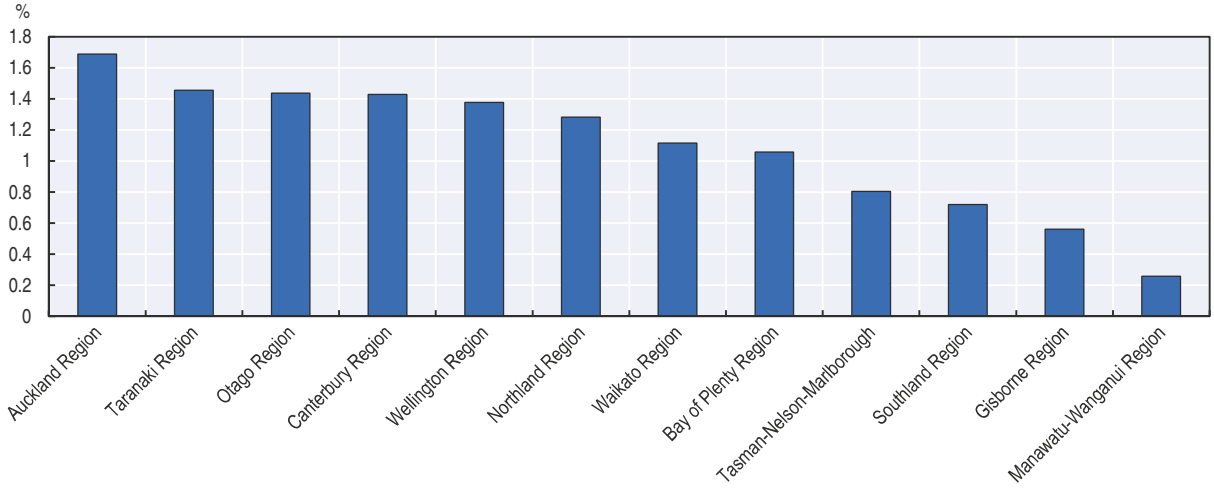


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425332

Figure 30.2. **Local employment growth over time: Ranking of New Zealand sub-regions, 2004-14**

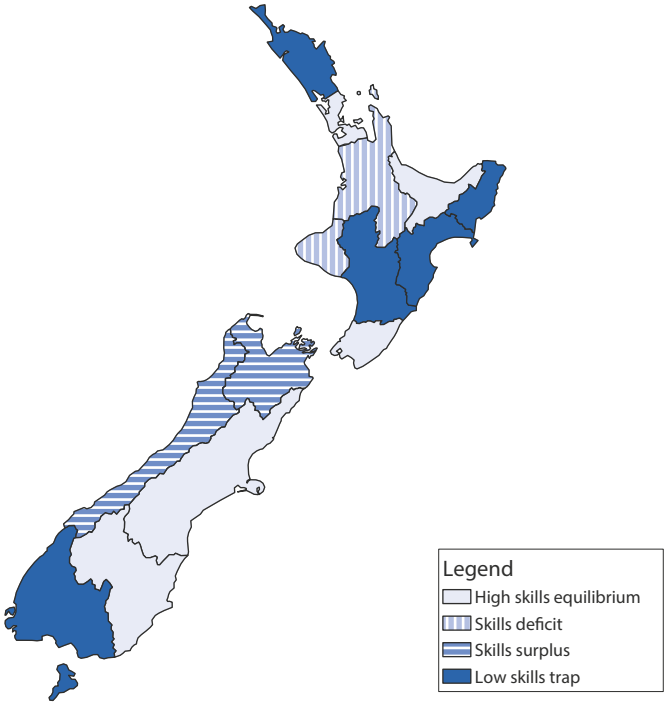
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425344

Figure 30.3. **Skills supply and demand, New Zealand sub-regions, 2015**



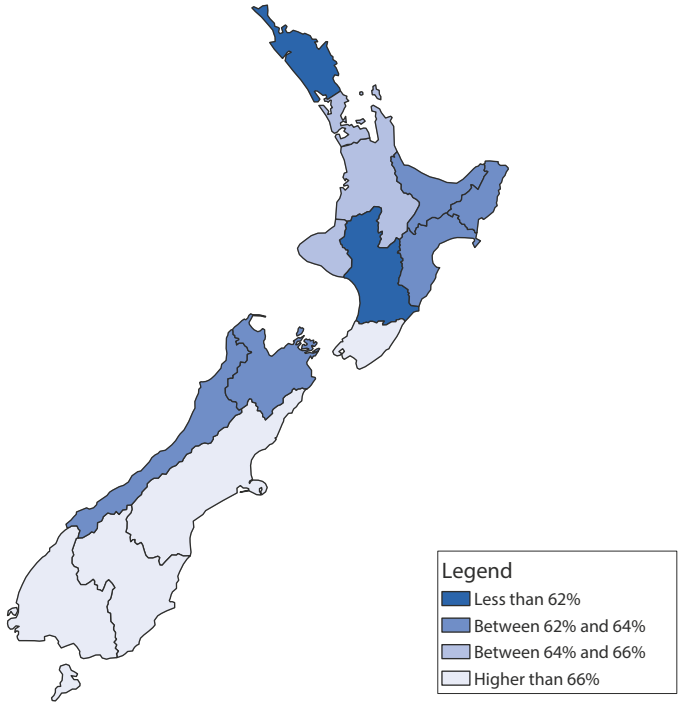
Source: OECD calculations based on data from the Household Labour Force Survey and Regional Accounts, Statistics New Zealand.

StatLink http://dx.doi.org/10.1787/888933425357

Table 30.1. **Places with the highest increase in skills supply and/or demand, New Zealand sub-regions 2006-15**

Increase in supply	Increase in supply and demand	Increase in demand
• Southland Region	• Taranaki Region	• Canterbury Region
• Tasman-Nelson-Marlborough		• Wellington Region

Figure 30.4. **Employment rate (population 15 and over), New Zealand sub-regions, 2015**

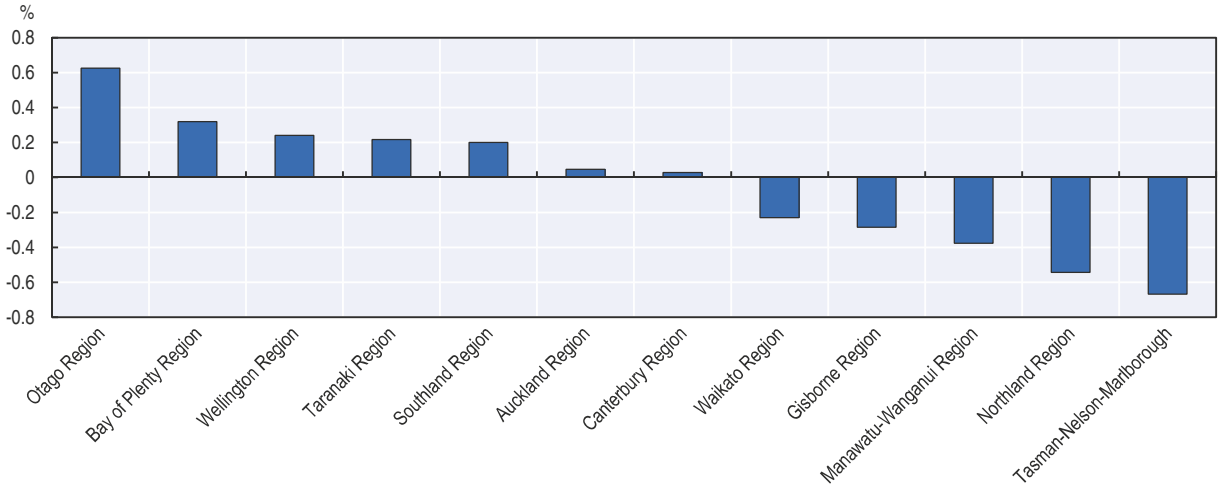


Source: OECD calculations based on data from the Household Labour Force Survey, Statistics New Zealand.

StatLink http://dx.doi.org/10.1787/888933425361

Figure 30.5. **Employment rate change over time, New Zealand sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Household Labour Force Survey, Statistics New Zealand.

StatLink http://dx.doi.org/10.1787/888933425370

Notes

1. The number of people employed may be impacted by the fact that New Zealand has a relatively high rate of part-time employment.
2. In some sub-regions, high GDP per worker values may be driven by the concentration of natural resources.
3. Employment growth: 2004-14; skills supply and demand: 2006-15; employment rate: 2005-15.

Norway

This profile examines the health of local labour markets in Norway. It analyses data at the sub-regional level, which corresponds to the country's 19 counties (fylker).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Norway, the number of people employed grew by an average annual rate of 1.5% between 2004 and 2014. Figures 31.1 and 31.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 2.6% in Oslo to an increase of 0.37% in Sogn og Fjordane.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker)[1] can provide further insights into the quality of local job creation and the potential for future growth. Figure 31.3 shows that in 2013, 8 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Seven sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher skilled, higher value-added production and services. The remaining four sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 31.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2005 and 2013.

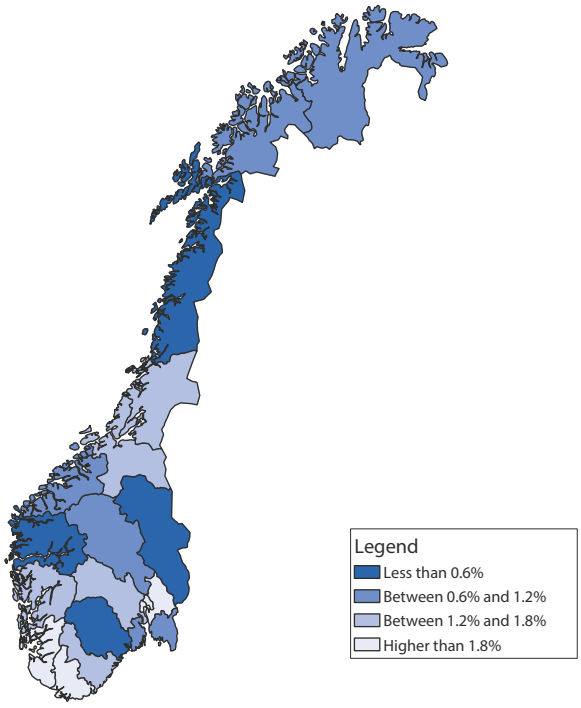
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-74 in 2015 is shown in Figure 31.4. Oslo had the highest employment rate at 72% while the Østfold, Telemark and Aust-Agder sub-regions had the lowest employment rate at 63%. To highlight those places making the most progress over time, Figure 31.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2015. A number of sub-regions show negative values, reflecting the fact that the overall employment rate in Norway slightly decreased during this time period.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In Norway, two sub-regions consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[2] These sub-regions were Rogaland and Sør-Trøndelag.

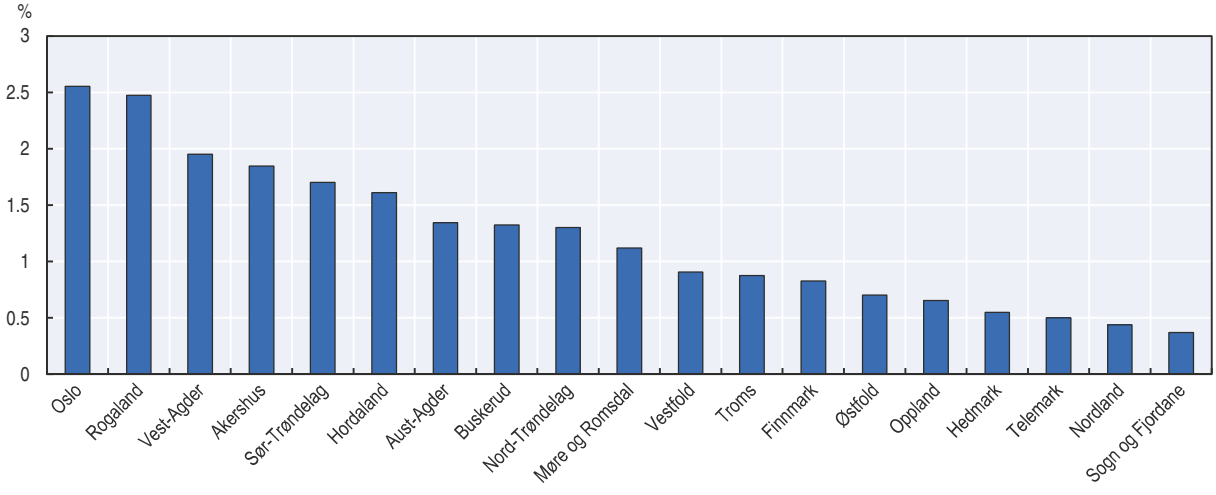
Figure 31.1. **Local employment growth over time, Norwegian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425383

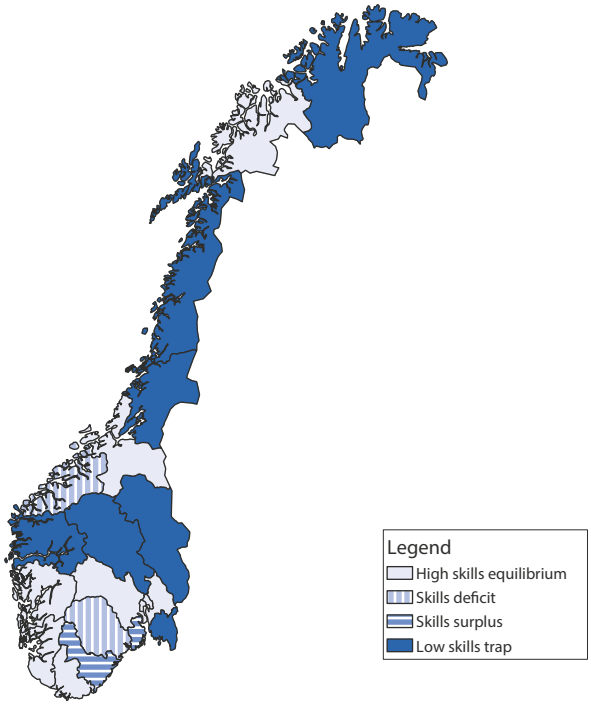
Figure 31.2. **Local employment growth over time: Ranking of Norwegian sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425390

Figure 31.3. **Skills supply and demand, Norwegian sub-regions, 2013**



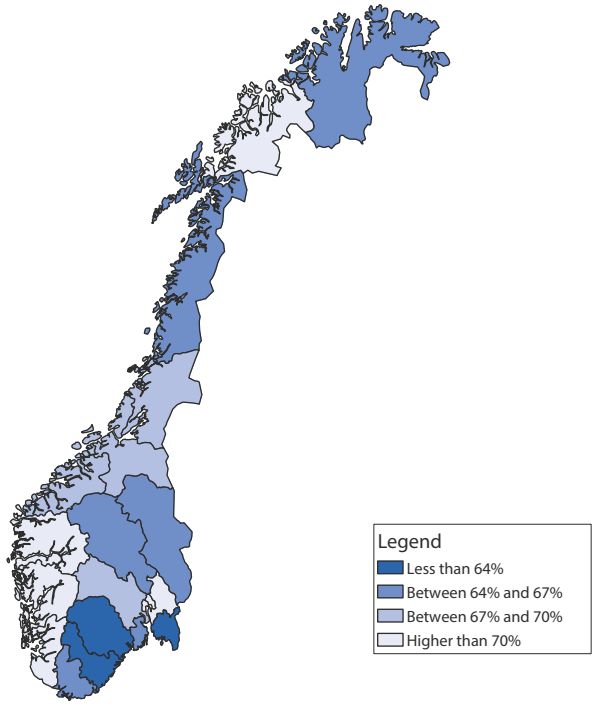
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Statistics Norway.

StatLink http://dx.doi.org/10.1787/888933425403

Table 31.1. **Places with the highest increase in skills supply and/or demand, Norwegian sub-regions, 2005-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Hedmark	• Møre og Romsdal	• Rogaland
• Oppland		• Troms
• Telemark		• Vest-Agder

Figure 31.4. **Employment rate (population 15-74), Norwegian sub-regions, 2015**

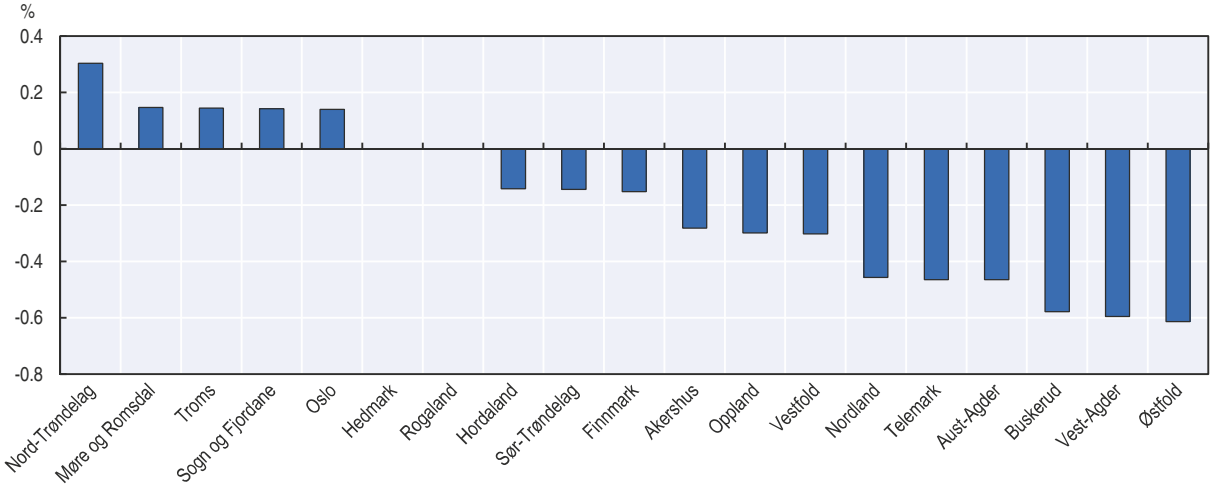


Source: OECD calculations based on data from the Labour Force Survey, Statistics Norway.

StatLink http://dx.doi.org/10.1787/888933425416

Figure 31.5. **Employment rate change over time, Norwegian sub-regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics Norway.

StatLink http://dx.doi.org/10.1787/888933425424

Notes

1. In some sub-regions, high GVA per worker values may be driven by the concentration of natural resources.
2. Employment growth: 2004-14; skills supply and demand: 2005-13; employment rate: 2005-15.

Poland

This profile examines the health of local labour markets in Poland. It analyses data at the regional level, which corresponds to the country's 16 voivodeships (województwa).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Poland, the number of people employed grew by an average annual rate of 1.3% between 2005 and 2015. Figures 32.1 and 32.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 3.5% in Pomerania to an increase of 0.01% in West Pomerania. Although Pomerania had the highest rate of employment growth over this period, Mazovia contributed more to national employment growth because of its larger population size.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 32.3 shows that in 2013, 4 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Four regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher skilled, higher value-added production and services. The remaining eight regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 32.1 lists the regions with the highest increase in skills supply and/or demand between 2002 and 2013.

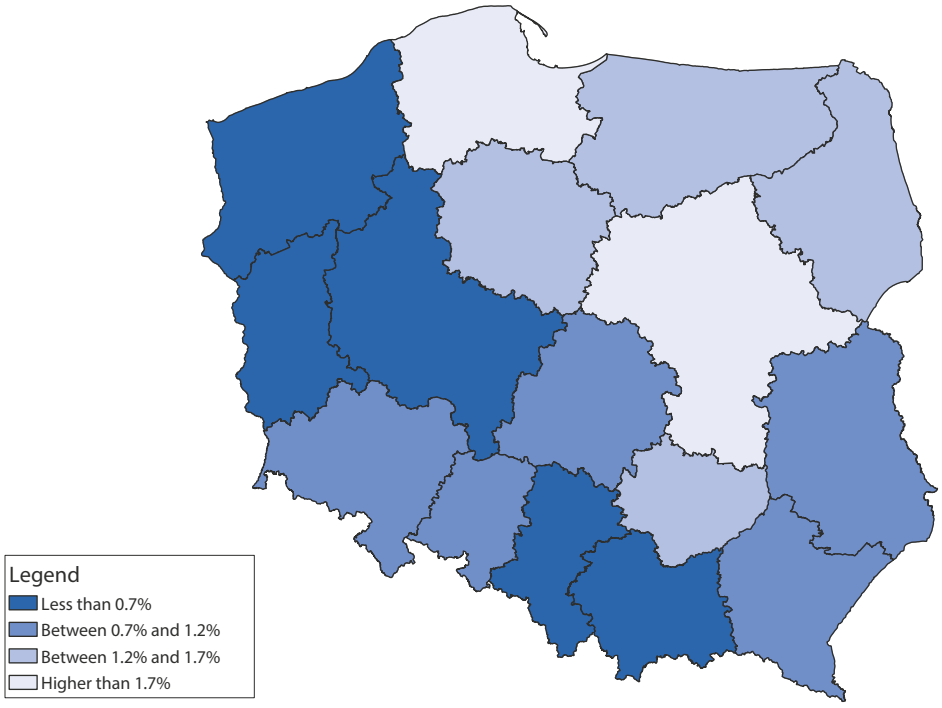
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 32.4. Mazovia had the highest employment rate at 68.8% while Warmian-Masuria had the lowest employment rate at 56.9%. To highlight those places making the most progress over time, Figure 32.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Poland, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

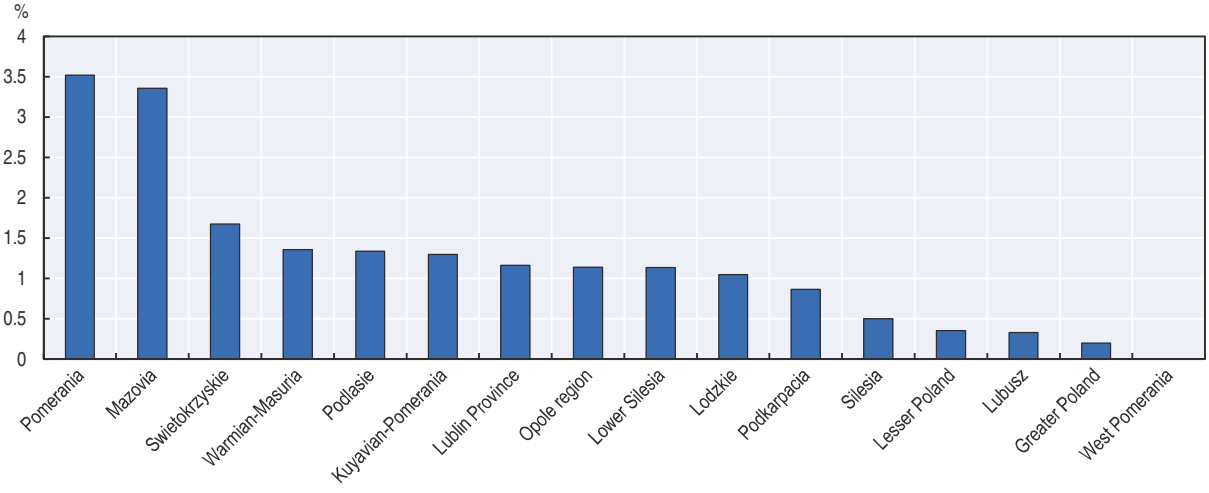
Figure 32.1. **Local employment growth over time, Polish regions, 2005-15**
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425439

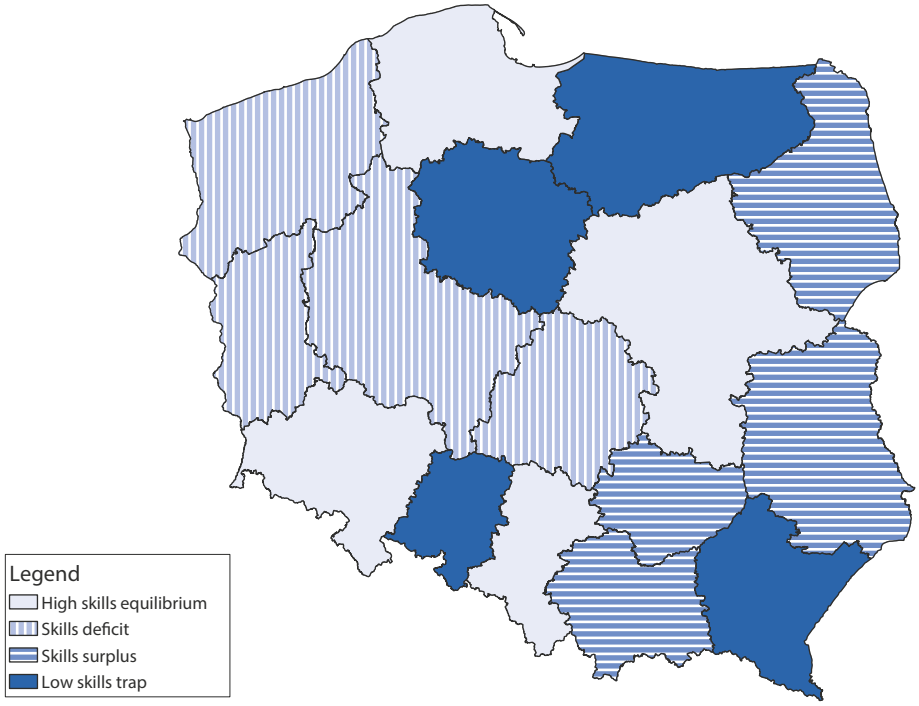
Figure 32.2. **Local employment growth over time: Ranking of Polish regions, 2005-15**
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425445

Figure 32.3. **Skills supply and demand, Polish regions, 2013**



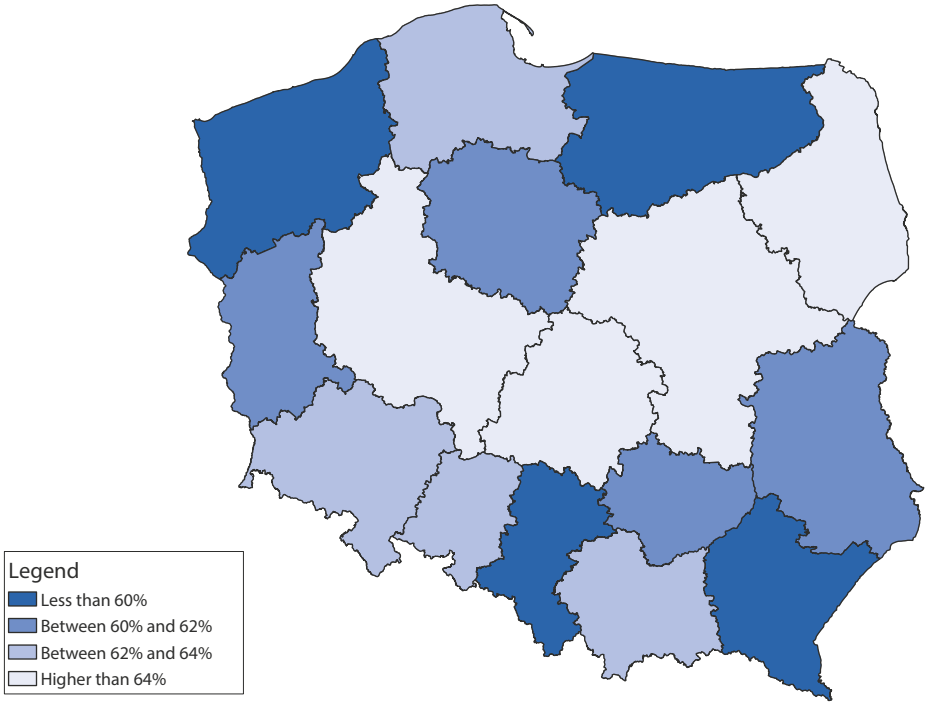
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Central Statistical Office, Poland.

StatLink http://dx.doi.org/10.1787/888933425453

Table 32.1. **Places with the highest increase in skills supply and/or demand, Polish regions, 2002-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Silesia • Swietokrzyskie	• Podlasie	• Lodzkie • Lublin Province

Figure 32.4. **Employment rate (population 15-64), Polish regions, 2015**

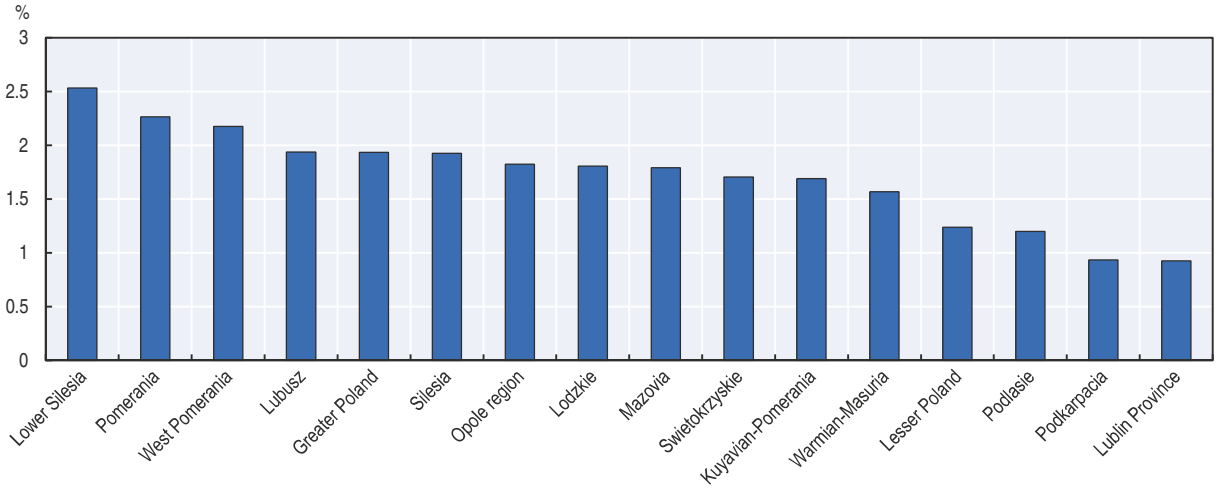


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425468

Figure 32.5. **Employment rate change over time, Polish regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425471

Portugal

This profile examines the health of local labour markets in Portugal. It analyses data at the regional level, which corresponds to the country's five regions (commissaoes de coordenaço regional) and two autonomous regions (regioes autonomas).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Portugal, the number of people employed declined by an average annual rate of 1.2% between 2004 and 2014. Figures 33.1 and 33.2 show the average annual employment growth rate across regions during this time period. It ranges from a decline of 0.2% in Algarve to a decline of 1.8% in Central Portugal. Although the number of people employed in Portugal has not recovered to 2008 levels, it should be noted it has been increasing since 2013.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 33.3 shows that in 2013, 3 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher skilled, higher value-added production and services. Central Portugal was the only region in a position of skills surplus, with a relatively high supply of skills and low demand for skills. Table 33.1 lists the regions with the highest increase in skills supply and/or demand between 2001 and 2013.

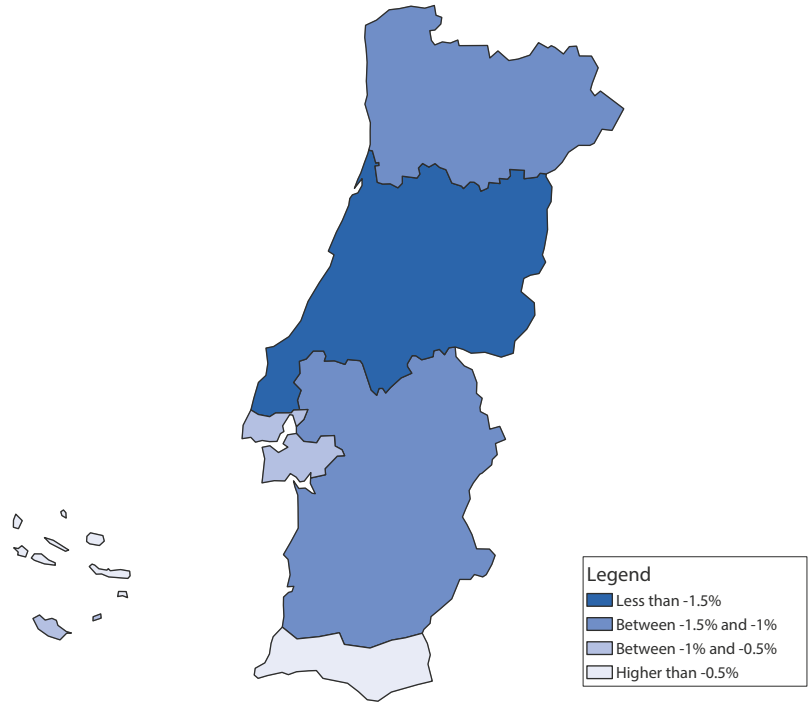
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 33.4. Central Portugal had the highest employment rate at 66.9% while Madeira had the lowest employment rate at 59.1%. To highlight those places making the most progress over time, Figure 33.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015. Although the employment rate in Portugal has not recovered to 2008 levels, it should be noted that it has been increasing since 2013.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Portugal, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods.

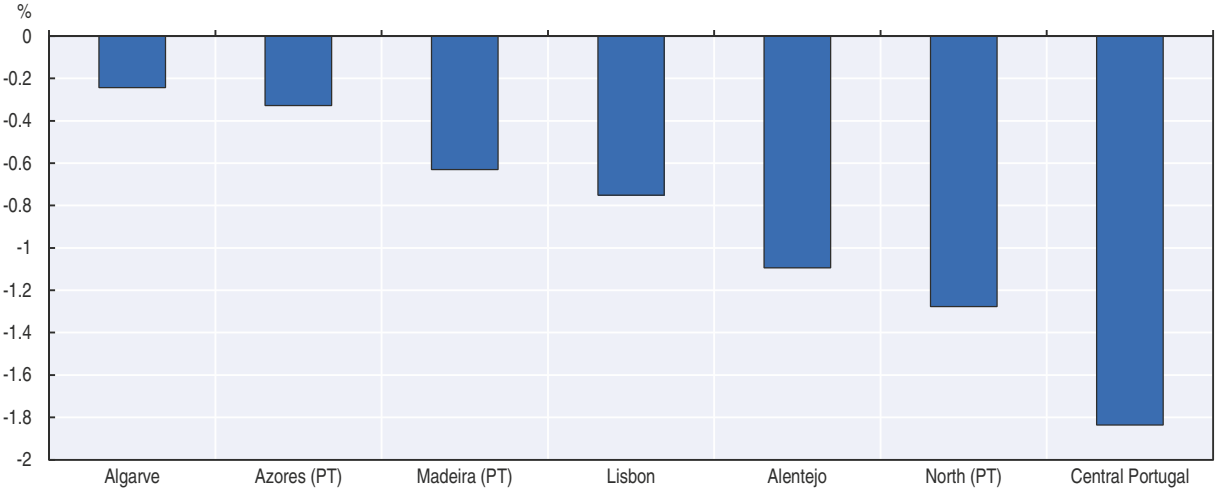
Figure 33.1. **Local employment growth over time, Portuguese regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425487

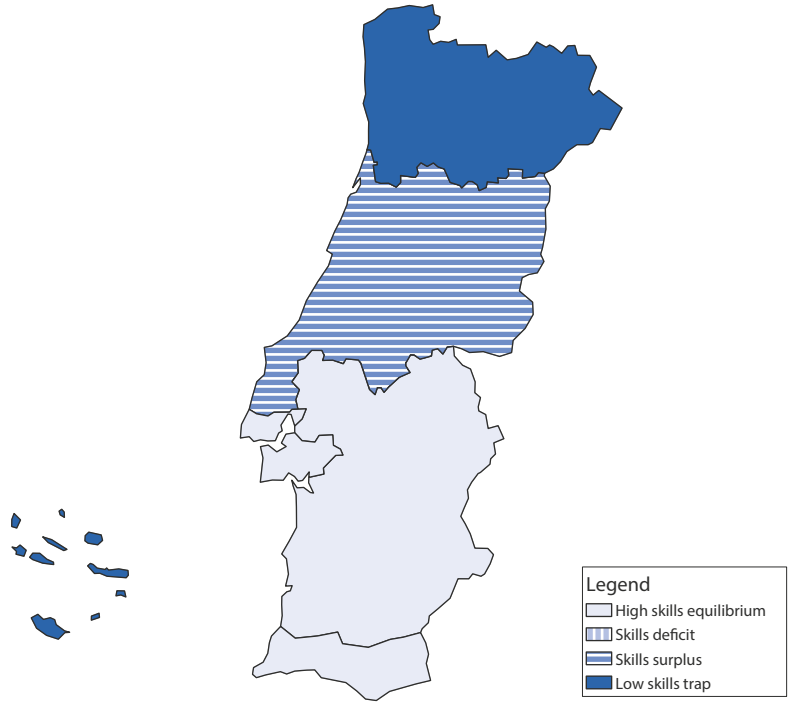
Figure 33.2. **Local employment growth over time: Ranking of Portuguese regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425490

Figure 33.3. **Skills supply and demand, Portuguese regions, 2013**



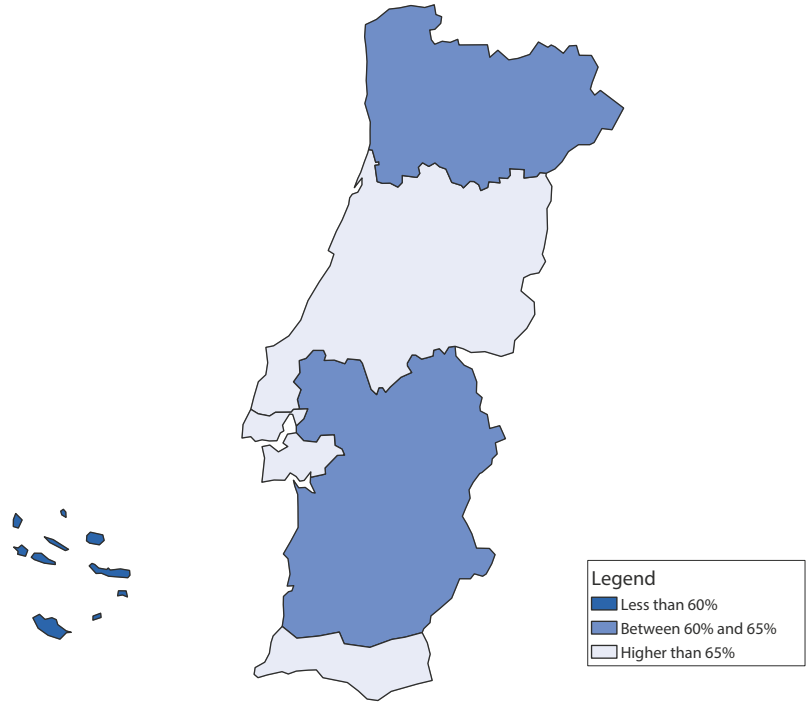
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Statistics Portugal.

StatLink http://dx.doi.org/10.1787/888933425500

Table 33.1. **Places with the highest increase in skills supply and/or demand, Portuguese regions, 2001-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Algarve	• Madeira	• Central Portugal

Figure 33.4. **Employment rate (population 15-64), Portuguese regions, 2015**

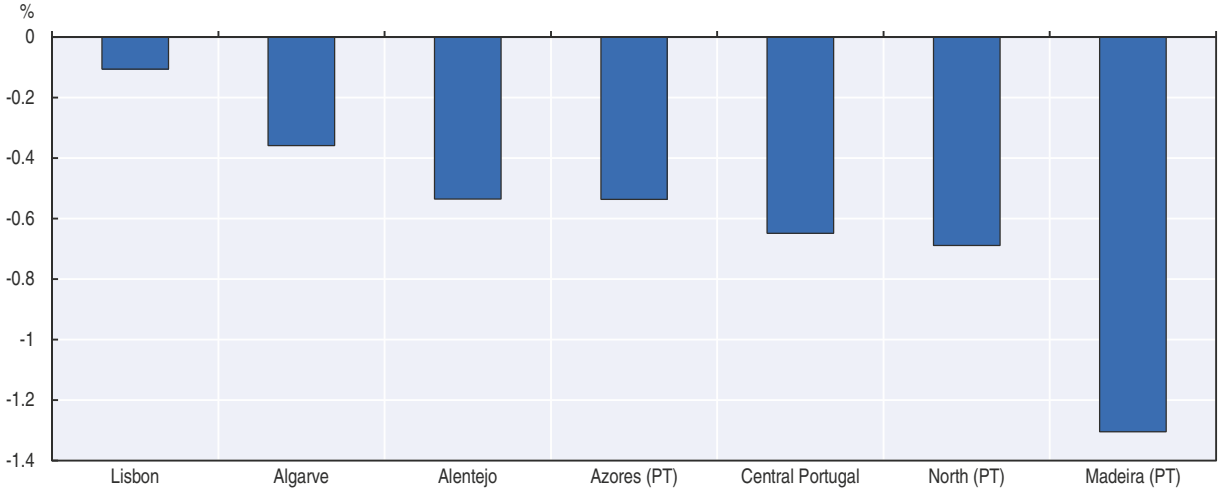


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425517

Figure 33.5. **Employment rate change over time, Portuguese regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425528

Romania

This profile examines the health of local labour markets in Romania. It analyses data at the regional level, which corresponds to the country's eight development regions (Regiunile de dezvoltare ale României).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Romania, the number of people employed decreased by an average annual rate of 0.3% between 2010 and 2014. Figure 34.1 and 34.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 1.0% in the North-West Region to a decrease of 2.1% in the South-East Region.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 34.2 shows that in 2014, 2 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Two regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher skilled, higher value-added production and services. The remaining four regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 34.1 lists the regions with the highest increase in skills supply and/or demand between 2011 and 2014.

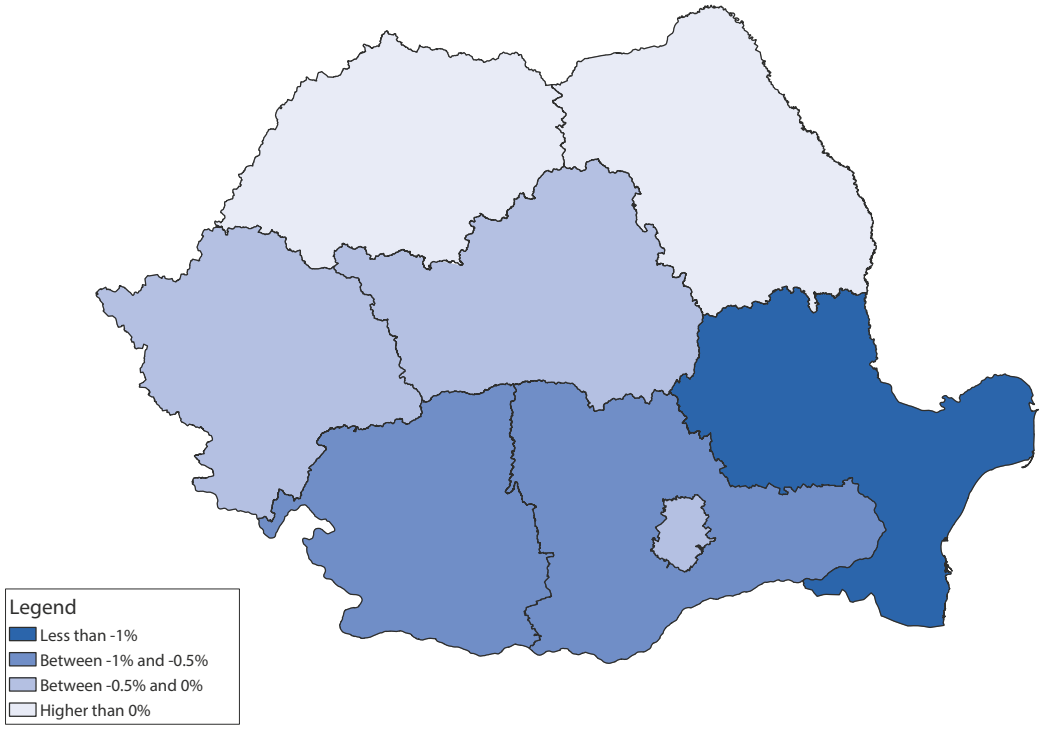
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2014 are shown in Figure 34.3. The North-East Region had the highest employment rate at 66.8% while the South-East Region had the lowest employment rate at 54.4%. To highlight those places making the most progress over time, Figure 34.4 shows the average annual change in the employment rate at the regional level between 2010 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Romania, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

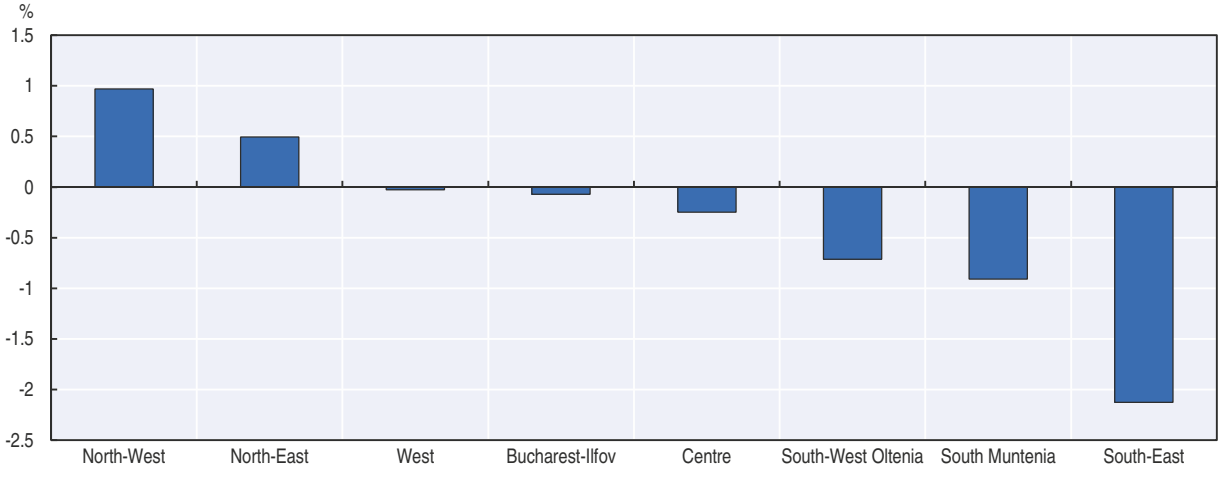
Figure 34.1. **Local employment growth over time, Romanian regions, 2010-14**
Average annual change (%)



Source: OECD calculations based on data from the Household Labour Force Survey (AMIGO), National Institute of Statistics, Romania.

StatLink http://dx.doi.org/10.1787/888933425534

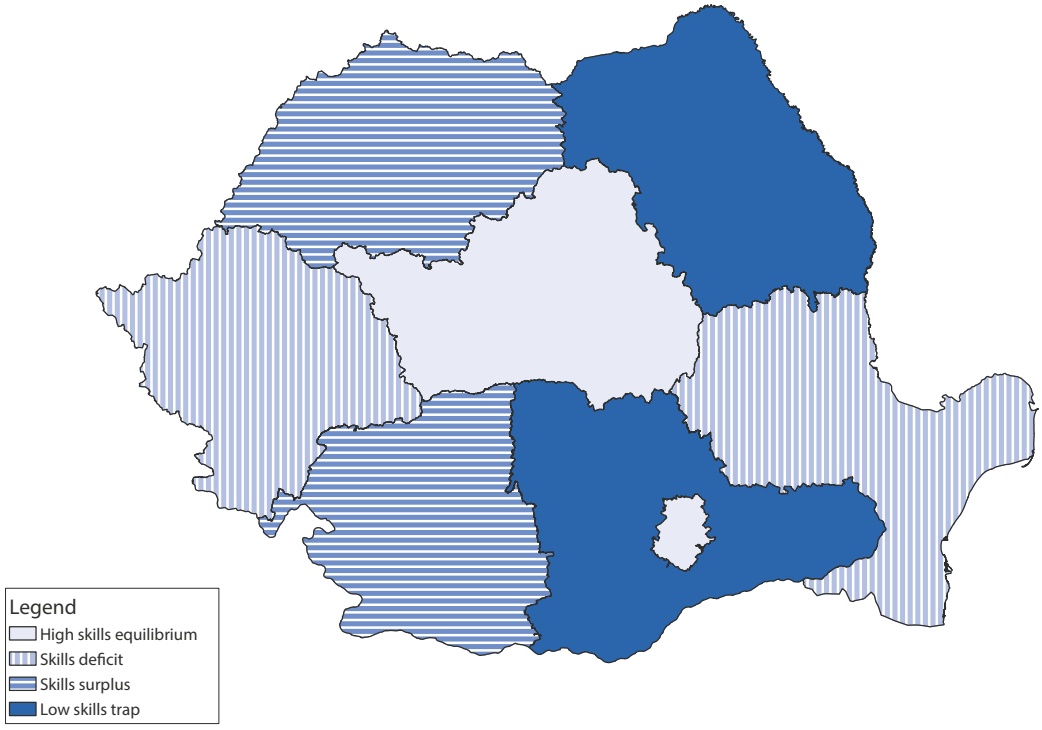
Figure 34.2. **Local employment growth over time: Ranking of Romanian regions, 2010-14**
Average annual change (%)



Source: OECD calculations based on data from the Household Labour Force Survey (AMIGO), National Institute of Statistics, Romania.

StatLink http://dx.doi.org/10.1787/888933425540

Figure 34.3. **Skills supply and demand, Romanian regions, 2014**



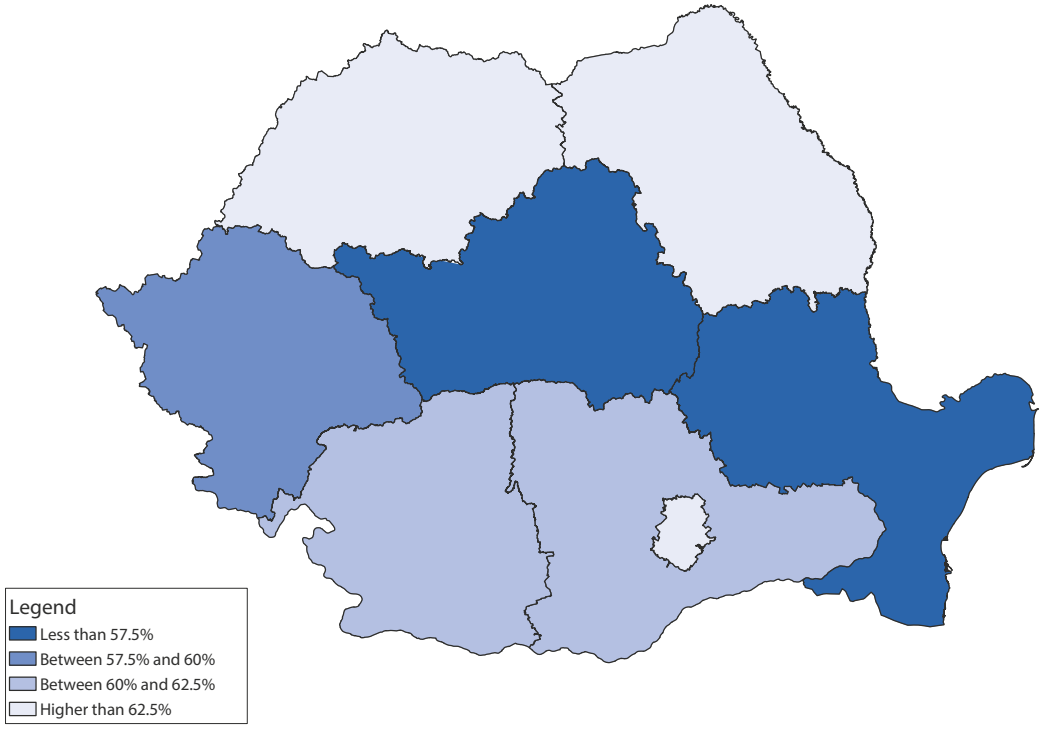
Source: OECD calculations based on data from the Household Labour Force Survey, National Institute of Statistics, Romania and Eurostat regional labour market statistics.

StatLink http://dx.doi.org/10.1787/888933425557

Table 34.1. **Places with the highest increase in skills supply and/or demand, Romanian regions, 2011-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Bucharest-Ilfov • Centre		• North-East • South-East

Figure 34.4. **Employment rate (population 15-64), Romanian regions, 2014**

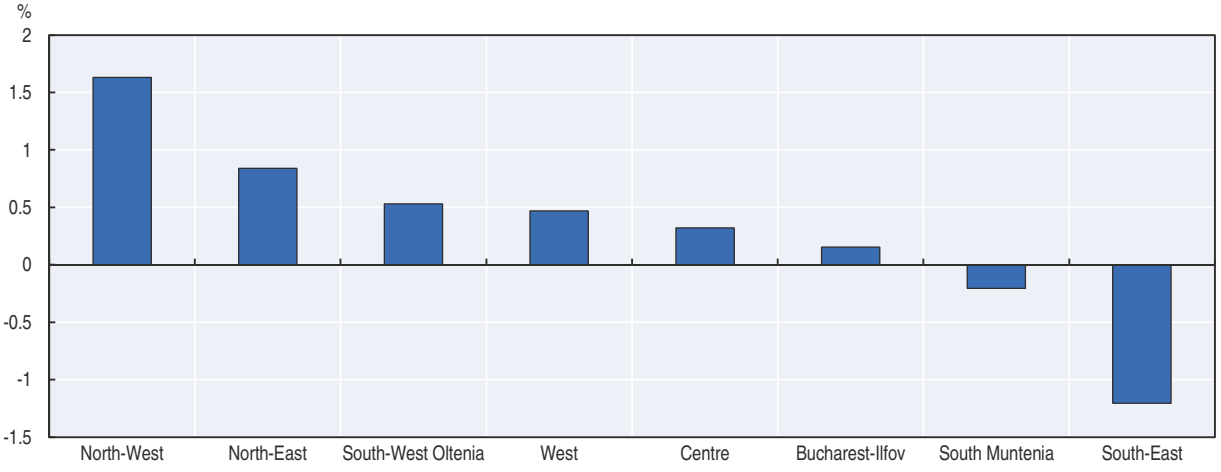


Source: OECD calculations based on data from the Household Labour Force Survey (AMIGO), National Institute of Statistics, Romania.

StatLink http://dx.doi.org/10.1787/888933425564

Figure 34.5. **Employment rate change over time, Romanian regions, 2010-14**

Average annual change (%)



Source: OECD calculations based on data from the Household Labour Force Survey (AMIGO), National Institute of Statistics, Romania.

StatLink http://dx.doi.org/10.1787/888933425576

Slovak Republic

This profile examines the health of local labour markets in Slovak Republic. It analyses data at the sub-regional level, which corresponds to the country's eight regions (kraje).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In the Slovak Republic, the number of people employed grew by an average annual rate of 1.0% between 2004 and 2014.[1] Figures 35.1 and 35.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.6% in Košice Region to an increase of 0.04% in Trenčín Region.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 35.3 shows that in 2013, 4 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. Trnava is the only region in a position of imbalance, with a relatively low supply of skills and high demand for skills (skills deficit). Table 35.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2000 and 2013.

Employment rate

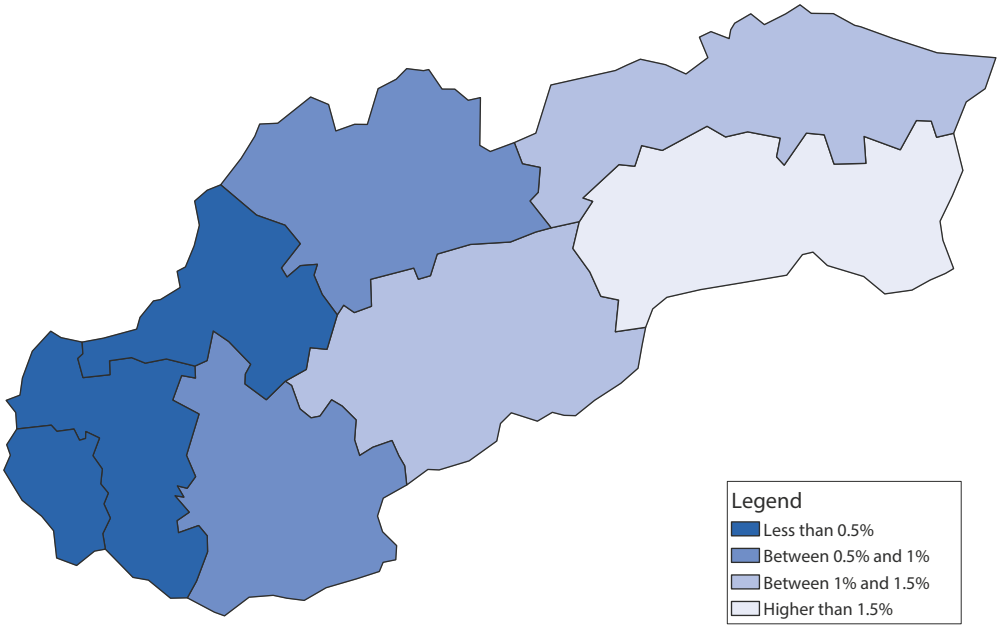
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 15-64 in 2014 are shown in Figure 35.4. Bratislava Region had the highest employment rate at 70.9% while Košice Region had the lowest employment rate at 56.4%. To highlight those places making the most progress over time, Figure 35.5 shows the average annual change in the employment rate at the sub-regional level between 2004 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. For the Slovak Republic, there were no sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 35.1. **Local employment growth over time, Slovak Republic sub-regions, 2004-14**

Average annual change (%)

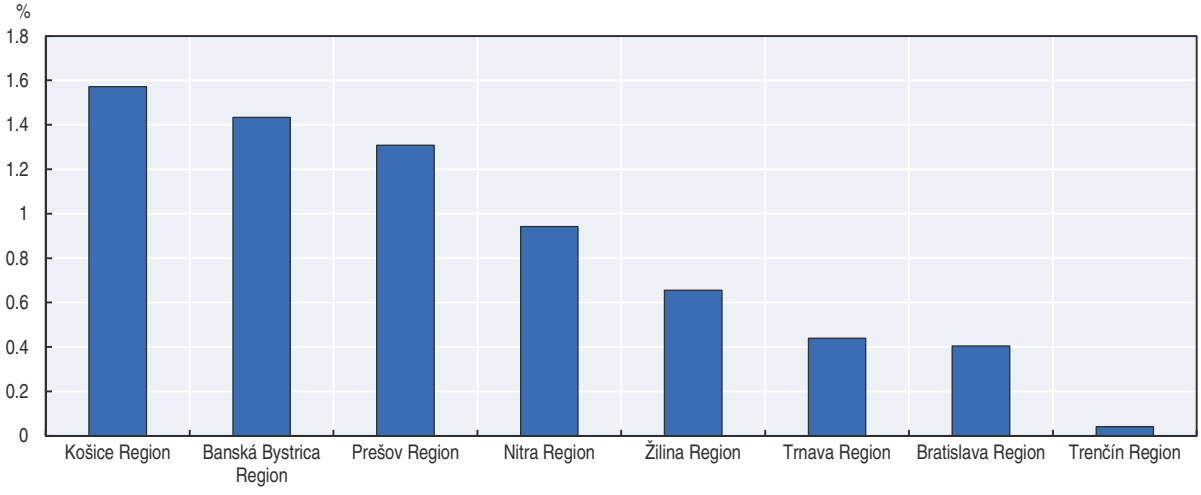


Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425586

Figure 35.2. **Local employment growth over time: Ranking of Slovak Republic sub-regions, 2004-14**

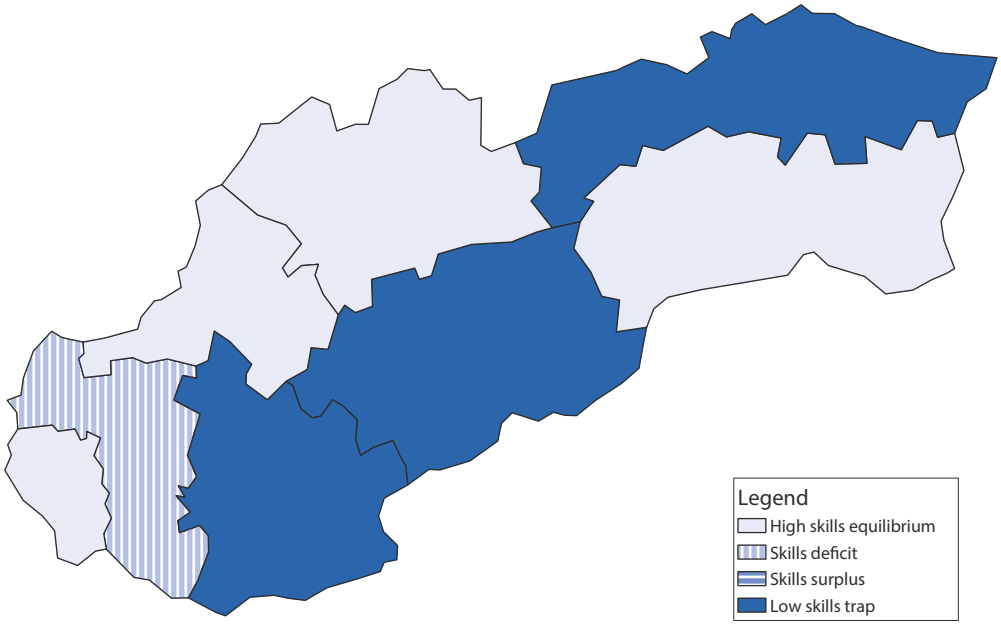
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425591

Figure 35.3. **Skills supply and demand, Slovak Republic sub-regions, 2013**



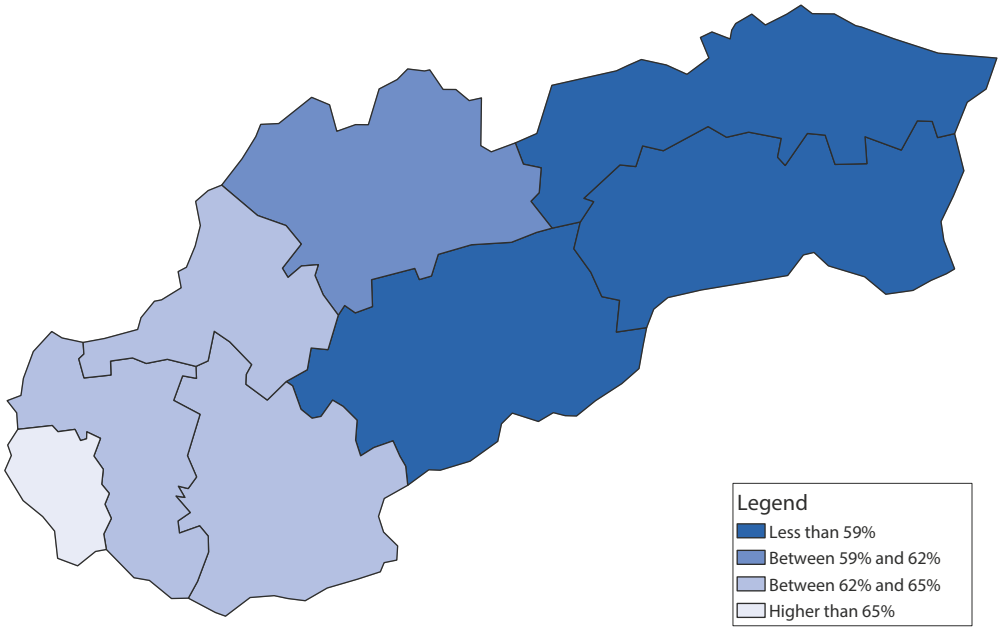
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Statistical Office of Slovak Republic.

StatLink http://dx.doi.org/10.1787/888933425603

Table 35.1. **Places with the highest increase in skills supply and/or demand, Slovak Republic sub-regions, 2000-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Košice Region		• Bratislava Region
• Trenčín Region		• Žilina Region

Figure 35.4. **Employment rate (population 15-64), Slovak Republic sub-regions, 2014**

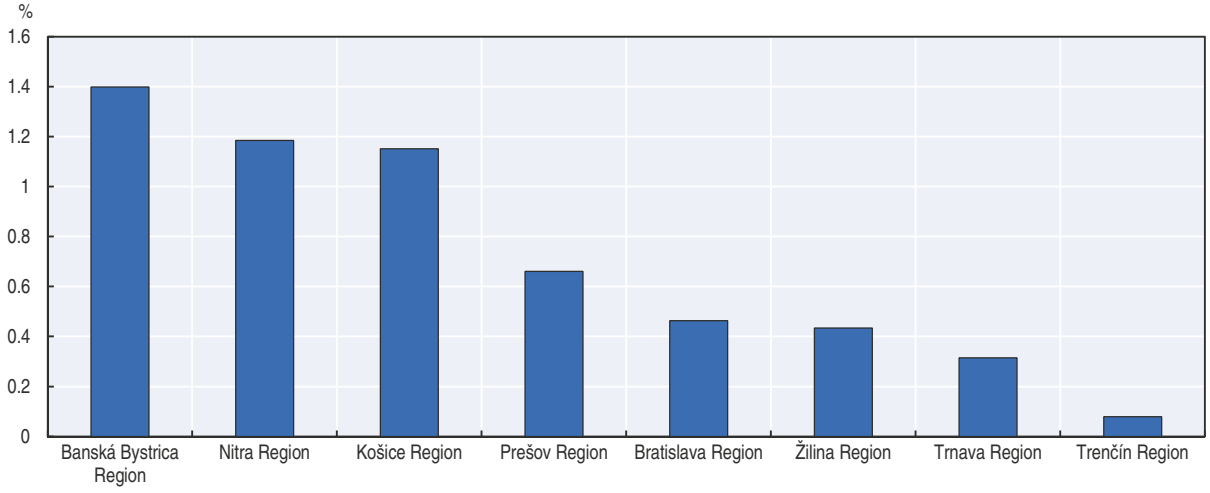


Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Slovak Republic.

StatLink http://dx.doi.org/10.1787/888933425612

Figure 35.5. **Employment rate change over time, Slovak Republic sub-regions, 2004-14**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Slovak Republic.

StatLink http://dx.doi.org/10.1787/888933425629

Note

1. The number of people employed may be impacted by the fact that the Slovak Republic saw an increase in part-time employment over this time period.

Slovenia

This profile examines the health of local labour markets in Slovenia. It analyses data at the sub-regional level, which corresponds to the country's 12 statistical regions (statistične regije).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Slovenia, the number of people employed decreased by an average annual rate of 0.2% between 2005 and 2014. While the number of people employed has not yet recovered to 2008 levels, it has been increasing since 2013. Figures 36.1 and 36.2 show the average annual employment growth rate across sub-regions during this time. It ranges from an increase of 0.9% in Central Slovenia to a decrease of 2.4% in Central Sava.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the potential for future growth. Figure 36.3 shows that in 2013, 4 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining five sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 36.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2002 and 2013.

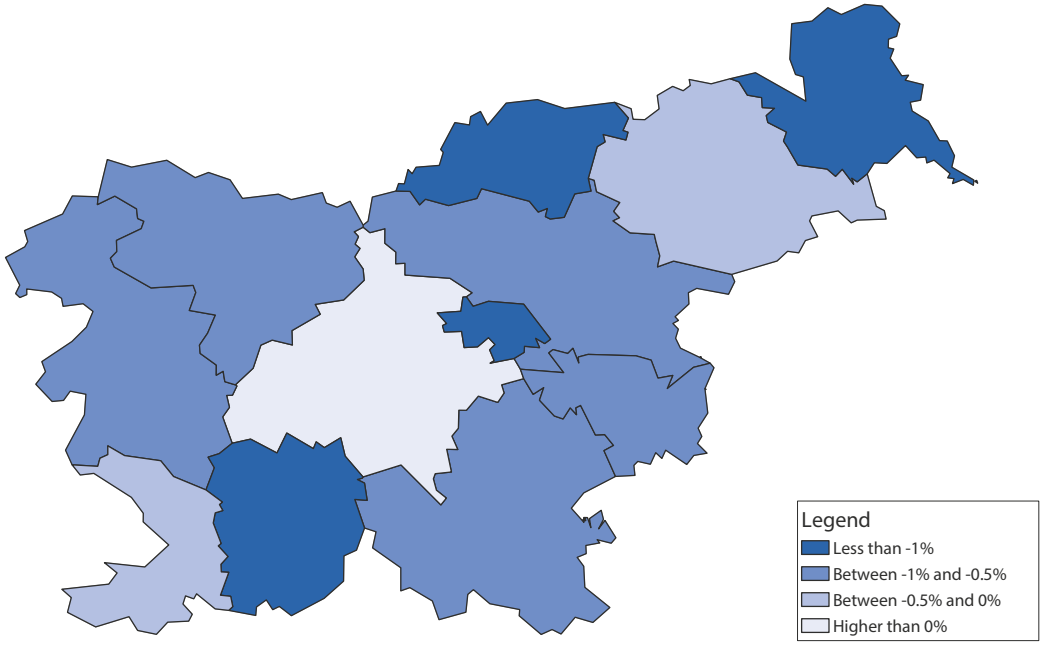
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 36.4 shows the 2014 sub-regional employment rate for the population 15-64. Inner-Karst had the highest employment rate (61.0%) while Mura had the lowest (50.7%). Figure 36.5 shows the average annual change in the employment rate at the sub-regional level between 2005 and 2014. A number of sub-regions show negative values, reflecting the fact that the overall employment rate in Slovenia slightly decreased during this time period. However, it should be noted that the employment rate has been increasing since 2013.

Places to watch: Moving towards more productive and inclusive economies

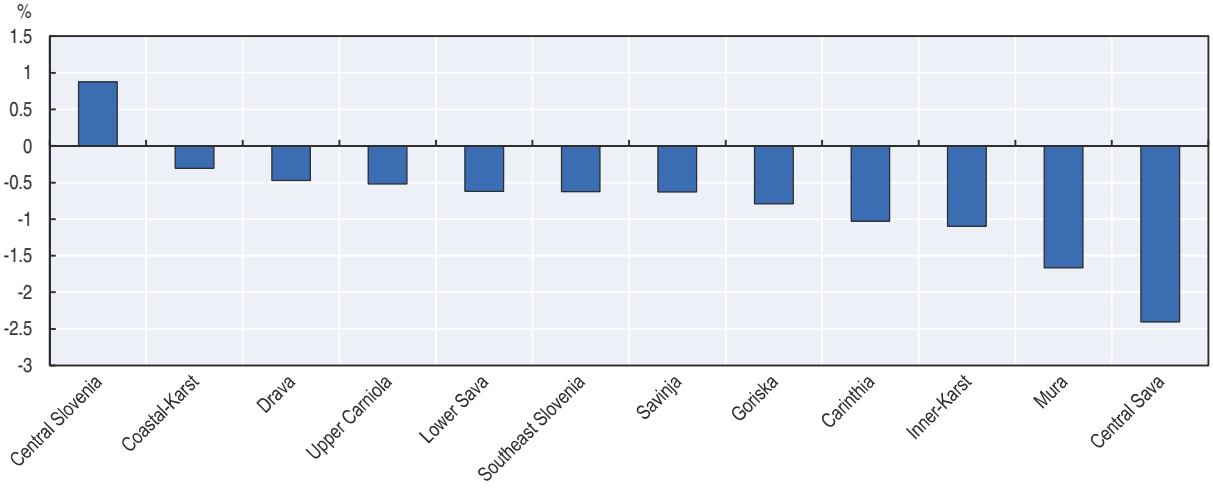
Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. In Slovenia, only one sub-region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods.[1] This sub-region is Lower Sava.

Figure 36.1. **Local employment growth over time, Slovenian sub-regions, 2005-14**
Average annual change (%)



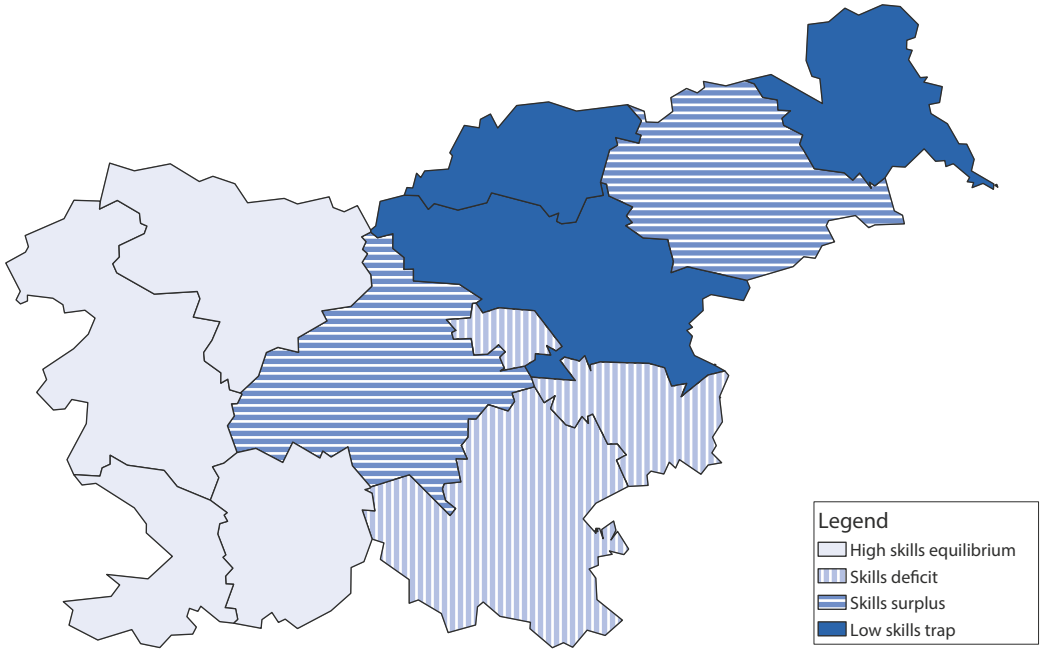
Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Republic of Slovenia.
StatLink http://dx.doi.org/10.1787/888933425639

Figure 36.2. **Local employment growth over time: Ranking of Slovenian sub-regions, 2005-14**
Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Republic of Slovenia.
StatLink http://dx.doi.org/10.1787/888933425647

Figure 36.3. **Skills supply and demand, Slovenian sub-regions, 2013**



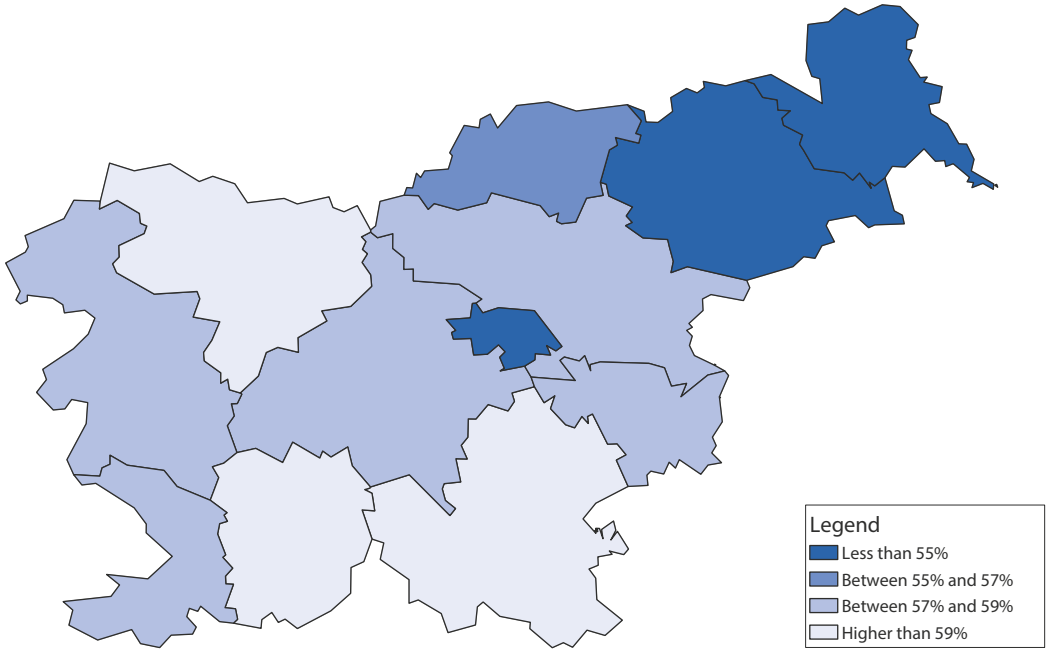
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Statistical Office of the Republic of Slovenia.

StatLink http://dx.doi.org/10.1787/888933425652

Table 36.1. **Places with the highest increase in skills supply and/or demand, Slovenian sub-regions, 2002-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Lower Sava	• Mura • Southeast Slovenia	• Carinthia

Figure 36.4. **Employment rate (population 15-64), Slovenian sub-regions, 2014**

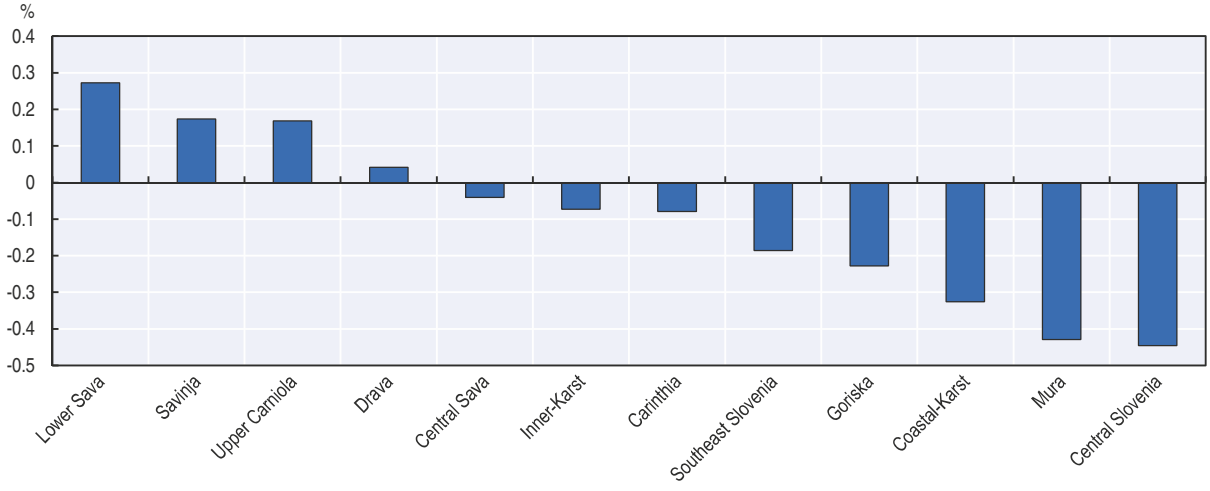


Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Republic of Slovenia.

StatLink http://dx.doi.org/10.1787/888933425663

Figure 36.5. **Employment rate change over time, Slovenian sub-regions, 2005-14**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistical Office of the Republic of Slovenia.

StatLink http://dx.doi.org/10.1787/888933425671

Note

1. Employment growth: 2005-14; skills supply and demand: 2002-13; employment rate: 2005-14.

South Africa

This profile examines the health of local labour markets in South Africa. It analyses data at the regional level, which corresponds to the country's nine provinces.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In South Africa, the number of people employed grew by an average annual rate of 0.6% between 2008 and 2014. Figures 37.1 and 37.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 4.5% in Limpopo to a decrease of 1.6% in Free State. While Limpopo registered the highest employment growth rate, Eastern Cape contributed more to national employment growth because of its comparatively larger population size.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GDP per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 37.3 shows that in 2014, 2 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Eastern Cape was the only region in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; this region may find it hard to move to higher-skilled, higher value-added production and services. The remaining six regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 37.1 lists the regions with the highest increase in skills supply and/or demand between 2008 and 2014.

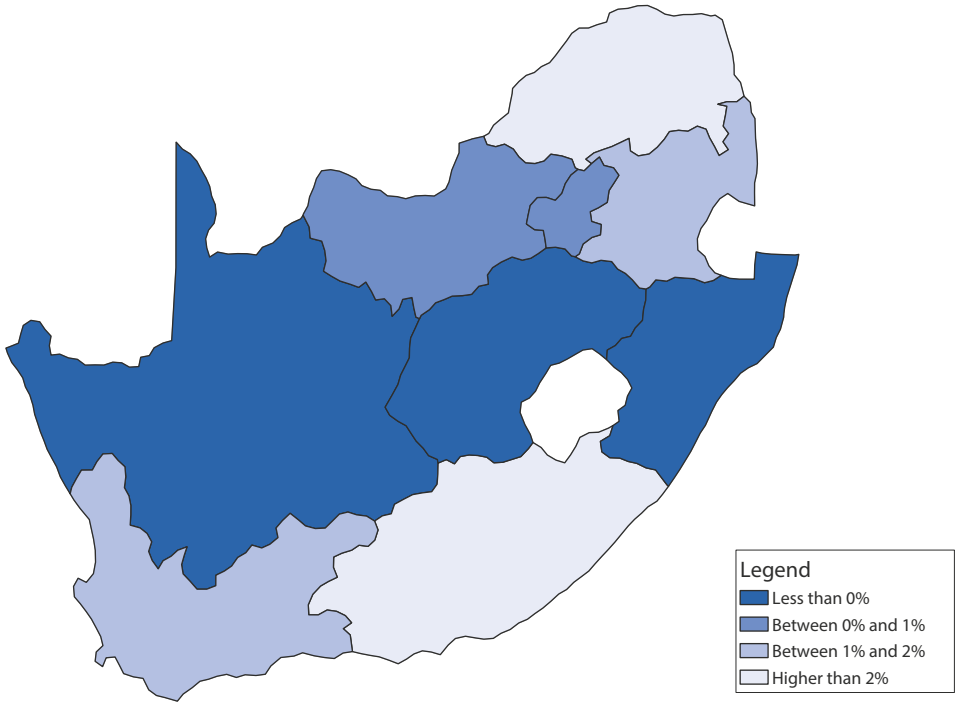
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 37.4 shows the 2015 regional employment rate for the population 15-64. Western Cape had the highest employment rate (53.8%) while Eastern Cape had the lowest (33.5%). Figure 37.5 shows the average annual change in the employment rate at the regional level between 2008 and 2015. A number of regions show negative values, reflecting the fact that the overall employment rate in South Africa decreased during this time period. However, the employment rate has been increasing since 2010.

Places to watch: Moving towards more productive and inclusive economies

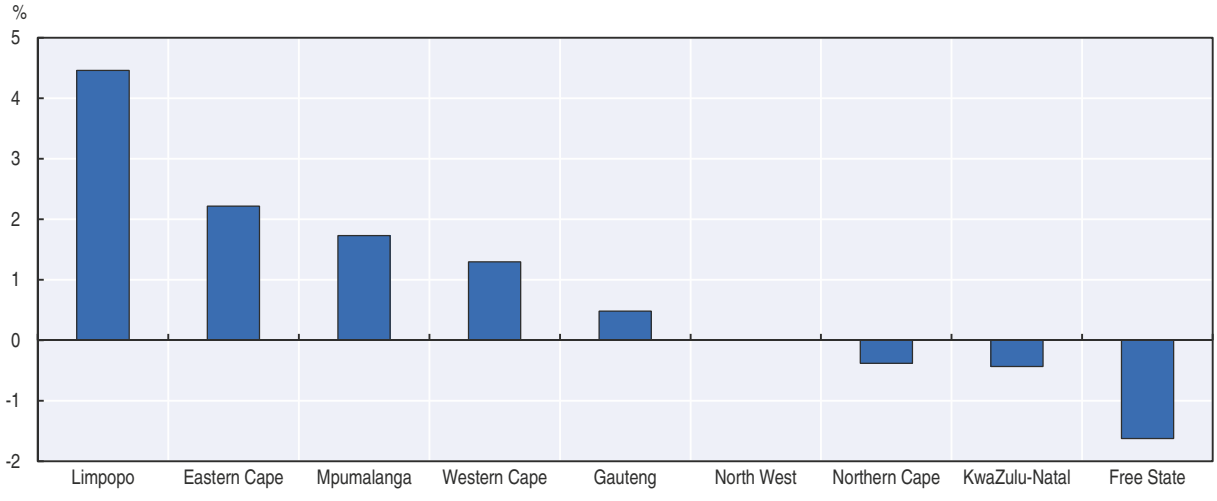
Looking across multiple indicators can provide a more balanced assessment of how regions have performed. For South Africa, there were no regions that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods.

Figure 37.1. **Local employment growth over time, South African regions, 2008-14**
Average annual change (%)



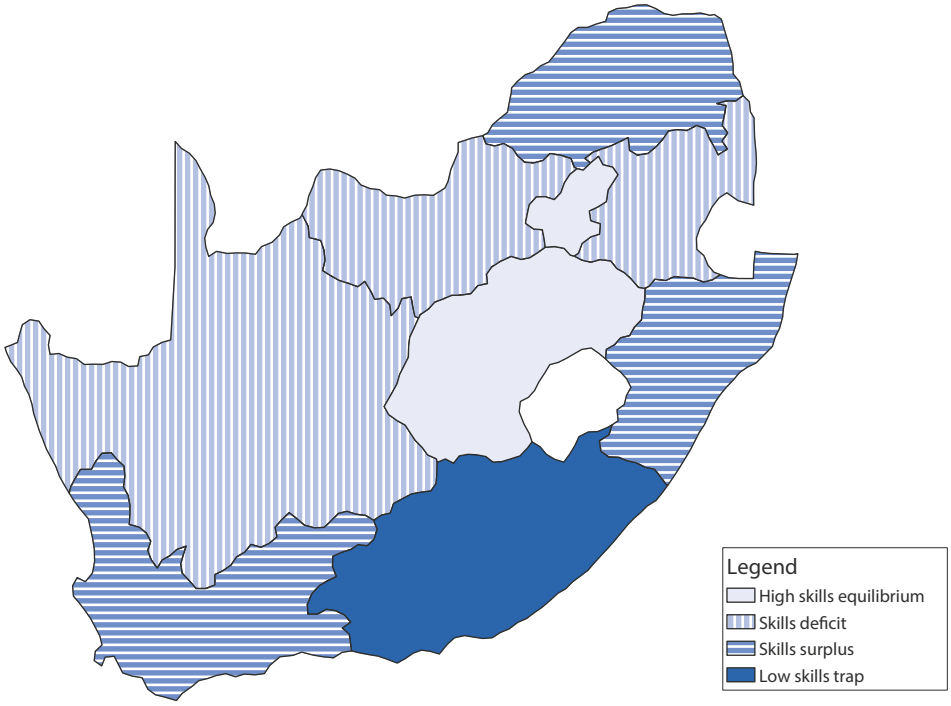
Source: OECD calculations based on data from the Quarterly Labour Force Survey, Statistics South Africa.
StatLink http://dx.doi.org/10.1787/888933425682

Figure 37.2. **Local employment growth over time: Ranking of South African regions, 2008-14**
Average annual change (%)



Source: OECD calculations based on data from the Quarterly Labour Force Survey, Statistics South Africa.
StatLink http://dx.doi.org/10.1787/888933425692

Figure 37.3. **Skills supply and demand, South African regions, 2014**



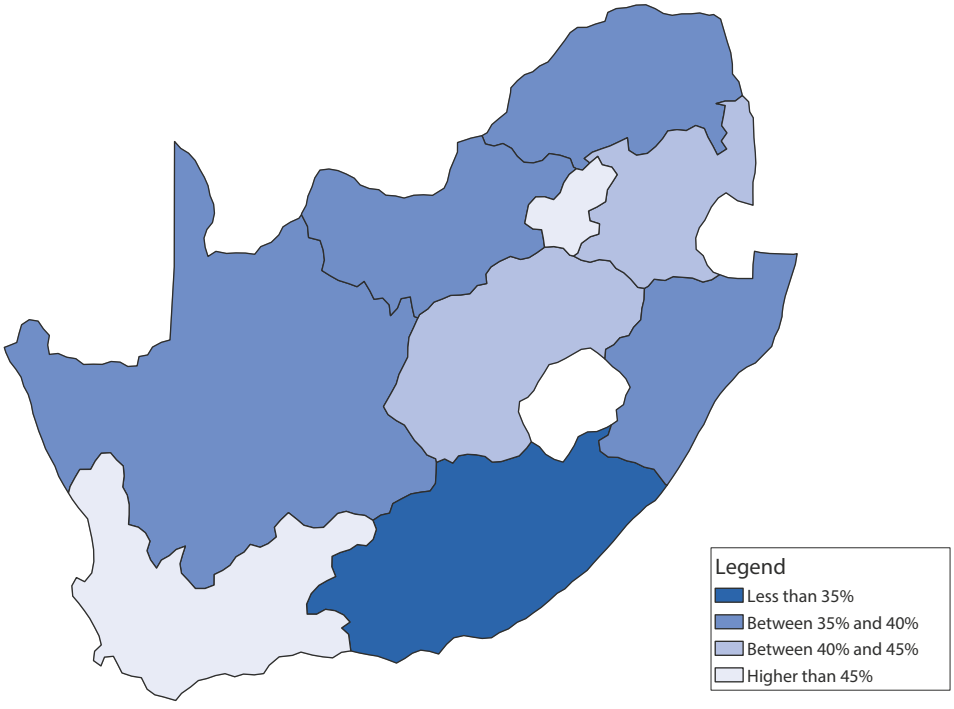
Source: OECD calculations based on data from the General Household Survey and national accounts, Statistics South Africa.

StatLink http://dx.doi.org/10.1787/888933425709

Table 37.1. **Places with the highest increase in skills supply and/or demand, South African regions, 2008-14**

Increase in supply	Increase in supply and demand	Increase in demand
• North West	• KwaZulu-Natal	• Free State

Figure 37.4. **Employment rate (population 15-64), South African regions, 2015**

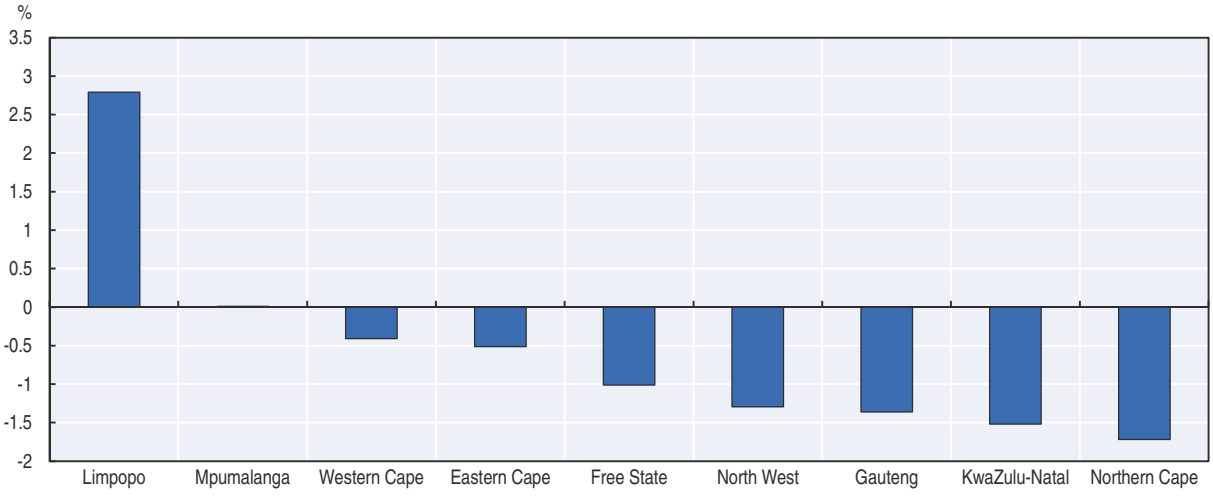


Source: OECD calculations based on data from the Labour Force Survey, Statistics South Africa.

StatLink http://dx.doi.org/10.1787/888933425713

Figure 37.5. **Employment rate change over time, South African regions, 2008-15**

Average annual change (%)



Source: OECD calculations based on data from the Labour Force Survey, Statistics South Africa.

StatLink http://dx.doi.org/10.1787/888933425723

Spain

This profile examines the health of local labour markets in Spain. It analyses data at the regional level, which corresponds to the country's 19 regions and autonomous cities (comunidades y ciudades autónomas).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. The number of people employed in Spain decreased by an average annual rate of 0.7% in 2005-15.[1] While employment has not yet recovered to 2005 levels, it has been increasing since 2014. Figure 38.1 shows the regional average annual employment growth rate during this time. It ranges from a 0.9% increase in the Balearic Islands to a 1.0% decline in Basque Country. Only The Balearic Islands and Melilla regions showed positive employment growth between 2005 and 2015.[2]

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 38.3 shows that in 2015, 8 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Eight regions and the autonomous city of Melilla were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining three regions and cities were in a position of imbalance. Table 38.1 lists the regions and autonomous cities with the highest increase in skills supply and/or demand in 2005-15.

Employment rate

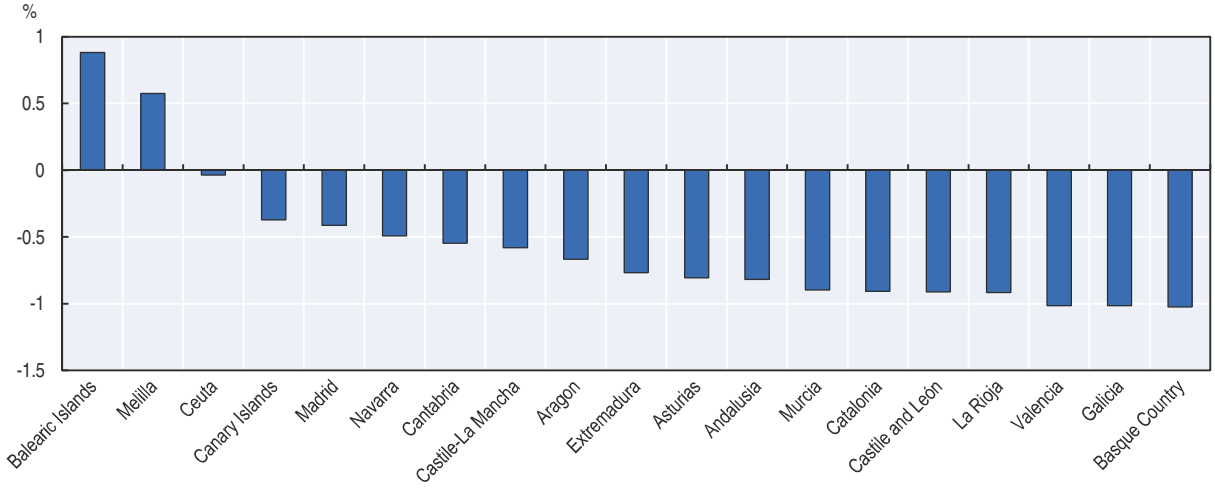
The employment rate provides an indication of the extent to which available labour resources are used, and can provide insights about the inclusiveness of labour markets. Figure 38.4 shows the 2015 regional employment rate for the population 15-64. Of Spanish regions, Madrid had the highest employment rate (65.3%) while Andalusia had the lowest (48.8%). The autonomous cities of Ceuta and Melilla had low employment rates (46.3% and 42.5% respectively). Figure 38.5 shows the average annual change in the regional employment rate in 2005-15. All regions show negative values, reflecting the fact that the overall employment rate in Spain declined over this time. However, since 2014, the employment rate has been increasing.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Spain, only one region consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and changes in the employment rate over the reference periods: Madrid.[3]

Figure 38.1. **Local employment growth over time, Spanish regions and autonomous cities, 2005-15**

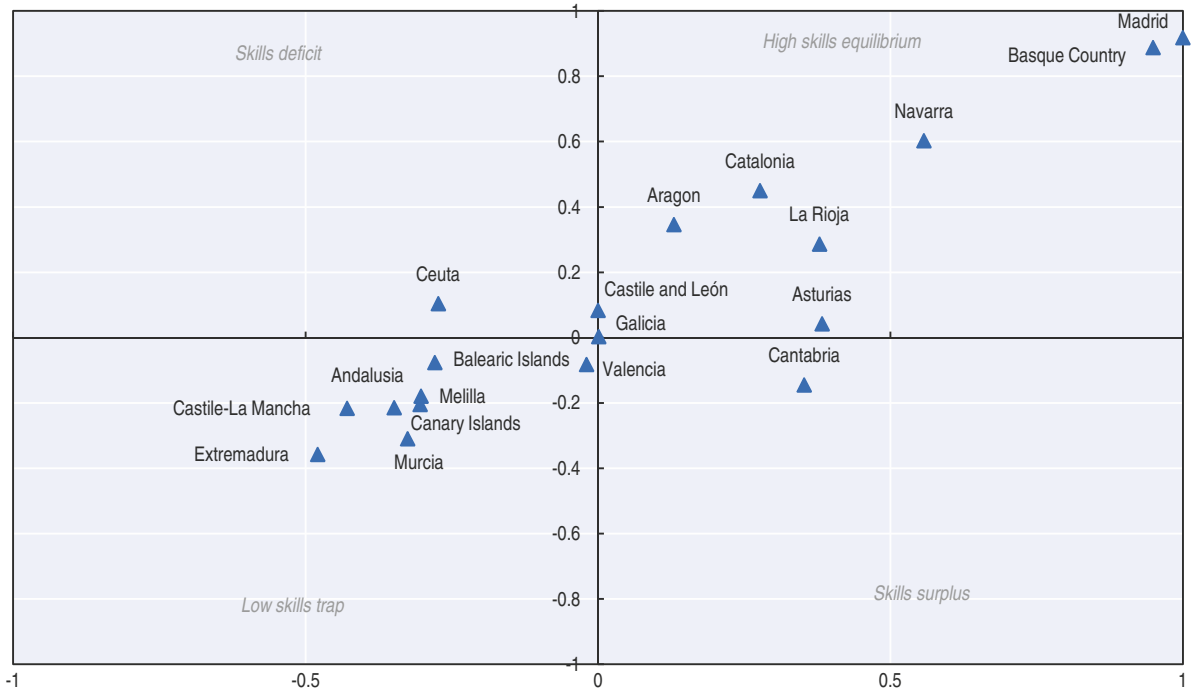
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933425731

Figure 38.2. **Skills supply and demand, Spanish regions and autonomous cities, 2015**



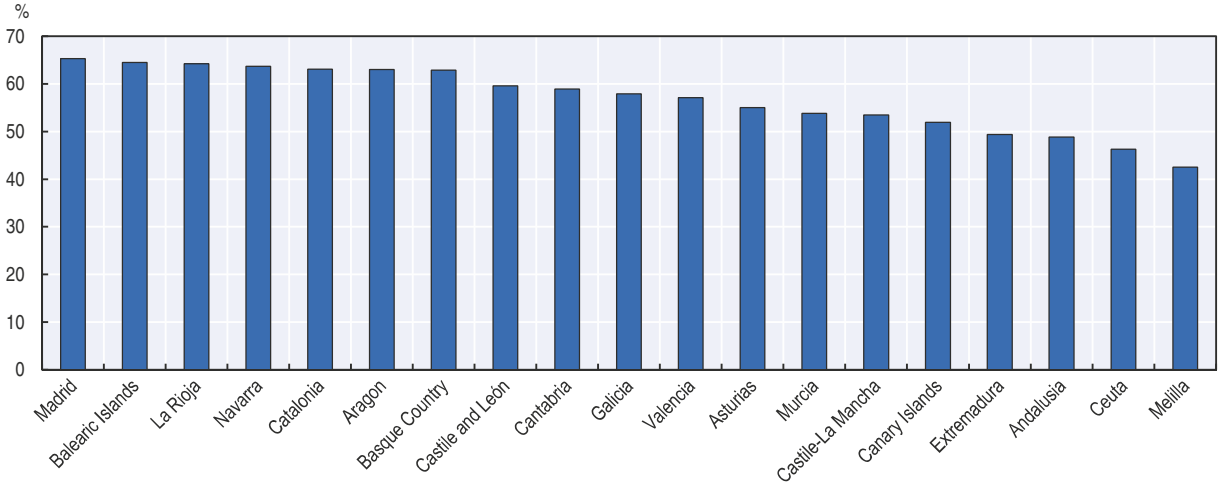
Source: OECD calculations based on data from the Labour Force Survey and Regional Accounts, Spanish National Institute of Statistics.

StatLink http://dx.doi.org/10.1787/888933425747

Table 38.1. **Places with the highest increase in skills supply and/or demand, Spanish regions and autonomous cities, 2005-15**

Increase in supply	Increase in supply and demand	Increase in demand
• Balearic Islands		• Basque Country
• Castile-La Mancha		• Catalonia
• Ceuta		• La Rioja
• Extremadura		• Madrid

Figure 38.3. **Employment rate (population 15-64), Spanish regions and autonomous cities, 2015**

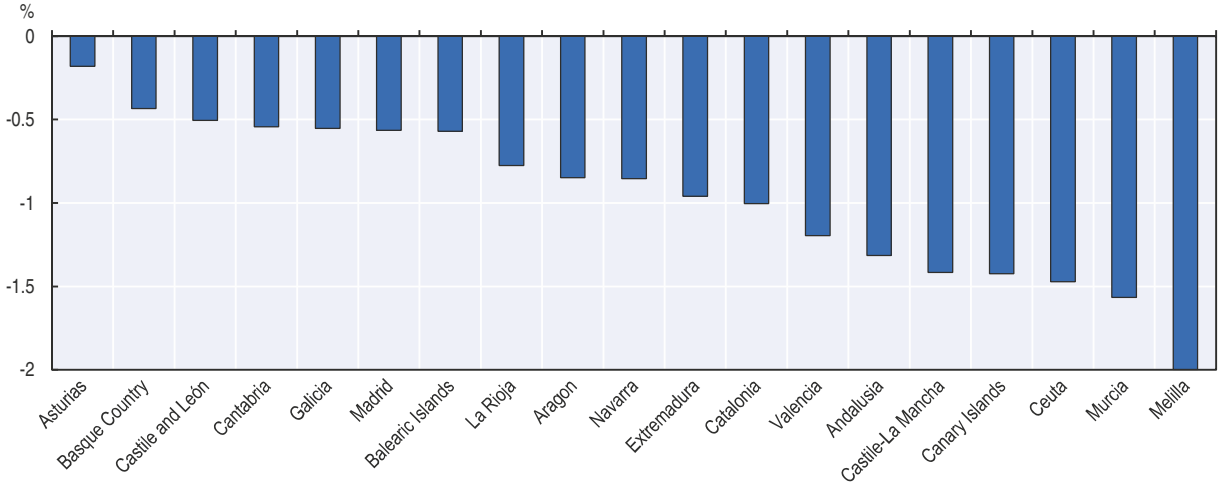


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933425755

Figure 38.4. **Employment rate change over time, Spanish regions and autonomous cities, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database.*

StatLink http://dx.doi.org/10.1787/888933425760

Notes

1. The number of people employed may be impacted by the fact that Spain saw an increase in part-time employment over this time period.
2. Ceuta and Melilla combined represent 0.4% of total Spanish population and an estimated 0.1% of those employed.
3. Employment growth: 2005-15; skills supply and demand: 2005-15; employment rate: 2005-15.

Sweden

This profile examines the health of local labour markets in Sweden. It analyses data at the sub-regional level, which corresponds to the country's 21 counties (Sveriges län).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Sweden, the number of people employed grew by an average annual rate of 1.0% between 2004 and 2014. Figures 39.1 and 39.2 show the average annual employment growth rate across sub-regions during this time period. It ranges from an increase of 1.9% in Stockholm to a decrease of 0.4% in Gotland.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GDP per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 39.3 shows that in 2013, 6 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Eight sub-regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining seven sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 39.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2001 and 2013.

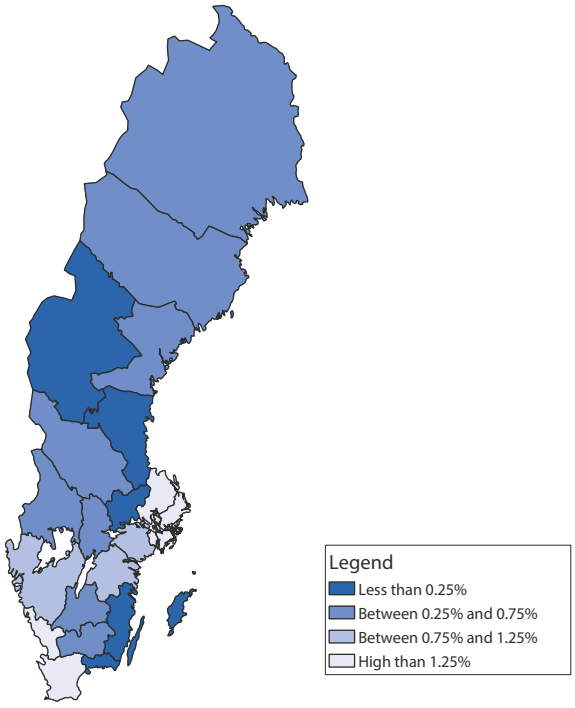
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the sub-regional employment rate for the population 16 and over in 2014 are shown in Figure 39.4. Stockholm had the highest employment rate at 62.8% while Värmland had the lowest employment rate at 54.1%. To highlight those places making the most progress over time, Figure 39.5 shows the average annual change in the employment rate at the sub-regional level between 2004 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Sweden, only one sub-region consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[1] This sub-region is Västra Götaland.

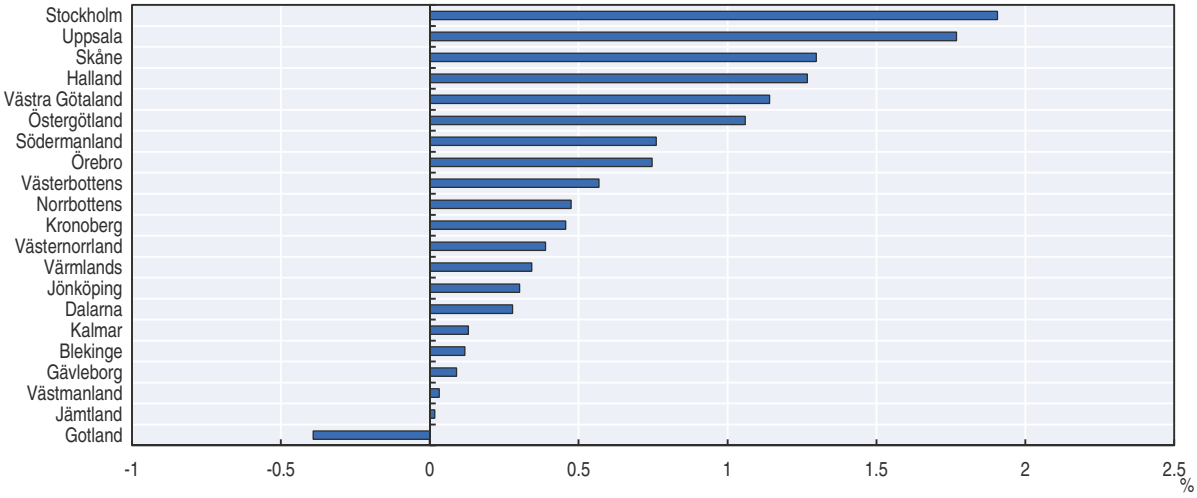
Figure 39.1. **Local employment growth over time, Swedish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425771

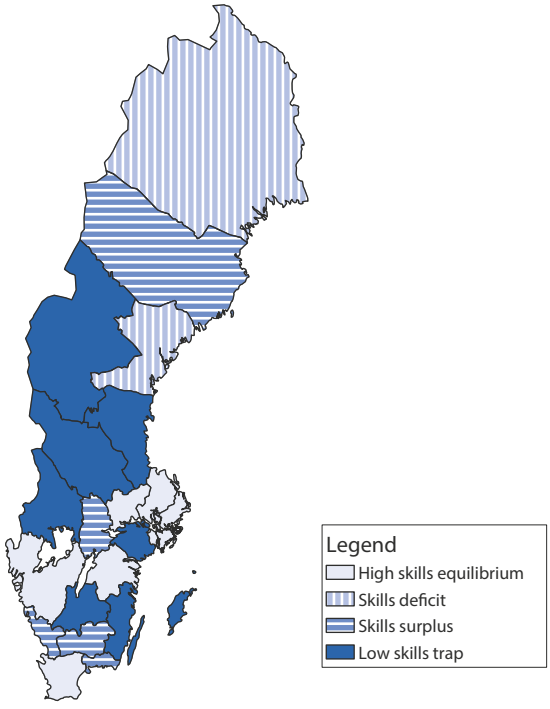
Figure 39.2. **Local employment growth over time: Ranking of Swedish sub-regions, 2004-14**
Average annual change (%)



Source: OECD calculations based on data from the *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/6b288ab8-en*.

StatLink http://dx.doi.org/10.1787/888933425788

Figure 39.3. **Skills supply and demand, Swedish sub-regions, 2013**



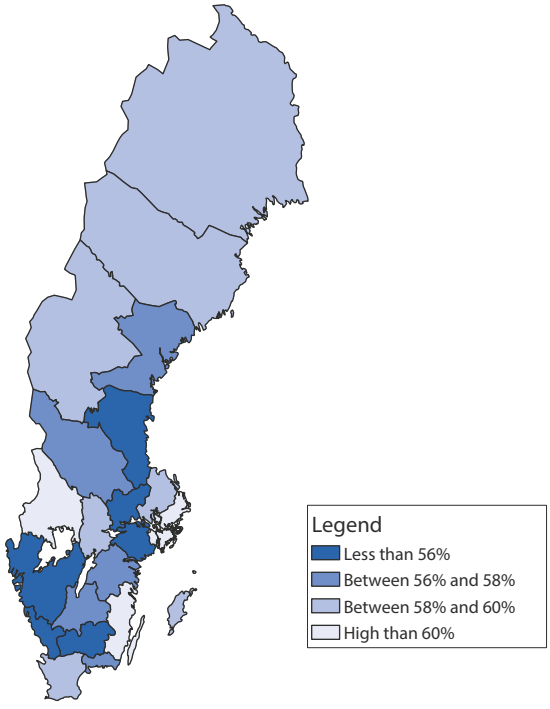
Source: OECD calculations based on data from Swedish Register of Education, Swedish Occupational Register, Regional Accounts, Statistics Sweden.

StatLink http://dx.doi.org/10.1787/888933425793

Table 39.1. **Places with the highest increase in skills supply and/or demand, Swedish sub-regions, 2001-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Blekinge	• Gotland	• Örebro
• Kalmar		• Stockholm
• Jönköping		• Uppsala

Figure 39.4. **Employment rate (population 16 and over), Swedish sub-regions, 2014**

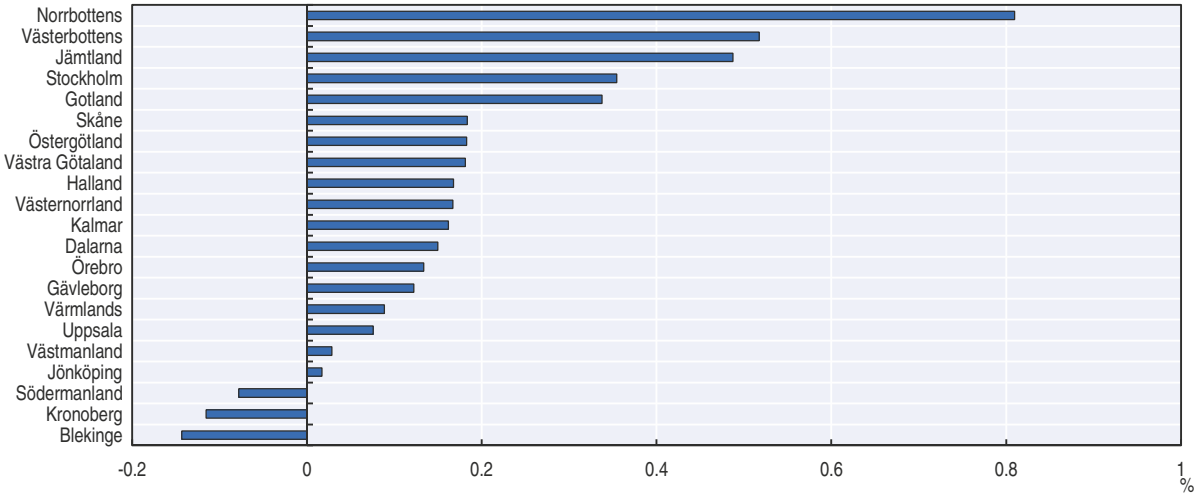


Source: OECD calculations based on data from Labour Force Survey, Statistics Sweden.

StatLink http://dx.doi.org/10.1787/888933425801

Figure 39.5. **Employment rate change over time, Swedish sub-regions, 2004-14**

Average annual change (%)



Source: OECD calculations based on data from Labour Force Survey, Statistics Sweden.

StatLink http://dx.doi.org/10.1787/888933425810

Note

1. Employment growth: 2004-14; skills supply and demand: 2001-13; employment rate: 2004-14.

Switzerland

This profile examines the health of local labour markets in Switzerland. It analyses data at the regional level, which corresponds to the country's seven greater regions (grandes regions/grossregionen).

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Switzerland, the number of people employed grew by an average annual rate of 1.3% between 2005 and 2015.[1] Figures 40.1 and 40.2 show the average annual employment growth rate across regions during this time period. It ranges from an increase of 1.7% in Zurich to an increase of 1.0% in Espace Mittelland.

Skills supply and demand

The level of skills supply (as measured by the percentage of people with post-secondary education) and demand (as measured by the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth. Figure 40.3 shows that in 2013, 2 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Three regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining two regions were in a position of skills surplus, with a relatively high supply of skills and low demand for skills. Table 40.1 lists the regions with the highest increase in skills supply and/or demand between 2010 and 2013.

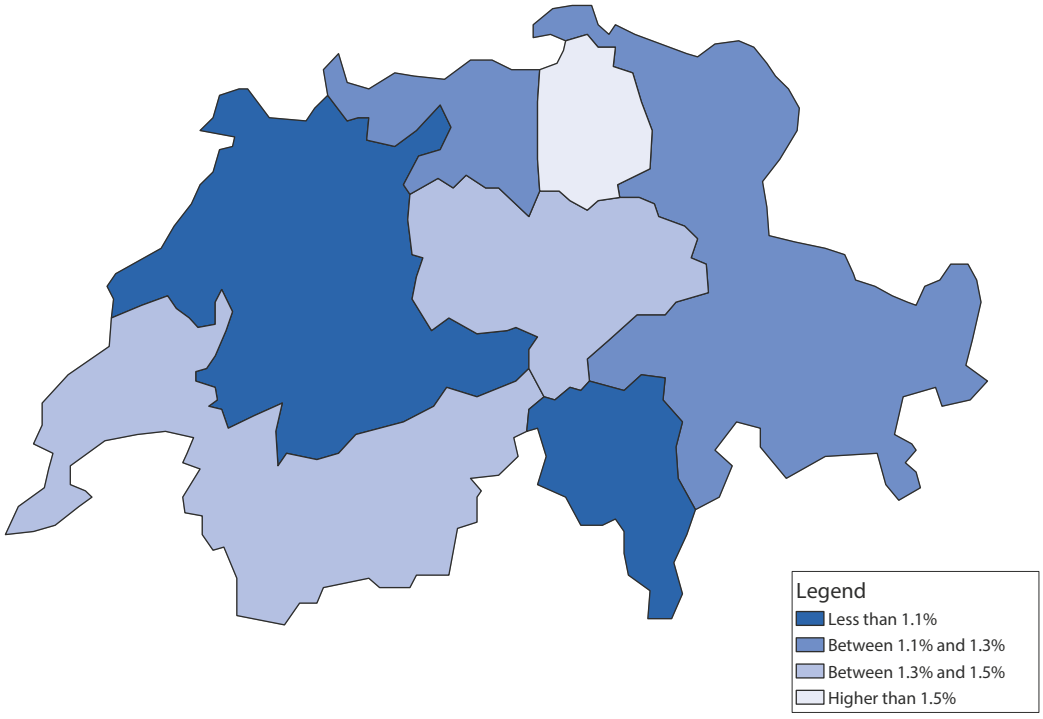
Employment rate

The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Data on the regional employment rate for the population 15-64 in 2015 are shown in Figure 40.4. Central Switzerland had the highest employment rate at 83.6% while Ticino had the lowest employment rate at 71.6%. To highlight those places making the most progress over time, Figure 40.5 shows the average annual change in the employment rate at the regional level between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Switzerland, only one region consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[2] This region is Zürich.

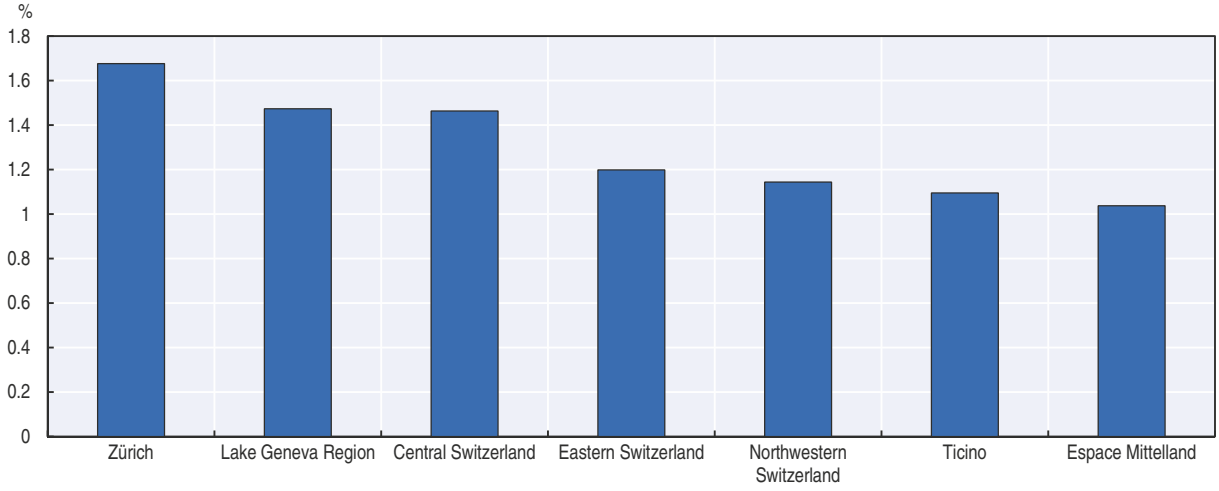
Figure 40.1. **Local employment growth over time, Swiss regions, 2005-15**
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425823

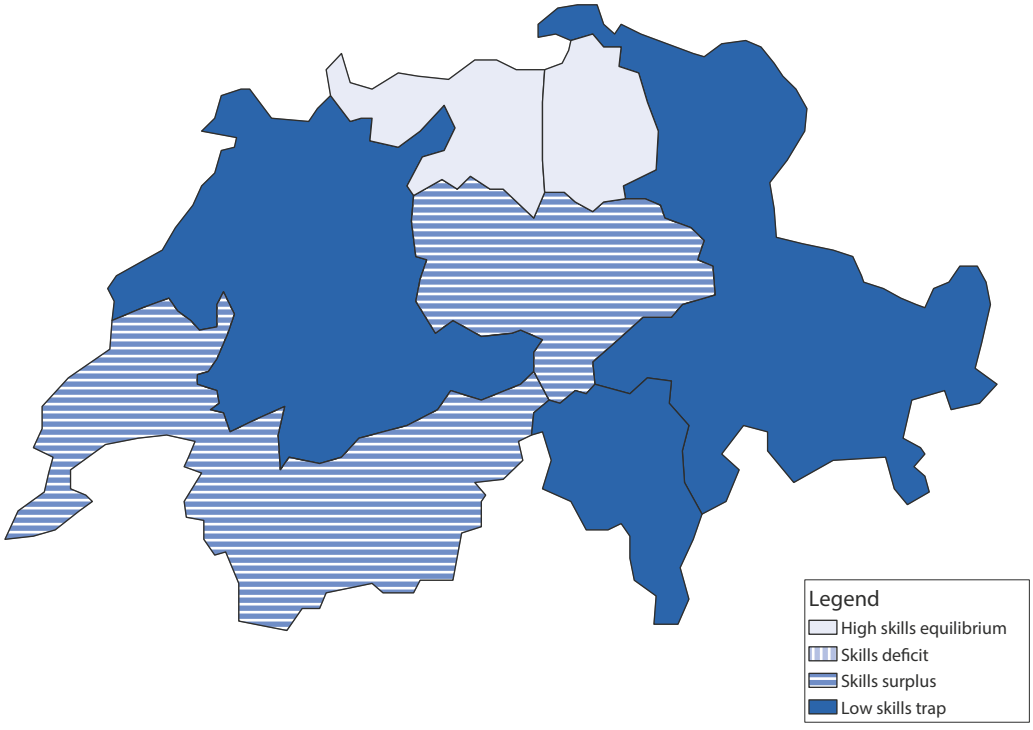
Figure 40.2. **Local employment growth over time: Ranking of Swiss regions, 2005-15**
Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425839

Figure 40.3. **Skills supply and demand, Swiss regions, 2013**



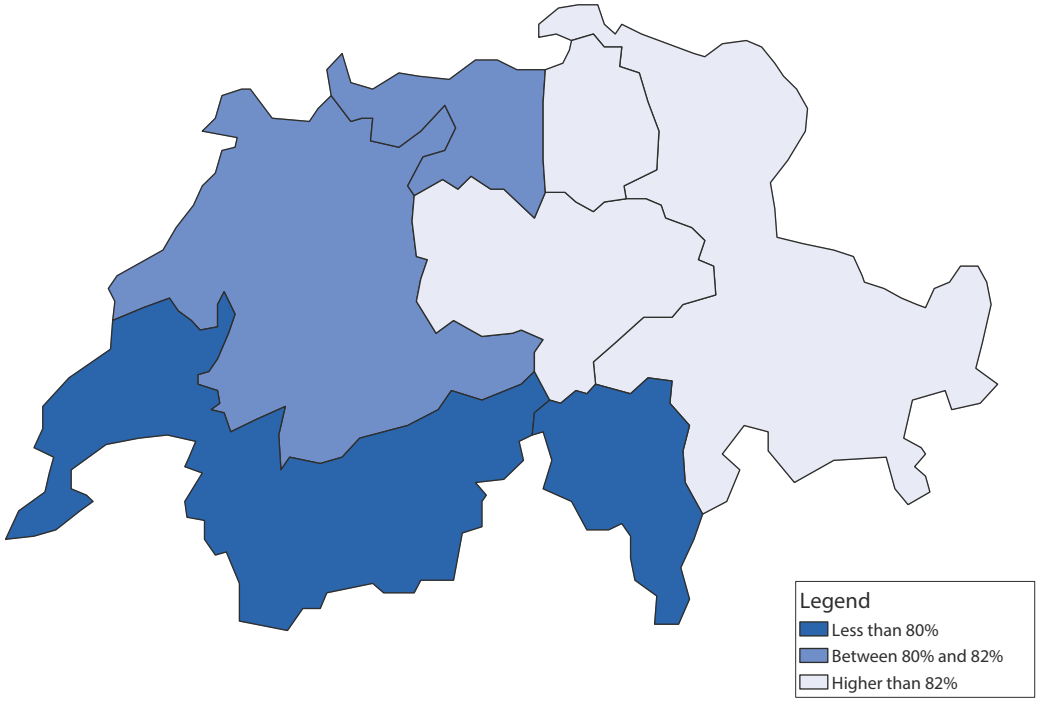
Source: OECD calculations based on data from the Labour Force Survey, Swiss Federal Statistical Office.

StatLink http://dx.doi.org/10.1787/888933425842

Table 40.1. **Places with the highest increase in skills supply and/or demand, Swiss regions, 2010-13**

Increase in supply	Increase in supply and demand	Increase in demand
• Ticino	• Zürich	• Espace Mittelland

Figure 40.4. **Employment rate (population 15-64), Swiss regions, 2015**

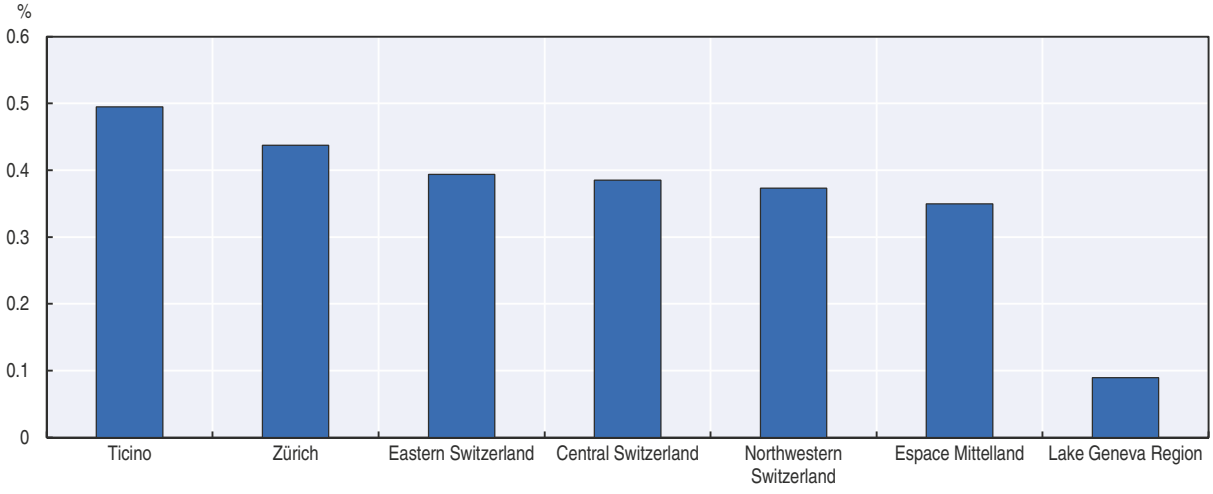


Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425856

Figure 40.5. **Employment rate change over time, Swiss regions, 2005-15**

Average annual change (%)



Source: Eurostat (2016), Regional Labour Market Statistics (database), *http://ec.europa.eu/eurostat/web/regions/data/database*.

StatLink http://dx.doi.org/10.1787/888933425866

Notes

1. The number of people employed may be impacted by the fact that Switzerland has a relatively high rate of part-time employment.
2. Employment growth: 2005-15; skills supply and demand: 2010-13; employment rate: 2005-15.

Turkey

This profile examines the health of local labour markets in Turkey. It analyses data at the regional level, which corresponds to the country's 26 NUTS2 regions as defined by Eurostat.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In Turkey, the number of people employed grew by an average annual rate of 3.0% between 2004 and 2013.[1] Figure 41.1 shows the average annual employment growth rate across regions during this time period. It ranges from an increase of 6.9% in Eastern Marmara – North to a decrease of 2.5% in Northeastern Anatolia – West. Figure 41.2 highlights the 20 regions showing the highest average annual employment growth rate. While these sub-regions had the highest growth rates, their contribution to national employment growth varied due to their different population sizes.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations) can provide further insights into the quality of local job creation and the potential for future growth. Figure 41.3 shows that in 2014, 9 regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Nine regions were in a "low skills trap". Here, both the supply of skills and the demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining eight regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 41.1 lists the regions with the highest increase in skills supply and/or demand between 2008 and 2014.

Employment rate

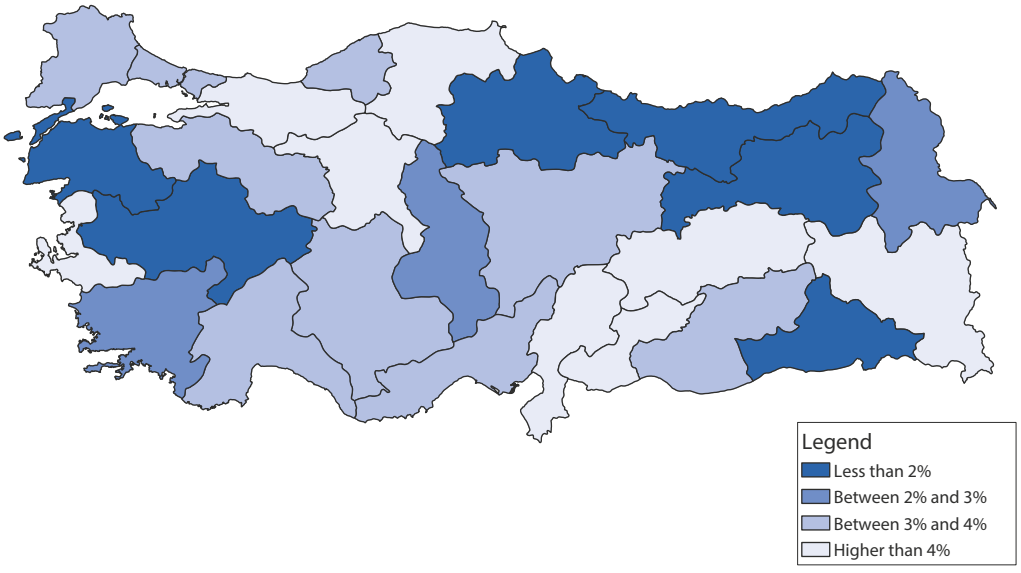
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 41.4 shows the 2015 regional employment rate for the population 15 and over. Thrace had the highest employment rate (53.2%) while Southeastern Anatolia – East had the lowest (28.7%). To highlight those places making the most progress over time, Figure 41.5 shows the 20 regions that registered the highest average annual change in their employment rate between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how regions have performed. In Turkey, only one region that consistently ranked in the top half (i.e. above the median) of all regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.[2] This region is Eastern Anatolia – West.

Figure 41.1. **Local employment growth over time, Turkish regions, 2004-13**

Average annual change (%)

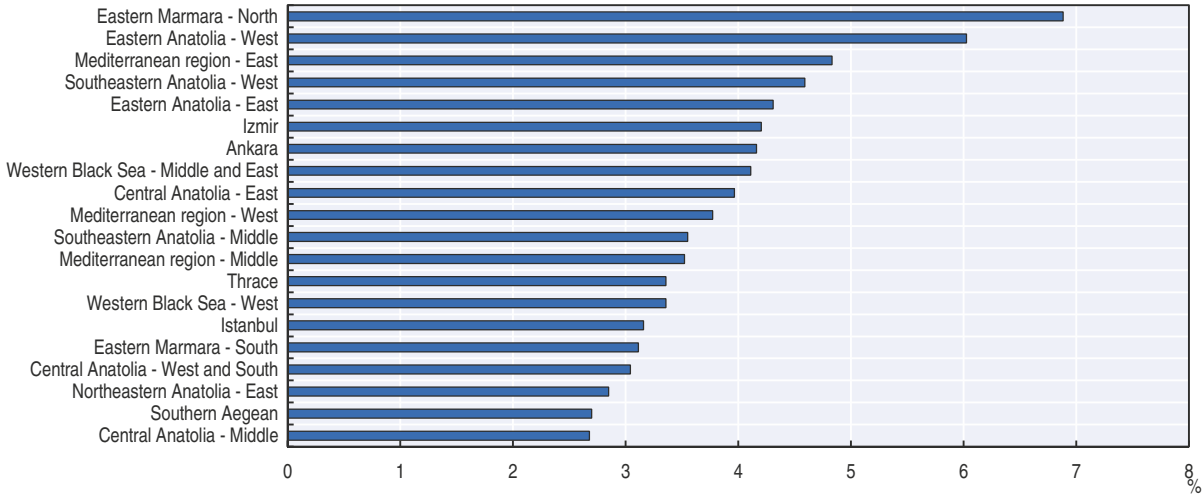


Source: OECD calculations based on data from Labour Force Survey, Turkish Statistical Institute.

StatLink http://dx.doi.org/10.1787/888933425875

Figure 41.2. **Local employment growth over time: Best performing Turkish regions, 2004-13**

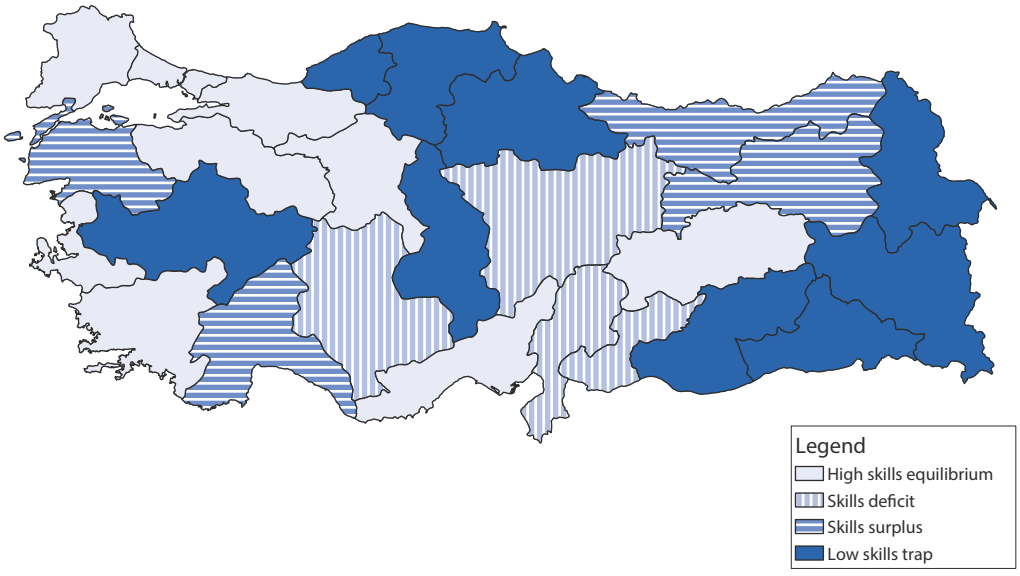
Average annual change (%)



Source: OECD calculations based on data from Labour Force Survey, Turkish Statistical Institute.

StatLink http://dx.doi.org/10.1787/888933425884

Figure 41.3. **Skills supply and demand, Turkish regions, 2014**



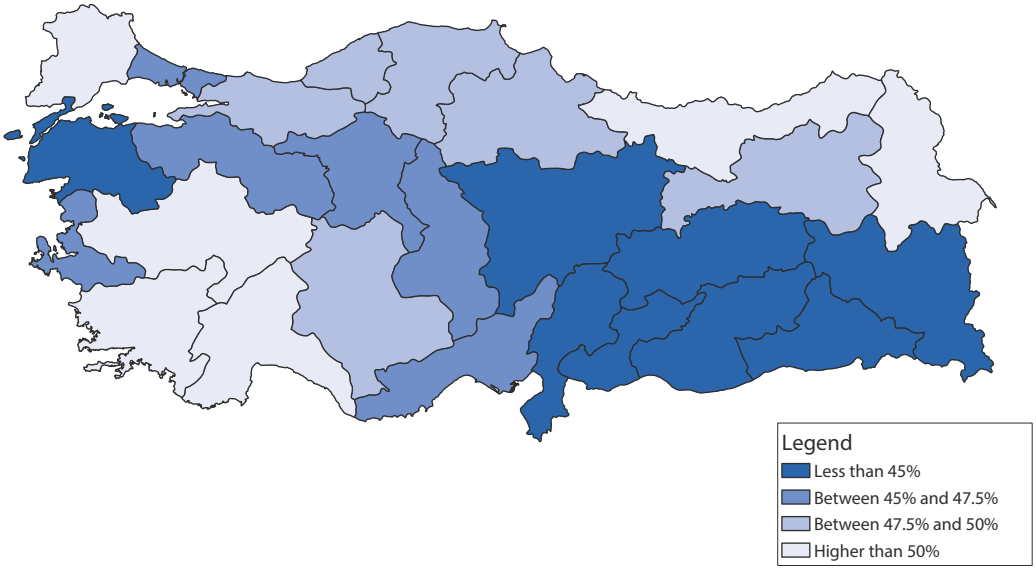
Source: OECD calculations based on data from the Household Labour Force Survey, Turkish Statistical Institute.

StatLink http://dx.doi.org/10.1787/888933425890

Table 41.1. **Places with the highest increase in skills supply and/or demand, Turkish regions, 2008-14**

Increase in supply	Increase in supply and demand	Increase in demand
• Eastern Anatolia – East	• Northeastern Anatolia – East	• Eastern Black Sea
• Eastern Anatolia – West		• Eastern Marmara – South
• Southeastern Anatolia – East		• Middle Black Sea
• Southeastern Anatolia – Middle		• Southeastern Anatolia – West

Figure 41.4. **Employment rate (population 15 and over), Turkish regions, 2015**

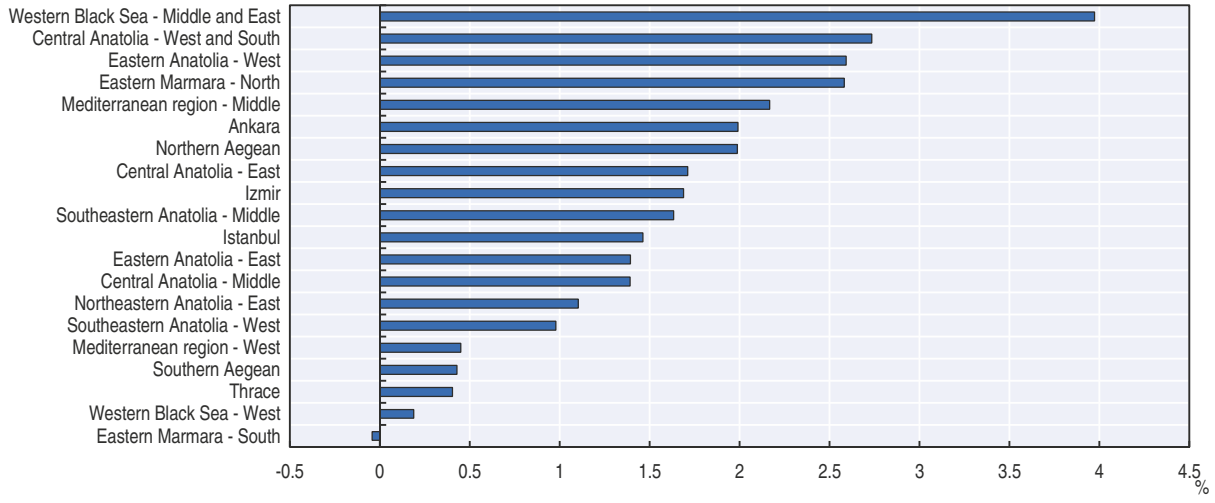


Source: Labour Force Survey, Turkish Statistical Institute.

StatLink http://dx.doi.org/10.1787/888933425901

Figure 41.5. **Employment rate change over time: Best performing Turkish regions, 2005-15**

Average annual change (%)



Source: OECD calculations based on data from Labour Force Survey, Turkish Statistical Institute.

StatLink http://dx.doi.org/10.1787/888933425919

Notes

1. The number of people employed may be impacted by the fact that Turkey saw an increase in part-time employment over this time period.
2. Employment growth: 2004-13; skills supply and demand: 2008-14; employment rate: 2005-15.

United Kingdom

This profile examines the health of local labour markets in the United Kingdom. It analyses data at the sub-regional level, which corresponds to the 128 NUTS3 regions as defined by Eurostat. Northern Ireland is not included in the analysis due to the lack of comparable data available.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In the United Kingdom, the number of people employed grew by an average annual rate of 0.8% between 2005 and 2015.[1] Figure 42.1 shows the average annual employment growth rate across sub-regions. It ranges from an increase of 3.6% in Inner London – East to a decrease of 2.0% in Lochaber, Skye and Lochalsh and Argyll and the Islands. Figure 42.2 shows the 20 sub-regions with the highest average annual employment growth rates. While these sub-regions had the highest growth rates, their contribution to national employment growth varied with their population sizes.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and GVA per worker) can provide further insights into the quality of local job creation and the potential for future growth.[2] Figure 42.3 shows that in 2013, 45 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. Forty-five sub-regions were in a "low skills trap" (relatively low supply of and demand for skills). Some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 35 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 42.1 lists the sub-regions with the highest increase in skills supply and/or demand between 2001 and 2013.

Employment rate

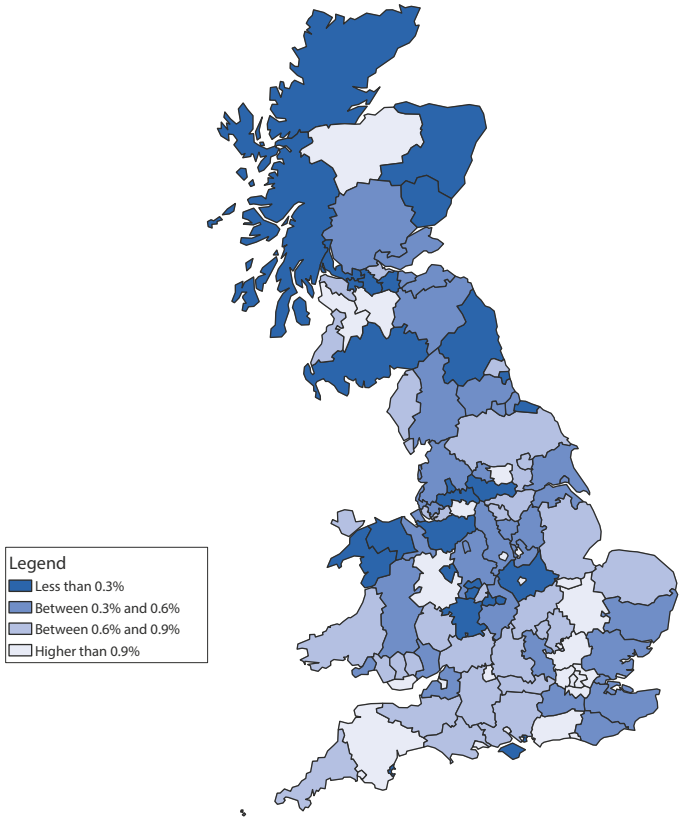
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 42.4 shows the 2015 sub-regional employment rate for the population 16-64. Hampshire City Council had the highest employment rate (81.0%) while Liverpool had the lowest (60.4%). Figure 42.5 shows the 20 sub-regions with the highest average annual increase in their employment rate between 2005 and 2015.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment sub-regional performance. Table 42.2 shows the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 42.1. **Local employment growth over time, United Kingdom sub-regions, 2005-15**

Average annual change (%)

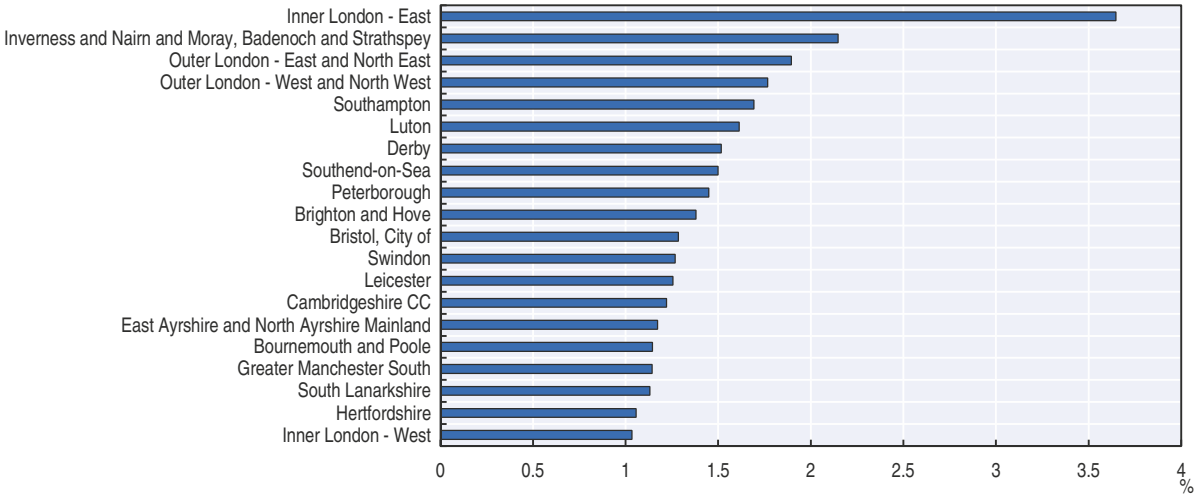


Source: OECD calculations based on data from the Annual population survey, UK Office for National Statistics.

StatLink http://dx.doi.org/10.1787/888933425924

Figure 42.2. **Local employment growth over time: Best performing United Kingdom sub-regions, 2005-15**

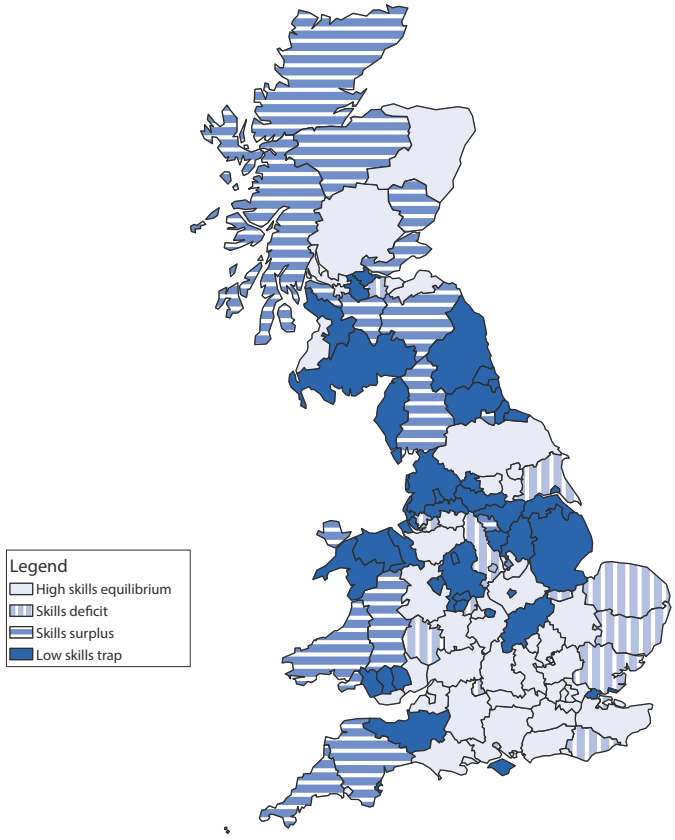
Average annual change (%)



Source: OECD calculations based on data from the Annual population survey, UK Office for National Statistics.

StatLink http://dx.doi.org/10.1787/888933425931

Figure 42.3. **Skills supply and demand, United Kingdom sub-regions, 2013**



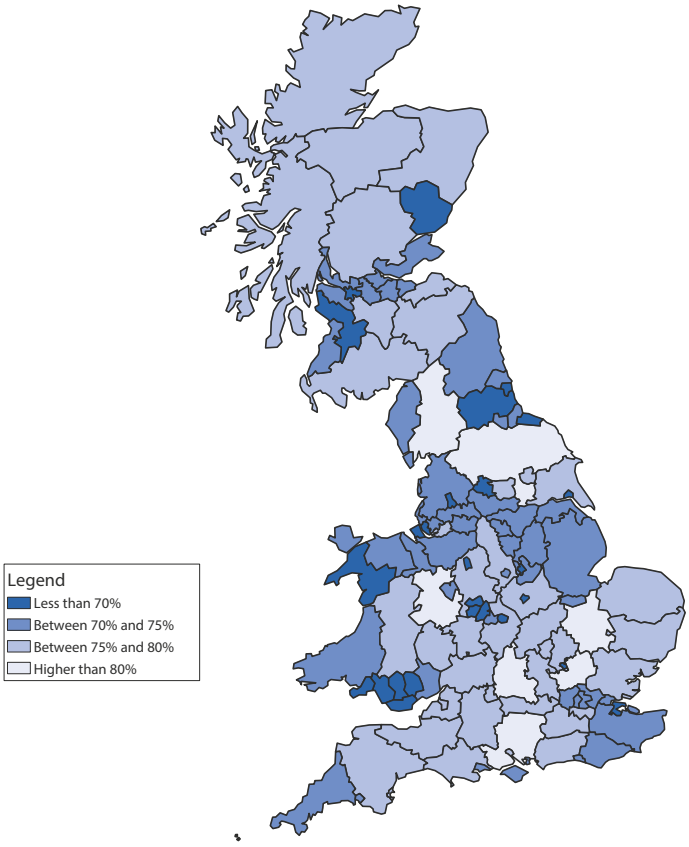
Source: OECD calculations based on data from the Annual population survey and Regional Accounts, UK Office for National Statistics.

StatLink http://dx.doi.org/10.1787/888933425942

Table 42.1. **Places with the highest increase in skills supply and/or demand, United Kingdom sub-regions, 2001-13**

Increase in supply		Increase in supply and demand	Increase in demand	
• Barnsley, Doncaster and Rotherham	• Isle of Wight	• Cambridgeshire CC	• Aberdeen City, Aberdeenshire	• Liverpool
• Bridgend and Neath Port Talbot	• Norfolk	• Plymouth	• Berkshire	• Lochaber, Skye and Lochalsh and Argyll and the Islands
• Central Valleys	• North Nottinghamshire		• Buckinghamshire CC	• Medway
• Conwy and Denbighshire	• Northamptonshire		• Caithness and Sutherland and Ross and Cromarty	• Milton Keynes
• Darlington	• Powys		• Dorset CC	• Portsmouth
• East Derbyshire	• Sheffield		• East Merseyside	• Scottish Borders
• Flintshire and Wrexham	• South Teesside		• Edinburgh, City of	• South Ayrshire
• Gwent Valleys	• South West Wales		• Glasgow City	• Suffolk
• Hartlepool and Stockton-on-Tees	• Stoke-on-Trent		• Hampshire CC	• Surrey
• Isle of Anglesey	• Sunderland		• Inner London – East	• Swindon
	• Telford and Wrekin		• Inner London – West	• West Sussex
	• Thurrock		• Kent CC	
	• West Cumbria			

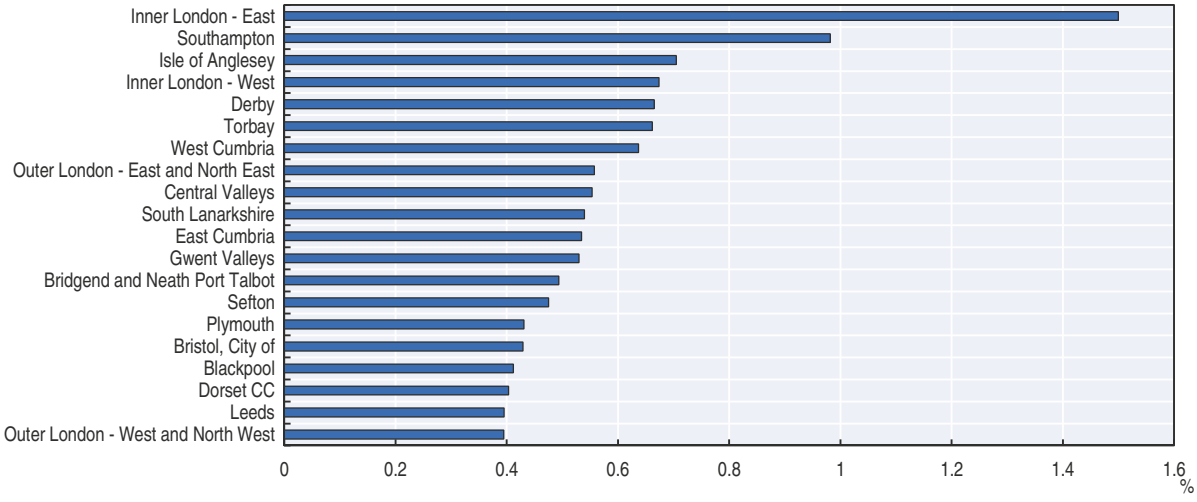
Figure 42.4. **Employment rate (population 16-64), United Kingdom sub-regions, 2015**



Source: OECD calculations based on data from the Annual population survey, UK Office for National Statistics.

StatLink http://dx.doi.org/10.1787/888933425956

Figure 42.5. **Employment rate change over time: Best performing United Kingdom sub-regions, 2005-15**



Source: OECD calculations based on data from the Annual population survey, UK Office for National Statistics.

StatLink http://dx.doi.org/10.1787/888933425960

Table 42.2. **Places to watch: United Kingdom sub-regions making progress across indicators**

• Cambridgeshire CC	• Plymouth
• Dorset CC	• Sheffield
• Inner London – East	• Shropshire CC
• Norfolk	• Tyneside
• Peterborough	• West Cumbria

Note: United Kingdom sub-regions improving more than the median across employment growth (2005-15), skills supply and demand (2001-13), and employment rate (2005-15).

Notes

1. The number of people employed may be impacted by the fact that the United Kingdom has a relatively high rate of part-time employment.
2. The analysis was conducted for 125 sub-regions. Data for Eilean Siar (Western Isles), Orkney Islands and Shetland Islands are not available due to their small size.

United States

This profile examines the health of local labour markets in the United States. It analyses data at the sub-regional level, which corresponds to the country's 3 144 counties.

Local employment growth

The change in the number of people employed can be a useful proxy for local job creation, for which internationally comparable data are not available. In the United States, the number of people employed grew by an average annual rate of 0.7% between 2000 and 2014. Figure 43.1 shows the average annual employment growth rate across sub-regions during this time period. Among sub-regions with more than 20 000 people, it ranges from an increase of 5.8% in Pinal County (AZ) to a decline of 3.8% in St. Bernard Parish (LA). Figure 43.2 highlights the 20 sub-regions with more than 20 000 people that recorded the highest average annual employment growth rate.

Skills supply and demand

The level of skills supply (the percentage of people with post-secondary education) and demand (the percentage of medium- and high-skilled occupations and wages)[1] can provide further insights into the quality of local job creation and the potential for future growth.[2] Figure 43.3 shows that in 2014, 1 079 sub-regions were in a "high skills equilibrium", with both a relatively high supply of and demand for skills. 1 063 sub-regions were in a "low skills trap". Here, both the supply of and demand for skills were relatively low; some of these sub-regions may find it hard to move to higher-skilled, higher value-added production and services. The remaining 963 sub-regions were in a position of imbalance, with a relatively high supply of skills and low demand for skills (skills surplus) or vice versa (skills deficit). Table 43.1 lists the sub-regions with more than 20 000 people with the highest increase in skills supply and/or demand between 2000 and 2014.

Employment rate

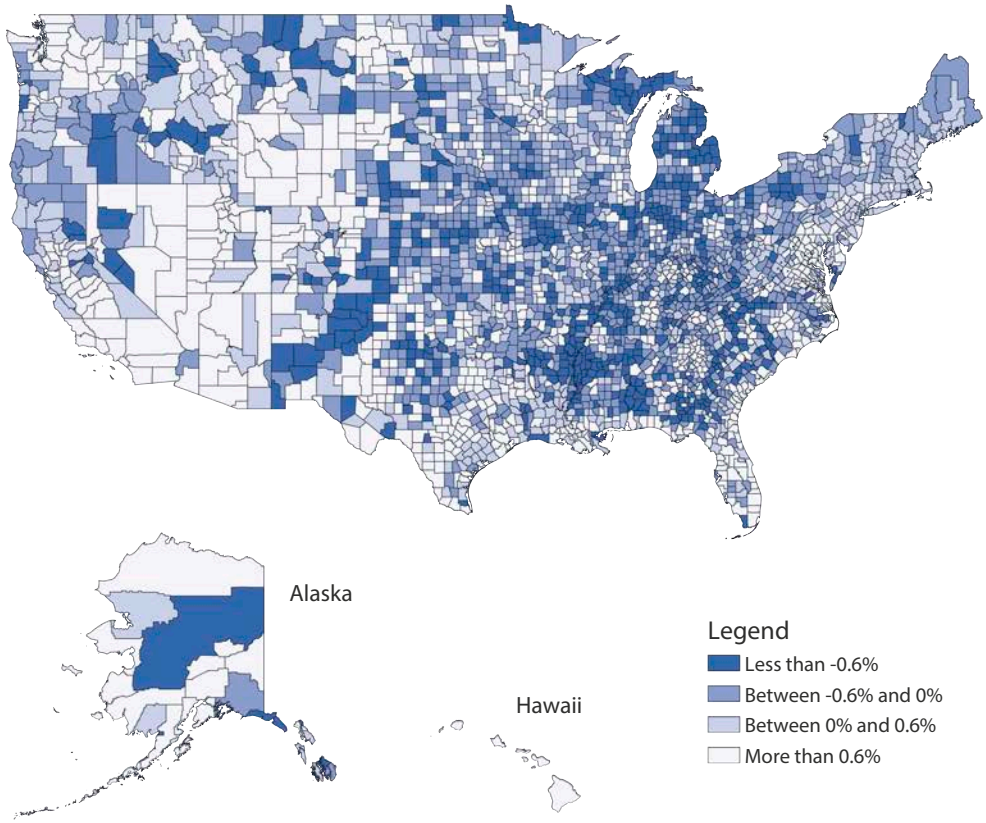
The employment rate provides an indication of the extent to which available labour resources are being used, and can provide insights about the inclusiveness of labour markets. Figure 43.4 shows the 2014 sub-regional employment rate for the population 15 and over in 2014. Among sub-regions with more than 20 000 people, Eagle County (CO) had the highest employment rate (76.5%) while Sumter County (FL) had the lowest (22.7%). Figure 43.5 shows the 20 sub-regions with more than 20 000 people that registered the highest average annual increase in their employment rate between 2000 and 2014.

Places to watch: Moving towards more productive and inclusive economies

Looking across multiple indicators can provide a more balanced assessment of how sub-regions have performed. Table 43.2 highlights the sub-regions that consistently ranked in the top half (i.e. above the median) of all sub-regions for employment growth, increase in skills supply and demand, and improvements in the employment rate over the reference periods.

Figure 43.1. **Local job creation over time: United States sub-regions, 2000-14**

Average annual change (%)

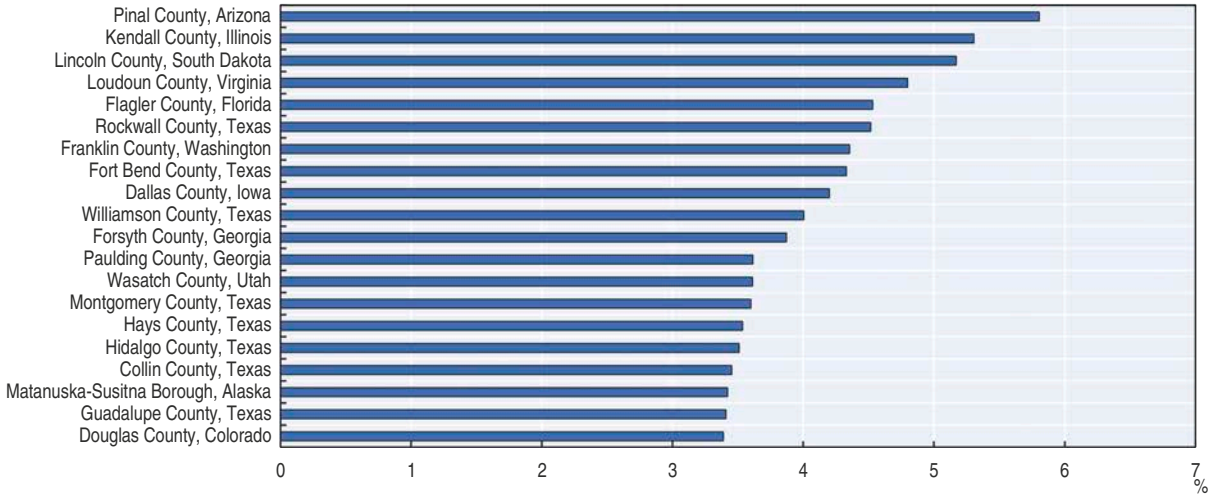


Source: OECD calculations based on data from the Census and American Community Survey, U.S. Census Bureau.

StatLink http://dx.doi.org/10.1787/888933425975

Figure 43.2. **Local employment growth over time: Best performing United States sub-regions, 2000-14**

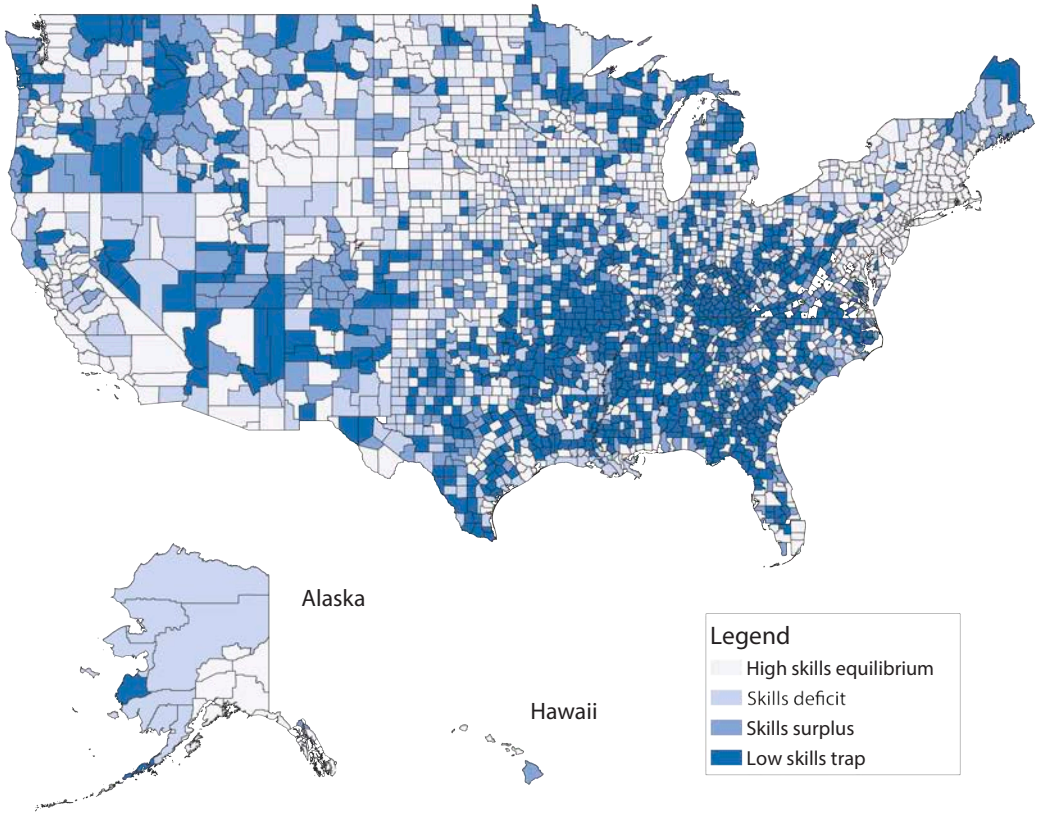
Average annual change (%)



Source: OECD calculations based on data from the Census and American Community Survey, U.S. Census Bureau.

StatLink http://dx.doi.org/10.1787/888933425985

Figure 43.3. **Skills supply and demand, United States sub-regions, 2014**



Source: OECD calculations based on data from the Census and American Community Survey, U.S. Census Bureau and Bureau of Economic Analysis.

StatLink http://dx.doi.org/10.1787/888933425993

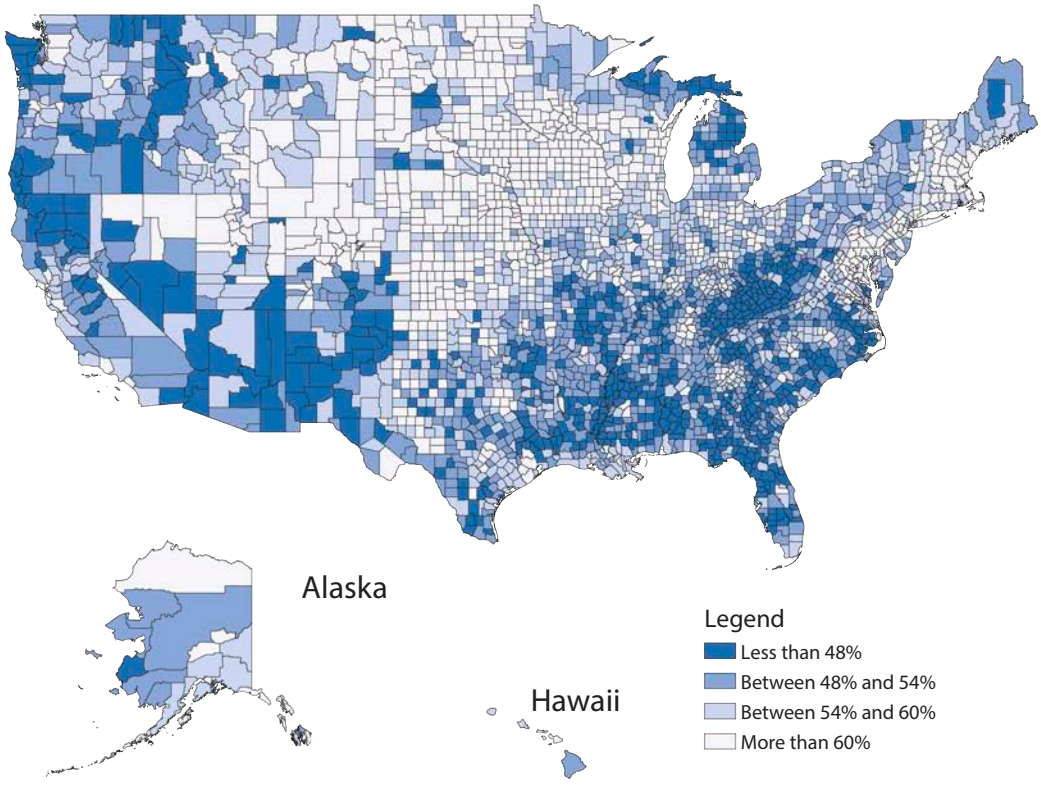
Table 43.1. **Places with the highest increase in skills supply and/or demand, United States sub-regions, 2000-14**

Increase in supply		Increase in supply and demand	Increase in demand	
• Ascension Parish, LA	• Lincoln County, WV	• Crawford County, MO	• Beckham County, OK	• Morgan County, MO
• Brunswick County, NC	• Macon County, TN	• St. Martin Parish, LA	• Buena Vista County, IA	• Plymouth County, IA
• Bryan County, GA	• Madison County, ID		• Cooke County, TX	• Powhatan County, VA
• Caroline County, VA	• Marion County, TN		• Curry County, NM	• Saline County, MO
• Cherokee County, NC	• McDonald County, MO		• Custer County, OK	• Saunders County, NE
• Dallas County, IA	• Meigs County, OH		• Eddy County, NM	• Seminole County, OK
• Dorchester County, MD	• Pasco County, FL		• Garvin County, OK	• Sioux County, IA
• Dyer County, TN	• Pender County, NC		• Geary County, KS	• Stark County, ND
• Haralson County, GA	• Perry County, OH		• Goochland County, VA	• Sweetwater County, WY
• Hickman County, TN	• Polk County, GA		• Hockley County, TX	• Todd County, MN
• Hoke County, NC	• Sumter County, FL		• Jefferson Davis Parish, LA	• Uintah County, UT
• Fayette County, TN	• Union County, GA		• Jim Wells County, TX	• Wagoner County, OK
• Jackson County, GA	• Union County, OH		• Lafourche Parish, LA	• Williams County, ND
• Lancaster County, SC	• West Baton Rouge Parish, LA		• Lea County, NM	• Woodward County, OK
• Letcher County, KY			• Midland County, TX	

Notes

1. In some sub-regions, high wage values may be driven by the concentration of natural resources.

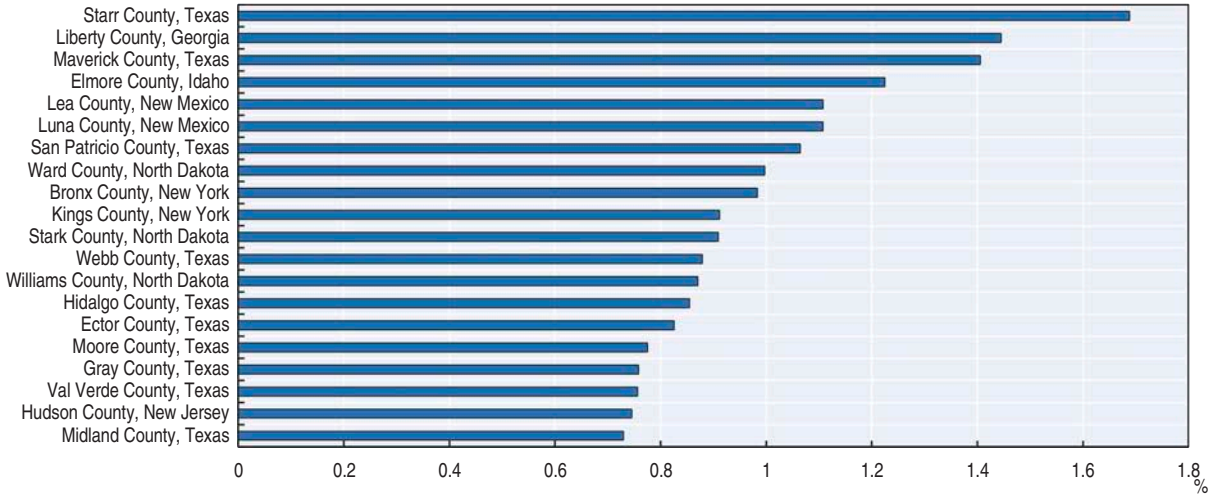
Figure 43.4. **Employment rate (population 15 and over), United States sub-regions, 2014**



Source: OECD calculations based on data from the Census and American Community Survey, U.S. Census Bureau.

StatLink http://dx.doi.org/10.1787/888933426000

Figure 43.5. **Employment rate change over time: Best performing United States sub-regions, 2000-14**



Source: OECD calculations based on data from the Census and American Community Survey, US Census Bureau.

StatLink http://dx.doi.org/10.1787/888933426018

Table 43.2. **Places to watch: United States sub-regions making progress across indicators, 2000-14**

• Bossier Parish, LA	• Morton County, ND
• Colusa County, CA	• St. Martin Parish, LA
• Dallas County, IA	• Starr County, TX
• District of Columbia	• Suffolk (Independent City), VA
• Liberty County, GA	• West Baton Rouge Paris, LA
• Lincoln County, SD	• Wilson County, TX

Note: United States sub-regions that ranked in the top 1% of all sub-regions across employment growth (2000-14), skills supply and demand (2000-14), and employment rate (2000-14) are listed in the table. Only sub-regions with a population of more than 20 000 are included.

Notes

1. In some sub-regions, high wage values may be driven by the concentration of natural resources.
2. The analysis was conducted for 3 105 counties due to the fact that data were not available in 39 counties.

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OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(84 2016 07 1 P) ISBN 978-92-64-26194-5 – 2016

Job Creation and Local Economic Development 2016

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ISBN 978-92-64-26194-5
84 2016 07 1 P